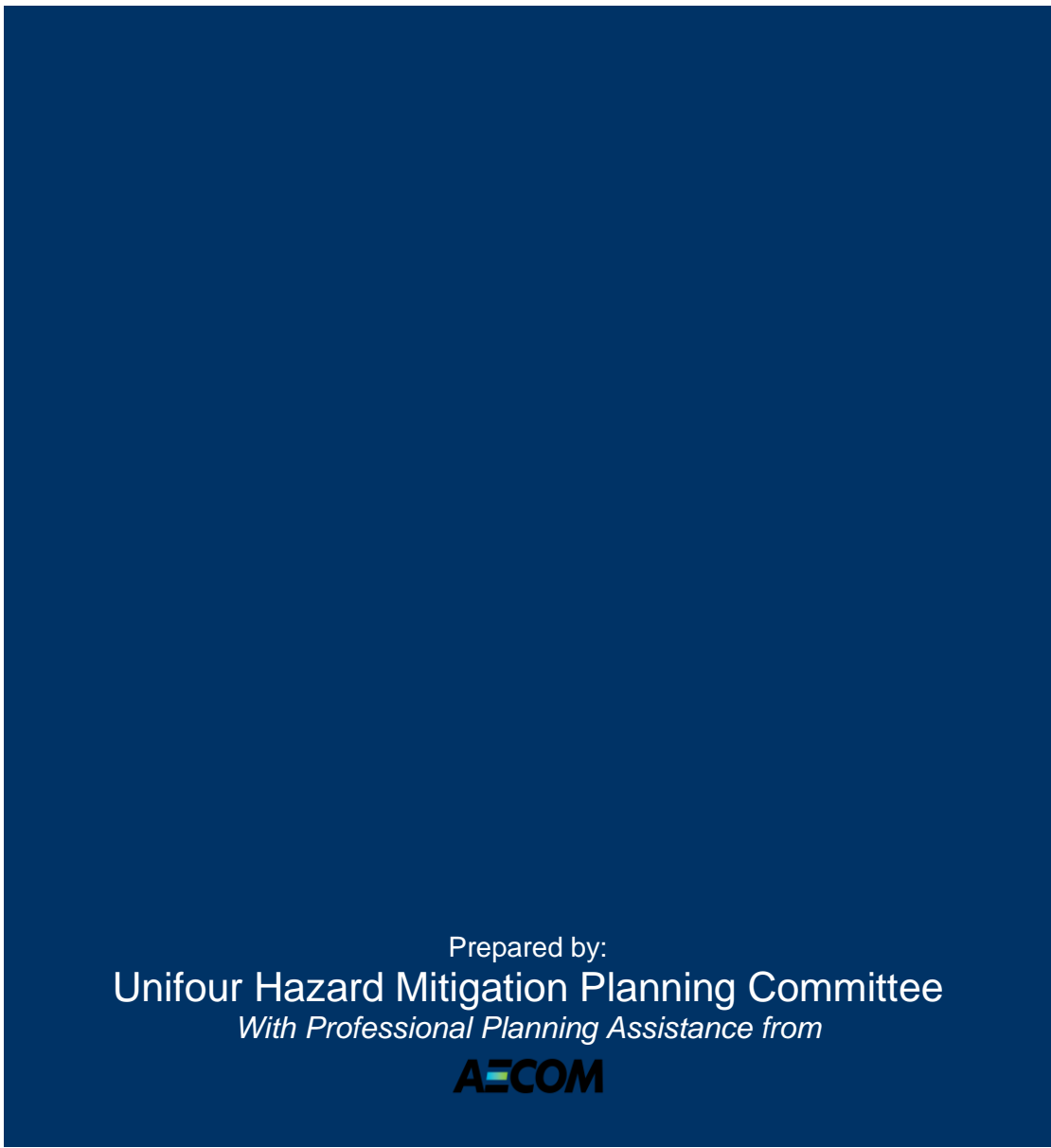




Unifour Regional Hazard Mitigation Plan

Alexander County, Burke County, Caldwell County, Catawba County



Prepared by:
Unifour Hazard Mitigation Planning Committee
With Professional Planning Assistance from



FINAL

July 2019

Acknowledgements

This regional hazard mitigation plan was made possible through the dedicated efforts of each participating jurisdiction, stakeholders, members of the public, and the project consultant. Detailed information about the planning process and individual participation can be found in the *Planning Process* section of this document.

Participating county and municipal jurisdictions are listed here in alphabetical order by county.

Alexander County

Town of Taylorsville

Burke County

City of Morganton

Town of Connelly Springs

Town of Drexel

Town of Glen Alpine

Town of Hildebran

Town of Rutherford College

Town of Valdese

Caldwell County

City of Lenoir

Town of Cahah's Mountain

Town of Gamewell

Town of Granite Falls

Town of Hudson

Town of Rhodhiss

Town of Sawmills

Village of Cedar Rock

Catawba County

City of Claremont

City of Conover

City of Hickory

City of Newton

Town of Brookford

Town of Catawba

Town of Long View

Town of Maiden

Table of Contents

Section 1: Introduction.....	1
1.1 Background.....	1
1.2 Purpose and Vision.....	2
1.3 Scope.....	3
1.4 Authority.....	4
1.5 Plan Overview.....	5
Section 2: Planning Process.....	7
2.1 Overview of Hazard Mitigation Planning.....	7
2.2 History of Hazard Mitigation Planning in the Plan Region.....	8
2.3 Preparing the Regional Plan.....	10
2.4 Hazard Mitigation Planning Committee.....	12
2.5 Meetings and Workshops.....	16
2.6 Involving the Public.....	23
2.6.1 Public Participation Survey.....	24
2.7 Involving Stakeholders.....	24
2.8 Documentation of Plan Progress.....	25
Section 3: Planning Area Profile.....	27
3.1 Geography and the Environment.....	27
3.2 Basin Description.....	30
3.3 Population and Demographics.....	31
3.4 Housing, Infrastructure, and Land Use.....	33
3.3.1 Housing.....	33
3.3.2 Infrastructure.....	33
3.3.3 Current and Future Land Use.....	34
3.5 Employment and Industry.....	35
Section 4: Risk Assessment.....	37
4.1 Overview.....	37
4.2 Hazard Selection.....	38
4.3 Methodologies and Assumptions.....	44
4.4 Inventory of Community Assets.....	46
4.4.1 Population.....	47
4.4.2 Parcels and Buildings.....	50
4.4.3 Critical Facilities.....	51
4.4.4 Infrastructure.....	60
4.4.5 High Potential Loss Properties.....	66
4.4.6 Historic Properties.....	69
4.5 Hazard Profiles, Analysis, and Vulnerability.....	71
4.5.1 River Flooding.....	71
4.5.2 Levee Failure.....	178
4.5.3 Wildfire.....	187

4.5.4	Tornado.....	228
4.5.5	Earthquake.....	369
4.5.6	Landslide.....	539
4.5.7	Snow.....	552
4.5.8	Dam Failure.....	580
4.5.9	Hail.....	599
4.5.10	Drought.....	613
4.5.11	Hurricane Winds.....	625
4.5.12	Ice.....	753
4.5.13	Thunderstorm Winds.....	762
4.5.14	Erosion.....	891
4.5.15	Sinkholes.....	894
4.6	Hazard Extent Summary.....	903
4.7	Conclusions on Hazard Risk.....	905
Section 5: Capability Assessment.....		909
5.1	Overview.....	909
5.2	Conducting the Capability Assessment.....	909
5.3	Capability Assessment Findings.....	910
5.3.1	Planning and Regulatory Capability.....	910
5.3.2	Administrative and Technical Capability.....	923
5.3.3	Fiscal Capability.....	928
5.3.4	Education and Outreach Capability.....	930
5.3.5	Mitigation Capability.....	932
5.3.6	Political Capability.....	934
5.3.7	Local Self-Assessment.....	935
5.4	Conclusions on Local Capability.....	938
Section 6: Mitigation Strategy.....		941
6.1	Overview.....	941
6.1.1	Mitigation Action Prioritization.....	942
6.2	Mitigation Goals.....	942
6.3	Identification and Analysis of Mitigation Techniques.....	943
6.3.1	Local Plans and Regulations.....	943
6.3.2	Structure and Infrastructure Projects.....	943
6.3.3	Natural Systems Protection.....	944
6.3.4	Education and Awareness Programs.....	944
6.3.5	Other Types of Actions.....	944
6.4	Selection of Mitigation Techniques for the Plan Area.....	945
6.5	Plan Update Requirement.....	945
Section 7: Mitigation Action Plans.....		947
Section 8: Plan Maintenance Procedures.....		1133
8.1	Implementation.....	1133
8.2	Monitoring, Evaluation, and Enhancement.....	1134

8.3 Continued Public Involvement.....1136

List of Appendices

Appendix A – Plan Adoption.....1137
Appendix B – Local Mitigation Plan Review Tool.....1138
Appendix C – State and Federal Approval Letters.....1151
Appendix D – Public Outreach Strategy.....1152
Appendix E – Project Information Fact Sheet.....1157
Appendix F – Public Participation Survey Results.....1161
Appendix G – Meeting Files.....1194

List of Figures

Figure 2.1: Mitigation Planning Process for the Plan Area.....	11
Figure 3.1: Planning Area.....	29
Figure 4.1: Population Density.....	49
Figure 4.2: Critical Facilities.....	56
Figure 4.3: Critical Facilities.....	57
Figure 4.4: Critical Facilities.....	58
Figure 4.5: Critical Facilities.....	59
Figure 4.6: Critical Infrastructure.....	62
Figure 4.7: Critical Infrastructure.....	63
Figure 4.8: Critical Infrastructure.....	64
Figure 4.9: Critical Infrastructure.....	65
Figure 4.10: High Potential Loss Properties.....	68
Figure 4.11: Historic Buildings.....	70
Figure 4.12: River Flooding Hazard Areas.....	122
Figure 4.13: River Flooding Hazard Areas.....	123
Figure 4.14: River Flooding Hazard Areas.....	124
Figure 4.15: River Flooding Hazard Areas.....	125
Figure 4.16: River Flooding Hazard Areas.....	126
Figure 4.17: River Flooding Hazard Areas.....	127
Figure 4.18: River Flooding Hazard Areas.....	128
Figure 4.19: River Flooding Hazard Areas.....	129
Figure 4.20: River Flooding Hazard Areas.....	130
Figure 4.21: River Flooding Hazard Areas.....	131
Figure 4.22: River Flooding Hazard Areas.....	132
Figure 4.23: River Flooding Hazard Areas.....	133
Figure 4.24: River Flooding Hazard Areas.....	134
Figure 4.25: River Flooding Hazard Areas.....	135
Figure 4.26: River Flooding Hazard Areas.....	136
Figure 4.27: River Flooding Hazard Areas.....	137
Figure 4.28: River Flooding Hazard Areas.....	138
Figure 4.29: River Flooding Hazard Areas.....	139
Figure 4.30: River Flooding Hazard Areas.....	140
Figure 4.31: River Flooding Hazard Areas.....	141
Figure 4.32: River Flooding Hazard Areas.....	142
Figure 4.33: River Flooding Hazard Areas.....	143
Figure 4.34: River Flooding Hazard Areas.....	144
Figure 4.35: River Flooding Hazard Areas.....	145
Figure 4.36: River Flooding Hazard Areas.....	146
Figure 4.37: River Flooding Hazard Areas.....	147
Figure 4.38: River Flooding Hazard Areas.....	148
Figure 4.39: River Flooding Hazard Areas.....	149

Figure 4.40: River Flooding Hazard Areas.....	150
Figure 4.41: Wildfire Hazard Areas.....	190
Figure 4.42: Wildfire Hazard Areas.....	191
Figure 4.43: Wildfire Hazard Areas.....	192
Figure 4.44: Wildfire Hazard Areas.....	193
Figure 4.45: Wildfire Hazard Areas.....	194
Figure 4.46: Wildfire Vulnerability.....	199
Figure 4.47: Tornado Activity in the United States.....	230
Figure 4.48: Historic Tornado Point Locations and Damage Paths in the Unifour Region (1951 - 2019).....	231
Figure 4.49: Tornado Hazard Areas (Depicting Probability High-Low).....	236
Figure 4.50: Tornado Hazard Areas (Depicting Probability High-Low).....	237
Figure 4.51: Tornado Hazard Areas (Depicting Probability High-Low).....	238
Figure 4.52: Tornado Hazard Areas (Depicting Probability High-Low).....	239
Figure 4.53: Tornado Hazard Areas (Depicting Probability High-Low).....	240
Figure 4.54: Peak Acceleration with 10 Percent Probability of Exceedance in 50 Years.....	371
Figure 4.55: Earthquake Hazard Areas.....	372
Figure 4.56: Earthquake Hazard Areas.....	374
Figure 4.57: Earthquake Hazard Areas.....	376
Figure 4.58: Earthquake Hazard Areas.....	378
Figure 4.59: Earthquake Hazard Areas.....	380
Figure 4.60: Landslide Overview Map of the Conterminous United States.....	541
Figure 4.61: Landslide Hazard Areas.....	543
Figure 4.62: Landslide Hazard Areas.....	544
Figure 4.63: Landslide Hazard Areas.....	545
Figure 4.64: Landslide Hazard Areas.....	546
Figure 4.65: Landslide Hazard Areas.....	547
Figure 4.66: Snow Hazard Areas.....	553
Figure 4.67: Snow Hazard Areas.....	554
Figure 4.68: Snow Hazard Areas.....	555
Figure 4.69: Snow Hazard Areas.....	556
Figure 4.70: Snow Hazard Areas.....	557
Figure 4.71: Snow Hazard Areas.....	558
Figure 4.72: Snow Hazard Areas.....	559
Figure 4.73: Snow Hazard Areas.....	560
Figure 4.74: Snow Hazard Areas.....	561
Figure 4.75: Snow Hazard Areas.....	562
Figure 4.76: Snow Hazard Areas.....	563
Figure 4.77: Snow Hazard Areas.....	564
Figure 4.78: Snow Hazard Areas.....	565
Figure 4.79: Snow Hazard Areas.....	566
Figure 4.80: Snow Hazard Areas.....	567
Figure 4.81: Snow Hazard Areas.....	568

Figure 4.82: Snow Hazard Areas.....	569
Figure 4.83: Snow Hazard Areas.....	570
Figure 4.84: Snow Hazard Areas.....	571
Figure 4.85: Snow Hazard Areas.....	572
Figure 4.86: Snow Hazard Areas.....	573
Figure 4.87: Snow Hazard Areas.....	574
Figure 4.88: Snow Hazard Areas.....	575
Figure 4.89: Snow Hazard Areas.....	576
Figure 4.90: Snow Hazard Areas.....	577
Figure 4.91: Dam Failure Hazard Areas.....	581
Figure 4.92: Dam Failure Hazard Areas.....	582
Figure 4.93: Dam Failure Hazard Areas.....	583
Figure 4.94: Dam Failure Hazard Areas.....	584
Figure 4.95: Locations of State-Regulated Dams.....	586
Figure 4.96: Hail Hazard Areas.....	600
Figure 4.97: Hail Hazard Areas.....	601
Figure 4.98: Hail Hazard Areas.....	602
Figure 4.99: Hail Hazard Areas.....	603
Figure 4.100: Hail Hazard Areas.....	604
Figure 4.101: U.S. Drought Monitor.....	614
Figure 4.102: Palmer Drought Severity Index for the Northern Mountains Climate Division.....	615
Figure 4.103: Empirical Probability of a Named Hurricane or Tropical Storm.....	626
Figure 4.104: Hurricane Winds Hazard Areas.....	631
Figure 4.105: Hurricane Winds Hazard Areas.....	632
Figure 4.106: Hurricane Winds Hazard Areas.....	633
Figure 4.107: Hurricane Winds Hazard Areas.....	634
Figure 4.108: Hurricane Winds Hazard Areas.....	635
Figure 4.109: Historical Hurricane and Tropical Storm Tracks in the Unifour Region.....	637
Figure 4.110: Ice Hazard Areas with Average Annual Accumulation in inches.....	755
Figure 4.111: Ice Hazard Areas with Average Annual Accumulation in inches.....	756
Figure 4.112: Ice Hazard Areas with Average Annual Accumulation in inches.....	757
Figure 4.113: Ice Hazard Areas with Average Annual Accumulation in inches.....	758
Figure 4.114: Ice Hazard Areas with Average Annual Accumulation in inches.....	759
Figure 4.115: Wind Zones in the United States.....	763
Figure 4.116: Annual Average Number of Thunder Events.....	764
Figure 4.117: Thunderstorm Hazard Areas.....	765
Figure 4.118: Thunderstorm Hazard Areas.....	766
Figure 4.119: Thunderstorm Hazard Areas.....	767
Figure 4.120: Thunderstorm Hazard Areas.....	768
Figure 4.121: Thunderstorm Hazard Areas.....	769
Figure 4.122: Sinkhole Hazard Areas.....	896
Figure 4.123: Sinkhole Hazard Areas.....	897
Figure 5.1: The Four Phases of Emergency Management.....	915

List of Tables

Table 2.1: Members of the Hazard Mitigation Planning Committee.....	13
Table 3.1: Total Land and Water Area for the Planning Area.....	28
Table 3.2: Basin Description.....	30
Table 3.3: Population Counts for Participating Jurisdictions.....	31
Table 3.4: Demographics of Participating Counties.....	33
Table 3.5: Housing Characteristics.....	33
Table 4.1: Documentation of the Hazard Selection Process.....	38
Table 4.2: Major Disaster Declarations for Burke, Caldwell, Catawba and Alexander counties from 1974 to 2013.....	42
Table 4.3: Population Counts with Vulnerable Population Breakdown.....	47
Table 4.4: Parcel and Building Counts and Values by Jurisdiction.....	50
Table 4.5: Critical Facilities Counts by Jurisdiction Part A.....	51
Table 4.6: Critical Facilities Counts by Jurisdiction Part B.....	53
Table 4.7: Infrastructure Counts and Measurements (in Miles) by Jurisdiction.....	60
Table 4.8: High Potential Loss Properties by Jurisdiction.....	66
Table 4.9: Historic Property Counts by Jurisdiction.....	69
Table 4.10: Flooding Sources Studied by Detailed Methods: Revised or Newly Studied.....	72
Table 4.11: Flooding Sources Studied by Detailed Methods: Redelineation.....	96
Table 4.12: Flooding Sources Studied by Detailed Methods: Limited Detailed.....	100
Table 4.13: USGS Peak River Stage Data.....	151
Table 4.14: Historical Occurrences of River Flooding (2005 to 2018).....	153
Table 4.15: Summary of Historical River Flooding Occurrences by Participating Jurisdiction.....	160
Table 4.16: NFIP Entry Dates.....	162
Table 4.17: Population Impacted by the 100-Year River Flooding.....	165
Table 4.18: Buildings Impacted by the 100-Year River Flooding.....	168
Table 4.19: Critical Facilities Exposed to the River Flooding - Alexander County (Unincorporated Area).....	171
Table 4.20: Critical Facilities Exposed to the River Flooding - Burke County (Unincorporated Area).....	171
Table 4.21: Critical Facilities Exposed to the River Flooding - City of Morganton.....	171
Table 4.22: Critical Facilities Exposed to the River Flooding - Town of Connelly Springs.....	171
Table 4.23: Critical Facilities Exposed to the River Flooding - Town of Drexel.....	172
Table 4.24: Critical Facilities Exposed to the River Flooding - Town of Valdese.....	172
Table 4.25: Critical Facilities Exposed to the River Flooding - Caldwell County (Unincorporated Area).....	172
Table 4.26: Critical Facilities Exposed to the River Flooding - City of Lenoir.....	172
Table 4.27: Critical Facilities Exposed to the River Flooding - Town of Gamewell.....	173
Table 4.28: Critical Facilities Exposed to the River Flooding - Town of Hudson.....	173

Table 4.29: Critical Facilities Exposed to the River Flooding - Catawba County (Unincorporated Area).....	173
Table 4.30: Critical Facilities Exposed to the River Flooding - City of Conover.....	173
Table 4.31: Critical Facilities Exposed to the River Flooding - City of Hickory.....	174
Table 4.32: Critical Facilities Exposed to the River Flooding - City of Newton.....	174
Table 4.33: Critical Facilities Exposed to the River Flooding - Town of Brookford.....	174
Table 4.34: Critical Facilities Exposed to the River Flooding - Town of Catawba.....	174
Table 4.35: Critical Facilities Exposed to the River Flooding - Town of Long View	174
Table 4.36: Critical Facilities Exposed to the River Flooding - Town of Maiden	175
Table 4.37: Critical Facilities Exposed to the River Flooding (by Sector).....	175
Table 4.38: High Potential Loss Properties Exposed to the River Flooding - Burke County (Unincorporated Area).....	176
Table 4.39: High Potential Loss Properties Exposed to the River Flooding - City of Lenoir.....	176
Table 4.40: High Potential Loss Properties Exposed to the River Flooding - Catawba County (Unincorporated Area).....	176
Table 4.41: Numbers of Repetitive Loss (RL) Properties by Jurisdiction.....	177
Table 4.42: Population Impacted by the 100 Year Levee Failure.....	181
Table 4.43: Buildings Impacted by the 100 Year Levee Failure.....	184
Table 4.44: Insert title	200
Table 4.45: Population Impacted by the Wildfire Hazard	202
Table 4.46: Buildings Impacted by the Wildfire Hazard	204
Table 4.47: Critical Facilities Exposed to the Wildfire - Alexander County (Unincorporated Area).....	208
Table 4.48: Critical Facilities Exposed to the Wildfire - Town of Taylorsville.....	208
Table 4.49: Critical Facilities Exposed to the Wildfire - Burke County (Unincorporated Area).....	209
Table 4.50: Critical Facilities Exposed to the Wildfire - City of Morganton.....	209
Table 4.51: Critical Facilities Exposed to the Wildfire - Town of Connelly Springs.....	210
Table 4.52: Critical Facilities Exposed to the Wildfire - Town of Drexel.....	210
Table 4.53: Critical Facilities Exposed to the Wildfire - Town of Glen Alpine.....	211
Table 4.54: Critical Facilities Exposed to the Wildfire - Town of Hildebran.....	211
Table 4.55: Critical Facilities Exposed to the Wildfire - Town of Rutherford College.....	211
Table 4.56: Critical Facilities Exposed to the Wildfire - Town of Valdese.....	212
Table 4.57: Critical Facilities Exposed to the Wildfire - Caldwell County (Unincorporated Area)..	212
Table 4.58: Critical Facilities Exposed to the Wildfire - City of Lenoir	213
Table 4.59: Critical Facilities Exposed to the Wildfire - Town of Cahah's Mountain.....	213
Table 4.60: Critical Facilities Exposed to the Wildfire - Town of Gamewell	213
Table 4.61: Critical Facilities Exposed to the Wildfire - Town of Granite Falls.....	214
Table 4.62: Critical Facilities Exposed to the Wildfire - Town of Hudson.....	214
Table 4.63: Critical Facilities Exposed to the Wildfire - Town of Rhodhiss.....	215
Table 4.64: Critical Facilities Exposed to the Wildfire - Town of Sawmills.....	215
Table 4.65: Critical Facilities Exposed to the Wildfire - Village of Cedar Rock.....	215
Table 4.66: Critical Facilities Exposed to the Wildfire - Catawba County (Unincorporated Area)..	216
Table 4.67: Critical Facilities Exposed to the Wildfire - City of Claremont.....	216

Table 4.68: Critical Facilities Exposed to the Wildfire - City of Conover.....	216
Table 4.69: Critical Facilities Exposed to the Wildfire - City of Hickory.....	217
Table 4.70: Critical Facilities Exposed to the Wildfire - City of Newton.....	217
Table 4.71: Critical Facilities Exposed to the Wildfire - Town of Catawba.....	218
Table 4.72: Critical Facilities Exposed to the Wildfire - Town of Long View.....	218
Table 4.73: Critical Facilities Exposed to the Wildfire - Town of Maiden.....	218
Table 4.74: Critical Facilities Exposed to the Wildfire (by Sector).....	219
Table 4.75: High Potential Loss Properties Exposed to the Wildfire - Alexander County (Unincorporated Area).....	220
Table 4.76: High Potential Loss Properties Exposed to the Wildfire - Town of Taylorsville.....	220
Table 4.77: High Potential Loss Properties Exposed to the Wildfire - Burke County (Unincorporated Area).....	220
Table 4.78: High Potential Loss Properties Exposed to the Wildfire - City of Morganton.....	221
Table 4.79: High Potential Loss Properties Exposed to the Wildfire - Town of Connelly Springs...	221
Table 4.80: High Potential Loss Properties Exposed to the Wildfire - Town of Drexel.....	221
Table 4.81: High Potential Loss Properties Exposed to the Wildfire - Town of Hildebran.....	222
Table 4.82: High Potential Loss Properties Exposed to the Wildfire - Town of Rutherford College.....	222
Table 4.83: High Potential Loss Properties Exposed to the Wildfire - Town of Valdese.....	222
Table 4.84: High Potential Loss Properties Exposed to the Wildfire - Caldwell County (Unincorporated Area).....	223
Table 4.85: High Potential Loss Properties Exposed to the Wildfire - City of Lenoir.....	223
Table 4.86: High Potential Loss Properties Exposed to the Wildfire - Town of Cahah's Mountain..	223
Table 4.87: High Potential Loss Properties Exposed to the Wildfire - Town of Gamewell.....	224
Table 4.88: High Potential Loss Properties Exposed to the Wildfire - Town of Granite Falls.....	224
Table 4.89: High Potential Loss Properties Exposed to the Wildfire - Town of Hudson.....	224
Table 4.90: High Potential Loss Properties Exposed to the Wildfire - Town of Rhodhiss.....	225
Table 4.91: High Potential Loss Properties Exposed to the Wildfire - Town of Sawmills.....	225
Table 4.92: High Potential Loss Properties Exposed to the Wildfire - Catawba County (Unincorporated Area).....	225
Table 4.93: High Potential Loss Properties Exposed to the Wildfire - City of Claremont.....	226
Table 4.94: High Potential Loss Properties Exposed to the Wildfire - City of Conover.....	226
Table 4.95: High Potential Loss Properties Exposed to the Wildfire - City of Hickory.....	226
Table 4.96: High Potential Loss Properties Exposed to the Wildfire - City of Newton.....	227
Table 4.97: High Potential Loss Properties Exposed to the Wildfire - Town of Catawba.....	227
Table 4.98: High Potential Loss Properties Exposed to the Wildfire - Town of Long View	227
Table 4.99: High Potential Loss Properties Exposed to the Wildfire - Town of Maiden.....	228
Table 4.100: Enhanced Fujita Scale for Tornadoes.....	229
Table 4.101: Historical Occurrences of Tornado (1951 to 2019).....	242
Table 4.102: Summary of Historical Tornado Occurrences by Participating Jurisdiction.....	246
Table 4.103: Population Impacted by the EF0 Tornado.....	250
Table 4.104: Population Impacted by the EF1 Tornado.....	252
Table 4.105: Population Impacted by the EF2 Tornado.....	255

Table 4.106: Population Impacted by the EF3 Tornado.....	258
Table 4.107: Population Impacted by the EF4 Tornado.....	261
Table 4.108: Population Impacted by the EF5 Tornado.....	263
Table 4.109: Buildings Impacted by the EF0 Tornado.....	266
Table 4.110: Buildings Impacted by the EF1 Tornado.....	269
Table 4.111: Buildings Impacted by the EF2 Tornado.....	271
Table 4.112: Buildings Impacted by the EF3 Tornado.....	274
Table 4.113: Buildings Impacted by the EF4 Tornado.....	276
Table 4.114: Buildings Impacted by the EF5 Tornado.....	279
Table 4.115: Critical Facilities Exposed to the Tornado - Alexander County (Unincorporated Area).....	282
Table 4.116: Critical Facilities Exposed to the Tornado - Town of Taylorsville.....	284
Table 4.117: Critical Facilities Exposed to the Tornado - Burke County (Unincorporated Area)....	286
Table 4.118: Critical Facilities Exposed to the Tornado - City of Morganton.....	288
Table 4.119: Critical Facilities Exposed to the Tornado - Town of Connelly Springs.....	291
Table 4.120: Critical Facilities Exposed to the Tornado - Town of Drexel.....	292
Table 4.121: Critical Facilities Exposed to the Tornado - Town of Glen Alpine.....	294
Table 4.122: Critical Facilities Exposed to the Tornado - Town of Hildebran.....	295
Table 4.123: Critical Facilities Exposed to the Tornado - Town of Rutherford College.....	297
Table 4.124: Critical Facilities Exposed to the Tornado - Town of Valdese.....	299
Table 4.125: Critical Facilities Exposed to the Tornado - Caldwell County (Unincorporated Area).....	301
Table 4.126: Critical Facilities Exposed to the Tornado - City of Lenoir.....	303
Table 4.127: Critical Facilities Exposed to the Tornado - Town of Cahah's Mountain.....	305
Table 4.128: Critical Facilities Exposed to the Tornado - Town of Gamewell.....	306
Table 4.129: Critical Facilities Exposed to the Tornado - Town of Granite Falls.....	308
Table 4.130: Critical Facilities Exposed to the Tornado - Town of Hudson.....	310
Table 4.131: Critical Facilities Exposed to the Tornado - Town of Rhodhiss.....	311
Table 4.132: Critical Facilities Exposed to the Tornado - Town of Sawmills.....	313
Table 4.133: Critical Facilities Exposed to the Tornado - Village of Cedar Rock.....	314
Table 4.134: Critical Facilities Exposed to the Tornado - Catawba County (Unincorporated Area).....	315
Table 4.135: Critical Facilities Exposed to the Tornado - City of Claremont.....	318
Table 4.136: Critical Facilities Exposed to the Tornado - City of Conover.....	319
Table 4.137: Critical Facilities Exposed to the Tornado - City of Hickory.....	321
Table 4.138: Critical Facilities Exposed to the Tornado - City of Newton.....	324
Table 4.139: Critical Facilities Exposed to the Tornado - Town of Brookford.....	326
Table 4.140: Critical Facilities Exposed to the Tornado - Town of Catawba.....	327
Table 4.141: Critical Facilities Exposed to the Tornado - Town of Long View.....	328
Table 4.142: Critical Facilities Exposed to the Tornado - Town of Maiden.....	330
Table 4.143: Critical Facilities Exposed to the Tornado (by Sector).....	332
Table 4.144: High Potential Loss Properties Exposed to the Tornado - Alexander County (Unincorporated Area).....	337

Table 4.145: High Potential Loss Properties Exposed to the Tornado - Town of Taylorsville.....	338
Table 4.146: High Potential Loss Properties Exposed to the Tornado - Burke County (Unincorporated Area).....	340
Table 4.147: High Potential Loss Properties Exposed to the Tornado - City of Morganton.....	341
Table 4.148: High Potential Loss Properties Exposed to the Tornado - Town of Connelly Springs	343
Table 4.149: High Potential Loss Properties Exposed to the Tornado - Town of Drexel.....	344
Table 4.150: High Potential Loss Properties Exposed to the Tornado - Town of Glen Alpine.....	345
Table 4.151: High Potential Loss Properties Exposed to the Tornado - Town of Hildebran.....	346
Table 4.152: High Potential Loss Properties Exposed to the Tornado - Town of Rutherford College.....	347
Table 4.153: High Potential Loss Properties Exposed to the Tornado - Town of Valdese.....	348
Table 4.154: High Potential Loss Properties Exposed to the Tornado - Caldwell County (Unincorporated Area).....	350
Table 4.155: High Potential Loss Properties Exposed to the Tornado - City of Lenoir	351
Table 4.156: High Potential Loss Properties Exposed to the Tornado - Town of Cahah's Mountain.....	353
Table 4.157: High Potential Loss Properties Exposed to the Tornado - Town of Gamewell.....	353
Table 4.158: High Potential Loss Properties Exposed to the Tornado - Town of Granite Falls.....	354
Table 4.159: High Potential Loss Properties Exposed to the Tornado - Town of Hudson.....	356
Table 4.160: High Potential Loss Properties Exposed to the Tornado - Town of Rhodhiss.....	357
Table 4.161: High Potential Loss Properties Exposed to the Tornado - Town of Sawmills.....	358
Table 4.162: High Potential Loss Properties Exposed to the Tornado - Catawba County (Unincorporated Area).....	359
Table 4.163: High Potential Loss Properties Exposed to the Tornado - City of Claremont.....	361
Table 4.164: High Potential Loss Properties Exposed to the Tornado - City of Conover.....	361
Table 4.165: High Potential Loss Properties Exposed to the Tornado - City of Hickory.....	363
Table 4.166: High Potential Loss Properties Exposed to the Tornado - City of Newton.....	364
Table 4.167: High Potential Loss Properties Exposed to the Tornado - Town of Catawba.....	366
Table 4.168: High Potential Loss Properties Exposed to the Tornado - Town of Long View.....	367
Table 4.169: High Potential Loss Properties Exposed to the Tornado - Town of Maiden.....	368
Table 4.170: Richter Scale.....	370
Table 4.171: Modified Mercalli Intensity Scale for Earthquakes.....	370
Table 4.172: Modified Mercalli Intensity Scale for Earthquakes.....	382
Table 4.173: Population Impacted by the 250 Year Earthquake.....	384
Table 4.174: Population Impacted by the 500 Year Earthquake.....	387
Table 4.175: Population Impacted by the 750 Year Earthquake.....	390
Table 4.176: Population Impacted by the 1000 Year Earthquake.....	392
Table 4.177: Population Impacted by the 1500 Year Earthquake	395
Table 4.178: Population Impacted by the 2000 Year Earthquake.....	398
Table 4.179: Population Impacted by the 2500 Year Earthquake	400
Table 4.180: Buildings Impacted by the 250 Year Earthquake.....	403
Table 4.181: Buildings Impacted by the 500 Year Earthquake.....	406
Table 4.182: Buildings Impacted by the 750 Year Earthquake.....	408

Table 4.183: Buildings Impacted by the 1000 Year Earthquake	411
Table 4.184: Buildings Impacted by the 1500 Year Earthquake	413
Table 4.185: Buildings Impacted by the 2000 Year Earthquake	416
Table 4.186: Buildings Impacted by the 2500 Year Earthquake	418
Table 4.187: Critical Facilities Exposed to the Earthquake - Alexander County (Unincorporated Area).....	421
Table 4.188: Critical Facilities Exposed to the Earthquake - Town of Taylorsville	424
Table 4.189: Critical Facilities Exposed to the Earthquake - Burke County (Unincorporated Area).....	427
Table 4.190: Critical Facilities Exposed to the Earthquake - City of Morganton	430
Table 4.191: Critical Facilities Exposed to the Earthquake - Town of Connelly Springs.....	433
Table 4.192: Critical Facilities Exposed to the Earthquake - Town of Drexel.....	435
Table 4.193: Critical Facilities Exposed to the Earthquake - Town of Glen Alpine.....	437
Table 4.194: Critical Facilities Exposed to the Earthquake - Town of Hildebran.....	439
Table 4.195: Critical Facilities Exposed to the Earthquake - Town of Rutherford College	442
Table 4.196: Critical Facilities Exposed to the Earthquake - Town of Valdese	444
Table 4.197: Critical Facilities Exposed to the Earthquake - Caldwell County (Unincorporated Area).....	447
Table 4.198: Critical Facilities Exposed to the Earthquake - City of Lenoir.....	449
Table 4.199: Critical Facilities Exposed to the Earthquake - Town of Cahah's Mountain.....	453
Table 4.200: Critical Facilities Exposed to the Earthquake - Town of Gamewell.....	455
Table 4.201: Critical Facilities Exposed to the Earthquake - Town of Granite Falls.....	457
Table 4.202: Critical Facilities Exposed to the Earthquake - Town of Hudson	459
Table 4.203: Critical Facilities Exposed to the Earthquake - Town of Rhodhiss.....	461
Table 4.204: Critical Facilities Exposed to the Earthquake - Town of Sawmills.....	463
Table 4.205: Critical Facilities Exposed to the Earthquake - Village of Cedar Rock.....	465
Table 4.206: Critical Facilities Exposed to the Earthquake - Catawba County (Unincorporated Area).....	467
Table 4.207: Critical Facilities Exposed to the Earthquake - City of Claremont.....	470
Table 4.208: Critical Facilities Exposed to the Earthquake - City of Conover.....	472
Table 4.209: Critical Facilities Exposed to the Earthquake - City of Hickory.....	475
Table 4.210: Critical Facilities Exposed to the Earthquake - City of Newton.....	478
Table 4.211: Critical Facilities Exposed to the Earthquake - Town of Brookford	482
Table 4.212: Critical Facilities Exposed to the Earthquake - Town of Catawba.....	483
Table 4.213: Critical Facilities Exposed to the Earthquake - Town of Long View.....	485
Table 4.214: Critical Facilities Exposed to the Earthquake - Town of Maiden.....	487
Table 4.215: Critical Facilities Exposed to the Earthquake (by Sector)	490
Table 4.216: High Potential Loss Properties Exposed to the Earthquake - Alexander County (Unincorporated Area).....	496
Table 4.217: High Potential Loss Properties Exposed to the Earthquake - Town of Taylorsville...	498
Table 4.218: High Potential Loss Properties Exposed to the Earthquake - Burke County (Unincorporated Area).....	500
Table 4.219: High Potential Loss Properties Exposed to the Earthquake - City of Morganton.....	502

Table 4.220: High Potential Loss Properties Exposed to the Earthquake - Town of Connelly Springs.....	504
Table 4.221: High Potential Loss Properties Exposed to the Earthquake - Town of Drexel.....	505
Table 4.222: High Potential Loss Properties Exposed to the Earthquake - Town of Glen Alpine....	507
Table 4.223: High Potential Loss Properties Exposed to the Earthquake - Town of Hildebran.....	508
Table 4.224: High Potential Loss Properties Exposed to the Earthquake - Town of Rutherford College.....	510
Table 4.225: High Potential Loss Properties Exposed to the Earthquake - Town of Valdese.....	511
Table 4.226: High Potential Loss Properties Exposed to the Earthquake - Caldwell County (Unincorporated Area).....	513
Table 4.227: High Potential Loss Properties Exposed to the Earthquake - City of Lenoir.....	515
Table 4.228: High Potential Loss Properties Exposed to the Earthquake - Town of Cajah's Mountain.....	517
Table 4.229: High Potential Loss Properties Exposed to the Earthquake - Town of Gamewell.....	518
Table 4.230: High Potential Loss Properties Exposed to the Earthquake - Town of Granite Falls..	519
Table 4.231: High Potential Loss Properties Exposed to the Earthquake - Town of Hudson.....	522
Table 4.232: High Potential Loss Properties Exposed to the Earthquake - Town of Rhodhiss.....	523
Table 4.233: High Potential Loss Properties Exposed to the Earthquake - Town of Sawmills.....	525
Table 4.234: High Potential Loss Properties Exposed to the Earthquake - Catawba County (Unincorporated Area).....	526
Table 4.235: High Potential Loss Properties Exposed to the Earthquake - City of Claremont.....	528
Table 4.236: High Potential Loss Properties Exposed to the Earthquake - City of Conover.....	529
Table 4.237: High Potential Loss Properties Exposed to the Earthquake - City of Hickory.....	531
Table 4.238: High Potential Loss Properties Exposed to the Earthquake - City of Newton.....	533
Table 4.239: High Potential Loss Properties Exposed to the Earthquake - Town of Catawba.....	535
Table 4.240: High Potential Loss Properties Exposed to the Earthquake - Town of Long View.....	536
Table 4.241: High Potential Loss Properties Exposed to the Earthquake - Town of Maiden.....	538
Table 4.242: Historical Occurrences of Landslide (2003 to 2019).....	549
Table 4.243: Summary of Historical Landslide Occurrences by Participating Jurisdiction.....	549
Table 4.244: Counts of High Hazard and Intermediate Hazard Dams by Jurisdiction.....	584
Table 4.245: Classification of Hazard Potential for North Carolina Dams.....	585
Table 4.246: Population Impacted by the Sunny Day Failure Dam Failure.....	588
Table 4.247: Population Impacted by the Overtopping Failure Dam Failure.....	591
Table 4.248: Buildings Impacted by the Sunny Day Failure Dam Failure.....	594
Table 4.249: Buildings Impacted by the Overtopping Failure Dam Failure.....	596
Table 4.250: TORRO Hailstorm Intensity Scale.....	605
Table 4.251: Hail Size and Diameter.....	606
Table 4.252: Historical Occurrences of Hail.....	607
Table 4.253: Summary of Historical Hail Occurrences by Participating Jurisdiction.....	609
Table 4.254: Historical Occurrences of Drought (1998 to 2019).....	622
Table 4.255: Summary of Historical Drought Occurrences by Participating Jurisdiction.....	623
Table 4.256: Saffir-Simpson Scale.....	627
Table 4.257: Hurricane Damage Classifications.....	628

Table 4.258: Historical Occurrences of Hurricane Storm Paths Crossing within 75 Miles of the Planning Area	636
Table 4.259: Population Impacted by the 25-Year Hurricane Winds	640
Table 4.260: Population Impacted by the 50-Year Hurricane Winds	643
Table 4.261: Population Impacted by the 100 Year Hurricane Winds	645
Table 4.262: Population Impacted by the 300 Year Hurricane Winds	648
Table 4.263: Population Impacted by the 700 Year Hurricane Winds	651
Table 4.264: Buildings Impacted by the 25 Year Hurricane Winds	653
Table 4.265: Buildings Impacted by the 50 Year Hurricane Winds	656
Table 4.266: Buildings Impacted by the 100 Year Hurricane Winds	658
Table 4.267: Buildings Impacted by the 300 Year Hurricane Winds	661
Table 4.268: Buildings Impacted by the 700 Year Hurricane Winds	664
Table 4.269: Critical Facilities Exposed to the Hurricane Winds - Alexander County (Unincorporated Area)	667
Table 4.270: Critical Facilities Exposed to the Hurricane Winds - Town of Taylorsville	669
Table 4.271: Critical Facilities Exposed to the Hurricane Winds - Burke County (Unincorporated Area)	671
Table 4.272: Critical Facilities Exposed to the Hurricane Winds - City of Morganton	673
Table 4.273: Critical Facilities Exposed to the Hurricane Winds - Town of Connelly Springs	676
Table 4.274: Critical Facilities Exposed to the Hurricane Winds - Town of Drexel	677
Table 4.275: Critical Facilities Exposed to the Hurricane Winds - Town of Glen Alpine	679
Table 4.276: Critical Facilities Exposed to the Hurricane Winds - Town of Hildebran	680
Table 4.277: Critical Facilities Exposed to the Hurricane Winds - Town of Rutherford College	682
Table 4.278: Critical Facilities Exposed to the Hurricane Winds - Town of Valdese	684
Table 4.279: Critical Facilities Exposed to the Hurricane Winds - Caldwell County (Unincorporated Area)	686
Table 4.280: Critical Facilities Exposed to the Hurricane Winds - City of Lenoir	688
Table 4.281: Critical Facilities Exposed to the Hurricane Winds - Town of Cahaj's Mountain	690
Table 4.282: Critical Facilities Exposed to the Hurricane Winds - Town of Gamewell	691
Table 4.283: Critical Facilities Exposed to the Hurricane Winds - Town of Granite Falls	693
Table 4.284: Critical Facilities Exposed to the Hurricane Winds - Town of Hudson	695
Table 4.285: Critical Facilities Exposed to the Hurricane Winds - Town of Rhodhiss	696
Table 4.286: Critical Facilities Exposed to the Hurricane Winds - Town of Sawmills	698
Table 4.287: Critical Facilities Exposed to the Hurricane Winds - Village of Cedar Rock	699
Table 4.288: Critical Facilities Exposed to the Hurricane Winds - Catawba County (Unincorporated Area)	700
Table 4.289: Critical Facilities Exposed to the Hurricane Winds - City of Claremont	703
Table 4.290: Critical Facilities Exposed to the Hurricane Winds - City of Conover	704
Table 4.291: Critical Facilities Exposed to the Hurricane Winds - City of Hickory	706
Table 4.292: Critical Facilities Exposed to the Hurricane Winds - City of Newton	709
Table 4.293: Critical Facilities Exposed to the Hurricane Winds - Town of Brookford	711
Table 4.294: Critical Facilities Exposed to the Hurricane Winds - Town of Catawba	712
Table 4.295: Critical Facilities Exposed to the Hurricane Winds - Town of Long View	713

Table 4.296: Critical Facilities Exposed to the Hurricane Winds - Town of Maiden	715
Table 4.297: Critical Facilities Exposed to the Hurricane Winds (by Sector).....	717
Table 4.298: High Potential Loss Properties Exposed to the Hurricane Winds - Alexander County (Unincorporated Area).....	721
Table 4.299: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Taylorsville.....	723
Table 4.300: High Potential Loss Properties Exposed to the Hurricane Winds - Burke County (Unincorporated Area).....	724
Table 4.301: High Potential Loss Properties Exposed to the Hurricane Winds - City of Morganton.....	726
Table 4.302: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Connelly Springs.....	727
Table 4.303: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Drexel ...	728
Table 4.304: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Glen Alpine	729
Table 4.305: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Hildebran.....	730
Table 4.306: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Rutherford College.....	732
Table 4.307: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Valdese.	733
Table 4.308: High Potential Loss Properties Exposed to the Hurricane Winds - Caldwell County (Unincorporated Area).....	734
Table 4.309: High Potential Loss Properties Exposed to the Hurricane Winds - City of Lenoir.....	736
Table 4.310: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Cahah's Mountain.....	737
Table 4.311: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Gamewell.....	738
Table 4.312: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Granite Falls.....	739
Table 4.313: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Hudson.	740
Table 4.314: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Rhodhiss.....	742
Table 4.315: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Sawmills.....	742
Table 4.316: High Potential Loss Properties Exposed to the Hurricane Winds - Catawba County (Unincorporated Area).....	744
Table 4.317: High Potential Loss Properties Exposed to the Hurricane Winds - City of Claremont.....	745
Table 4.318: High Potential Loss Properties Exposed to the Hurricane Winds - City of Conover ...	746
Table 4.319: High Potential Loss Properties Exposed to the Hurricane Winds - City of Hickory ...	747
Table 4.320: High Potential Loss Properties Exposed to the Hurricane Winds - City of Newton	749
Table 4.321: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Catawba.....	750

Table 4.322: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Long View	751
Table 4.323: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Maiden.....	752
Table 4.324: Historical Occurrences for Ice 1996-2019.....	760
Table 4.325: Historical Occurrences of Thunderstorm Winds.....	771
Table 4.326: Summary of Historical Thunderstorm Winds Occurrences by Participating Jurisdiction	773
Table 4.327: Population Impacted by the 25 Year Thunderstorm Winds.....	778
Table 4.328: Population Impacted by the 50 Year Thunderstorm Winds.....	781
Table 4.329: Population Impacted by the 100 Year Thunderstorm Winds.....	783
Table 4.330: Population Impacted by the 300 Year Thunderstorm Winds.....	786
Table 4.331: Population Impacted by the 700 Year Thunderstorm Winds.....	789
Table 4.332: Buildings Impacted by the 25 Year Thunderstorm Winds.....	791
Table 4.333: Buildings Impacted by the 50 Year Thunderstorm Winds.....	794
Table 4.334: Buildings Impacted by the 100 Year Thunderstorm Winds	796
Table 4.335: Buildings Impacted by the 300 Year Thunderstorm Winds	799
Table 4.336: Buildings Impacted by the 700 Year Thunderstorm Winds	802
Table 4.337: Critical Facilities Exposed to the Thunderstorm Winds - Alexander County (Unincorporated Area).....	805
Table 4.338: Critical Facilities Exposed to the Thunderstorm Winds - Town of Taylorsville.....	807
Table 4.339: Critical Facilities Exposed to the Thunderstorm Winds - Burke County (Unincorporated Area).....	809
Table 4.340: Critical Facilities Exposed to the Thunderstorm Winds - City of Morganton.....	811
Table 4.341: Critical Facilities Exposed to the Thunderstorm Winds - Town of Connelly Springs.....	814
Table 4.342: Critical Facilities Exposed to the Thunderstorm Winds - Town of Drexel.....	815
Table 4.343: Critical Facilities Exposed to the Thunderstorm Winds - Town of Glen Alpine.....	817
Table 4.344: Critical Facilities Exposed to the Thunderstorm Winds - Town of Hildebran.....	818
Table 4.345: Critical Facilities Exposed to the Thunderstorm Winds - Town of Rutherford College.....	820
Table 4.346: Critical Facilities Exposed to the Thunderstorm Winds - Town of Valdese.....	822
Table 4.347: Critical Facilities Exposed to the Thunderstorm Winds - Caldwell County (Unincorporated Area).....	824
Table 4.348: Critical Facilities Exposed to the Thunderstorm Winds - City of Lenoir.....	826
Table 4.349: Critical Facilities Exposed to the Thunderstorm Winds - Town of Cahaj's Mountain.....	828
Table 4.350: Critical Facilities Exposed to the Thunderstorm Winds - Town of Gamewell.....	829
Table 4.351: Critical Facilities Exposed to the Thunderstorm Winds - Town of Granite Falls.....	831
Table 4.352: Critical Facilities Exposed to the Thunderstorm Winds - Town of Hudson.....	833
Table 4.353: Critical Facilities Exposed to the Thunderstorm Winds - Town of Rhodhiss.....	834
Table 4.354: Critical Facilities Exposed to the Thunderstorm Winds - Town of Sawmills.....	836
Table 4.355: Critical Facilities Exposed to the Thunderstorm Winds - Village of Cedar Rock.....	837
Table 4.356: Critical Facilities Exposed to the Thunderstorm Winds - Catawba County (Unincorporated Area).....	838
Table 4.357: Critical Facilities Exposed to the Thunderstorm Winds - City of Claremont.....	841

Table 4.358: Critical Facilities Exposed to the Thunderstorm Winds - City of Conover.....	842
Table 4.359: Critical Facilities Exposed to the Thunderstorm Winds - City of Hickory.....	844
Table 4.360: Critical Facilities Exposed to the Thunderstorm Winds - City of Newton.....	847
Table 4.361: Critical Facilities Exposed to the Thunderstorm Winds - Town of Brookford.....	849
Table 4.362: Critical Facilities Exposed to the Thunderstorm Winds - Town of Catawba.....	850
Table 4.363: Critical Facilities Exposed to the Thunderstorm Winds - Town of Long View.....	851
Table 4.364: Critical Facilities Exposed to the Thunderstorm Winds - Town of Maiden.....	853
Table 4.365: Critical Facilities Exposed to the Thunderstorm Winds (by Sector).....	855
Table 4.366: High Potential Loss Properties Exposed to the Thunderstorm Winds - Alexander County (Unincorporated Area).....	859
Table 4.367: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Taylorsville.....	861
Table 4.368: High Potential Loss Properties Exposed to the Thunderstorm Winds - Burke County (Unincorporated Area).....	862
Table 4.369: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Morganton.....	864
Table 4.370: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Connelly Springs.....	865
Table 4.371: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Drexel.....	866
Table 4.372: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Glen Alpine.....	868
Table 4.373: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Hildebran.....	868
Table 4.374: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Rutherford College.....	870
Table 4.375: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Valdese.....	871
Table 4.376: High Potential Loss Properties Exposed to the Thunderstorm Winds - Caldwell County (Unincorporated Area).....	872
Table 4.377: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Lenoir.....	874
Table 4.378: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Cajah's Mountain.....	875
Table 4.379: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Gamewell.....	876
Table 4.380: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Granite Falls.....	877
Table 4.381: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Hudson.....	878
Table 4.382: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Rhodhiss.....	880

Table 4.383: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Sawmills.....	880
Table 4.384: High Potential Loss Properties Exposed to the Thunderstorm Winds - Catawba County (Unincorporated Area).....	882
Table 4.385: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Claremont.....	883
Table 4.386: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Conover.....	884
Table 4.387: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Hickory.....	885
Table 4.388: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Newton.....	887
Table 4.389: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Catawba.....	888
Table 4.390: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Long View.....	889
Table 4.391: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Maiden.....	890
Table 4.392: Historical Occurrences of Sinkholes (2002 to 2019).....	900
Table 4.393: Summary of Historical Sinkholes Occurrences by Participating Jurisdiction.....	901
Table 4.394: Summary of Hazard Extents.....	903
Table 4.395: Annualized Loss Estimates (ALEs) by Hazard by Jurisdiction.....	906
Table 5.1: Review and Incorporation of Existing Plans, Studies, Reports, Ordinances, Technical Information and Programs.....	912
Table 5.2: NFIP Policy and Claim Information.....	919
Table 5.3: CRS Premium Discounts, By Class.....	922
Table 5.4: Relevant Staff/Personnel Resources.....	925
Table 5.5: Relevant Fiscal Resources.....	928
Table 5.6: Education and Outreach Resources.....	930
Table 5.7: Mitigation Resources.....	933
Table 5.8: Self Assessment of Capability.....	936
Table 5.9: Capability Assessment Results.....	938
Table 6.1: Regional Mitigation Goals.....	943

Section 1: Introduction

This section provides a general introduction to the Hazard Mitigation Plan. It consists of the following five subsections:

- 1.1 Background
- 1.2 Purpose and Vision
- 1.3 Scope
- 1.4 Authority
- 1.5 Plan Overview

1.1 Background

Natural hazards, such as floods, tornadoes, and severe winter storms are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. We must consider these hazards to be legitimate and significant threats to human life, safety, and property.

The plan region, which is comprised of Alexander, Burke, Caldwell and Catawba counties, is vulnerable to a wide range of natural hazards. These hazards threaten the life and safety of the Region's residents, and have the potential to damage or destroy both public and private property and disrupt the local economy and overall quality of life.

While the threat from hazardous events may never be fully eliminated, there is much we can do to lessen their potential impact upon our community and our citizens. By minimizing the damaging effects of natural hazards upon our built environment, we can prevent such events from resulting in disasters. The concept and practice of reducing risks to people and property from known hazards is generally referred to as hazard mitigation. Hazard mitigation is defined by the Federal Emergency Management Agency (FEMA) as, "Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards."

Hazard mitigation techniques include structural measures and non-structural measures. Structural measures include activities such as strengthening or protecting buildings and infrastructure from the destructive forces of potential hazards. Non-structural measures include activities such as the adoption of sound land use policies and the creation of public awareness programs. It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made. A comprehensive mitigation approach addresses hazard vulnerabilities that exist today and in the foreseeable future. Therefore it is essential that projected patterns of future development are evaluated and considered in terms of how that growth will increase or decrease overall hazard vulnerability in the planning area.

One of the most effective means that a community can use to implement a comprehensive approach to hazard mitigation is to develop, adopt, and update as needed, a local hazard mitigation plan. A mitigation plan establishes the broad local vision and guiding principles for reducing hazard risk, and further proposes specific mitigation actions to eliminate or reduce identified vulnerabilities.

The Unifour Regional HMP (hereinafter referred to as “Hazard Mitigation Plan” or “Plan”) is an effective means to incorporate hazard mitigation principles and practices into the routine government activities and functions of the 4 counties and 28 municipalities participating in this Plan. At its most inner core, the Plan recommends specific actions to protect our built environment from the forces of nature and to protect the residents of the region from losses to those hazards that pose the greatest risk. These mitigation actions go beyond simply recommending structural solutions to reduce existing vulnerability, such as elevation, retrofitting, and acquisition projects. Local policies on community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of other actions considered to reduce the region’s future vulnerability to identified hazards.

The Plan is designed to be a living document, with implementation and evaluation procedures included to help achieve meaningful objectives and successful outcomes over time.

Disaster Mitigation Act of 2000

In an effort to reduce the Nation's mounting natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act by invoking new and revitalized approaches to mitigation planning. Section 322 of the Act emphasizes the need for state and local government entities to closely coordinate on mitigation planning activities, and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. Communities with an adopted and federally approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next declared disaster.

This Plan was prepared in coordination with FEMA and the North Carolina Division of Emergency Management (NCEM) to ensure that it meets all applicable planning requirements. This includes conformance with FEMA’s latest *Local Mitigation Planning Handbook* (released March 2013) and *Local Mitigation Plan Review Guide* (released October 2011). A *Local Hazard Mitigation Plan Update Checklist*, found in Appendix B, provides a summary of FEMA and NCEM’s current minimum standards of acceptability and notes the location within the Plan where each planning requirement is met.

1.2 Purpose and Vision

The general purpose of this Hazard Mitigation Plan is:

- To protect life and property by reducing the potential for future damages and economic losses that result from natural hazards;
- To qualify for additional grant funding, in both the pre-disaster and post-disaster environment;
- To speed recovery and redevelopment following future disaster events;
- To sustain and enhance existing governmental coordination in the Plan Region and demonstrate a firm local commitment to hazard mitigation principles; and
- To comply with federal and state requirements for local hazard mitigation plans.

A Unifour Hazard Mitigation Planning Committee was created, consisting of representatives from each of the 28 participating jurisdictions, to develop a regional plan. This committee established a vision

statement to help guide the regional planning process and to give all of the participating jurisdictions a common focal point for discussion, coordination, and development of the Plan

Vision Statement

Through a coordinated regional planning effort, create and implement an effective hazard mitigation plan that will identify and prioritize risk reduction measures for natural hazards in order to protect the health, safety, quality of life, environment, and economy of the planning area.

The general purpose of this Hazard Mitigation Plan is:

- 1. To protect life and property by reducing the potential for future damages and economic losses that result from natural hazards;
- 2. To qualify for additional grant funding, in both the pre-disaster and post-disaster environment;
- 3. To speed recovery and redevelopment following future disaster events;
- 4. To sustain and enhance existing governmental coordination in the planning area and demonstrate a firm local commitment to hazard mitigation principles; and
- 5. To comply with federal and state requirements for local hazard mitigation plans.

1.3 Scope

This Hazard Mitigation Plan will be updated and maintained to continually address those hazards determined to be of high and moderate risk through the detailed vulnerability assessment for the plan area (see Section 4: *Risk Assessment*). Other hazards that pose a low or negligible risk will continue to be evaluated during future updates to the Plan, but they may not be fully addressed until they are determined to be of high or moderate risk to the plan area

The geographic scope (i.e., the “planning area”) for the Plan includes all incorporated and unincorporated areas of Alexander, Burke, Caldwell and Catawba counties. This includes the following 28 local government jurisdictions:

Alexander County

- Town of Taylorsville

Burke County

- City of Morganton
- Town of Connelly Springs
- Town of Drexel
- Town of Glen Alpine
- Town of Hildebran
- Town of Rutherford College
- Town of Valdese

Caldwell County

- City of Lenoir
- Town of Cahah's Mountain
- Town of Gamewell
- Town of Granite Falls
- Town of Hudson
- Town of Rhodhiss
- Town of Sawmills
- Village of Cedar Rock

Catawba County

- City of Claremont
- City of Conover
- City of Hickory
- City of Newton
- Town of Brookford
- Town of Catawba
- Town of Long View
- Town of Maiden

1.4 Authority

This Hazard Mitigation Plan has been adopted by all participating counties in accordance with the authority and police powers granted to counties as defined by the State of North Carolina (N.C.G.S., Chapter 153A). This Hazard Mitigation Plan has also been adopted by all participating incorporated municipal jurisdictions under the authority granted to cities and towns as defined by the State of North Carolina (N.C.G.S., Chapter 160A). Copies of all local resolutions to adopt the Plan are included in Appendix A.

This Plan was developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans. The Plan shall be monitored and updated on a routine basis to maintain compliance with the following legislation:

- Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390) and by FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201.
- North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act, as amended by Senate Bill 300: An Act to Amend the Laws Regarding Emergency Management as Recommended by the Legislative Disaster Response and Recovery Commission (2001).

1.5 Plan Overview

This Hazard Mitigation Plan is divided into eight major sections, each of which is described briefly below. The Plan also includes several appendices for additional or supplemental items not included in the main body of the Plan, including copies of local adoption resolutions (Appendix A), a completed *Local Hazard Mitigation Plan Update Checklist* (Appendix B), Public Outreach Strategy (Appendix C), public participation survey results (Appendix D), copies of meeting agendas, sign-in sheets, and PowerPoint slides (Appendix E), etc.

This *Introduction* (Section 1) provides background on hazard mitigation planning and the Disaster Mitigation Act of 2000, and defines the purpose, scope, and authority of the Plan as adopted by all participating jurisdictions. It also provides the following outline of each section making up the Plan.

The *Planning Process*, (Section 1) provides background on hazard mitigation planning and the Disaster Mitigation Act of 2000, and defines the purpose, scope, and authority of the Plan as adopted by all participating jurisdictions. It also provides the following outline of each section making up the Plan.

The *Planning Process*, found in Section 2, fully documents the process by which the region prepared this regional hazard mitigation plan as an update to its four existing county level plans. This includes a description of the key steps involved in the processes followed, who was involved (i.e., the members of the Hazard Mitigation Planning Committee) and full descriptions of community meetings and workshops, how the public and other stakeholders were notified and involved, and how each of the municipal jurisdictions participated in the process.

The *Planning Area Profile*, located in Section 3, describes the general makeup of the region, including its counties and local municipalities, including relevant geographic, demographic, and economic characteristics. In addition, building characteristics and land use patterns are discussed along with general historical disaster data. This baseline information provides context for the region-wide planning area and thereby assists the planning team in recognizing the social, environmental, and economic factors that ultimately play a role in determining community vulnerability to natural hazards.

The *Risk Assessment*, found in Section 4, serves to identify, analyze, and assess the region's overall risk to natural hazards. The *Risk Assessment* also attempts to define any hazard risks that may uniquely or exclusively affect the individual municipal jurisdictions. The *Risk Assessment*, builds on available historical data from past hazard occurrences, establishes detailed profiles for each hazard, and culminates in a hazard risk ranking based on conclusions about the frequency of occurrence, spatial extent, and potential impact of each hazard. In essence, the information generated through the *Risk Assessment*, serves a critical function as communities seek to determine the most appropriate mitigation actions to pursue and implement—enabling communities to prioritize and focus their efforts on those hazards of greatest concern and those structures or areas facing the greatest risk(s).

The *Capability Assessment*, located in Section 5, provides a comprehensive examination of the Plan Area and the participating municipalities' capacity to implement meaningful mitigation strategies and identifies existing opportunities to increase and enhance that capacity. Specific capabilities addressed in this section include planning and regulatory capability, staff, and organizational (administrative) capability, technical capability, fiscal capability, and political capability. Information was obtained through the use of detailed

survey questionnaires for local officials and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts, and to identify those activities that should be built upon (such as participation in the National Flood Insurance Program) in establishing a successful and sustainable community hazard mitigation program. The *Community Profile, Risk Assessment, and Capability Assessment* collectively serve as a basis for determining the goals for the Hazard Mitigation Plan, each contributing to the development, adoption, and implementation of a meaningful

The *Mitigation Strategy*, found in Section 6, consists of regional goal statements as well as specific mitigation actions for each local government jurisdiction participating in the planning process, along with a set of regional mitigation actions to be implemented by the Hazard Mitigation Planning Committee. The *Mitigation Strategy* provides the foundation for detailed *Mitigation Action Plans*, found in Section 7, that link specific mitigation actions for each jurisdiction to locally assigned implementation mechanisms and target completion dates. Together, these sections are designed to make the Plan both strategic (through the identification of long-term goals) and also functional through the identification of short-term and immediate actions that will guide day-to-day decision-making and project implementation.

In addition to the identification and prioritization of possible mitigation projects, emphasis is placed on the use of program and policy alternatives to help make the Plan Area less vulnerable to the damaging forces of nature while improving the economic, social, and environmental health of the community. The concept of multi-objective planning was emphasized throughout the planning process, particularly in identifying ways to link hazard mitigation policies and programs with complimentary community goals related to housing, economic development, downtown revitalization, recreational opportunities, transportation improvements, environmental quality, land development, and public health and safety.

The *Plan Maintenance Procedures*, found in Section 8, includes the measures each participating jurisdiction will take to ensure the Plan's continuous long-term implementation. The procedures also include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

Section 2: Planning Process

This section of the Plan describes the mitigation planning process undertaken by the region in preparing the Hazard Mitigation Plan. It consists of the following eight subsections:

- 2.1 Overview of Hazard Mitigation Planning
- 2.2 History of Hazard Mitigation Planning in the Plan Region
- 2.3 Preparing the Regional Plan
- 2.4 Hazard Mitigation Planning Committee
- 2.5 Meetings and Workshops
- 2.6 Involving the Public
- 2.7 Involving Stakeholders
- 2.8 Documentation of Plan Progress

2.1 Overview of Hazard Mitigation Planning

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process results in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve short-term planning objectives as well as a long-term community vision. To ensure the functionality of each mitigation action, responsibility is assigned to a specific individual, department, or agency along with a schedule for its implementation. Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time.

Mitigation planning offers many benefits, including:

- Saving lives and property;
- Saving money;
- Speeding recovery following disasters;
- Reducing future vulnerability through wise development and post-disaster recovery and reconstruction;
- Expediting the receipt of pre-disaster and post-disaster grant funding; and
- Demonstrating a firm commitment to improving community health and safety.

Typically, mitigation planning is described as having the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that pre-disaster investments will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Furthermore, mitigation practices will enable local residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track more quickly and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such

as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other concurrent local planning efforts, and any proposed mitigation strategies must take into account other existing community goals or initiatives that will help complement or hinder their future implementation.

2.2 History of Hazard Mitigation Planning in the Plan Region

All four counties participated in the creation of the Unifour Regional Hazard Mitigation Plan in 2014. The FEMA approval date for the previous plan was 2014. The counties, along with a list of their participating municipalities, are listed below.

- Alexander County
 - Alexander County
 - Town of Taylorsville
- Burke County
 - Burke County
 - Town of Connelly Springs
 - Town of Drexel
 - Town of Glen Alpine
 - Town of Hildebran
 - City of Morganton
 - Town of Valdese
 - Rutherford College
- Caldwell County
 - Caldwell County
 - Town of Cahah's Mountain
 - Village of Cedar Rock
 - Town of Gamewell
 - Town of Granite Falls
 - Town of Hudson
 - City of Lenoir
 - Town of Rhodhiss
 - Town of Sawmills
- Catawba County
 - Catawba County
 - Town of Brookford
 - Town of Catawba
 - City of Claremont
 - City of Conover
 - City of Hickory
 - Town of Long View
 - Town of Maiden
 - City of Newton

No new jurisdictions have joined the planning process since the plan above was adopted and all of the jurisdictions that participated in previous planning efforts have agreed to participate in this regional

planning effort. The specific process of moving forward with one regional approach is described in more detail in the following subsections.

All four counties participated in the update of the Unifour Regional Hazard Mitigation Plan in 2019. The FEMA approval date for this plan is 2019. The counties, along with a list of their participating municipalities, are listed below.

- Alexander County
 - Alexander County
 - Town of Taylorsville
- Burke County
 - Burke County
 - Town of Connelly Springs
 - Town of Drexel
 - Town of Glen Alpine
 - Town of Hildebran
 - City of Morganton
 - Town of Valdese
 - Rutherford College
- Caldwell County
 - Caldwell County
 - Town of Cahah's Mountain
 - Village of Cedar Rock
 - Town of Gamewell
 - Town of Granite Falls
 - Town of Hudson
 - City of Lenoir
 - Town of Rhodhiss
 - Town of Sawmills
- *Catawba County*
 - Catawba County
 - Town of Brookford
 - Town of Catawba
 - City of Claremont
 - City of Conover
 - City of Hickory
 - Town of Long View
 - Town of Maiden
 - City of Newton

No new jurisdictions have joined the planning process since the previous plan was adopted and all of the jurisdictions that participated in previous planning efforts have agreed to participate in this regional planning effort. The specific process of moving forward with one regional approach is described in more detail in the following subsections.

2.3 Preparing the Regional Plan

Hazard mitigation plans are required by FEMA to be updated every five years in order for the jurisdictions covered under them to remain eligible for federal mitigation and public assistance funding.

Hazard mitigation plans are required by FEMA to be updated every five years in order for the jurisdictions covered under them to remain eligible for federal mitigation and public assistance funding. To simplify and enhance planning efforts for the jurisdictions in the Unifour Region, Alexander, Burke, Caldwell, and Catawba counties made the decision to move forward with the creation of the Unifour Regional Hazard Mitigation Plan. This regional approach allows resources to be shared amongst the participating jurisdictions and eases the administrative duties of all of the participants by combining the four existing county level plans, and the requirements for the five-year plan update, into one coordinated regional planning process.

To help prepare the Unifour Regional Hazard Mitigation Plan, AECOM was hired as a consultant to provide professional mitigation planning services. To meet requirements of the NFIP's Community Rating System, the region ensured that the planning process was facilitated under the direction of a professional planner, Kelly Keefe, CFM, from AECOM who served as the lead planner for this project.

Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA and recommendations provided by North Carolina Division of Emergency Management (NCEM) mitigation planning staff. The *Local Hazard Mitigation Plan Update Checklist*, found in Appendix B, provides a detailed summary of FEMA's current minimum standards of acceptability for compliance with DMA 2000 and notes the location where each requirement is met within this Plan. These standards are based upon FEMA's Interim Final Rule as published in the Federal Register on February 26, 2002 in Part 201 of the Code of Federal Regulations (CFR). The planning team used FEMA's *Local Mitigation Planning Handbook* (released March 2013) for reference as they completed the Plan.

The process used to prepare this Plan included six major steps that were completed over the course of approximately six months beginning in November 2018. Each of these planning steps resulted in critical work products and outcomes that collectively make up the Plan.

Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA and recommendations provided by North Carolina Division of Emergency Management (NCEM) mitigation planning staff. The *Local Hazard Mitigation Plan Update Checklist*, found in Appendix B, provides a detailed summary of FEMA's current minimum standards of acceptability for compliance with DMA 2000 and notes the location where each requirement is met within this Plan. These standards are based upon FEMA's Interim Final Rule as published in the Federal Register on February 26, 2002 in Part 201 of the Code of Federal Regulations (CFR). The planning team used FEMA's *Local Mitigation Planning Handbook* (released March 2013) for reference as they completed the Plan.

Figure 2.1 below shows the timeline used to update this Plan and the timeline set out for this Plan.

Figure 2.1: Mitigation Planning Process for the Plan Area



Task #1: Plan Development	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Milestones														
Admin		10/1/2018												
Planning Process							3/1/2019							
Capability Assessment							3/1/2019							
Website and Survey Design				12/1/2018										
Capability Assessment								4/1/2019						
Risk Assessment								4/1/2019						
Hazard Profiles								4/1/2019						
Mitigation Goals and Strategies										6/1/2019				
Maintenance and Evaluation										6/1/2019				
CRS Incorporation										6/1/2019				
Risk Map Interpretation										6/1/2019				
Community Wildfire Protection Requirements										6/1/2019				
Public Meetings							3/1/2019			6/1/2019				
Planning Meetings					1/1/2019		3/1/2019			6/1/2019				
Review State Plan			11/1/2019											
Maps							3/1/2019							
RMT Resiliency Assessment									5/1/2019					
RMT Hazard Mitigation Module									5/1/2019					
Task #2: NCEM Review, FEMA Review and Final Plan														
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
NCEM HMP Plan Review											7/1/2019			
FEMA HMP Plan Review												8/1/2019		
Plan Revision HMP													9/1/2019	
Plan Revisions Resiliency									5/1/2019					
Adoption Resolution Support														10/1/2019
Task #3: Programmatic Support														
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Technical Assistance and Support													9/1/2019	
Task #4: Optional Repetitive Loss Area Analysis (RLAA)														
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Advise properties of analysis					1/1/2019									
Contact agencies that have related plans or studies						2/1/2019								
Review alternative mitigation approaches							3/1/2019							
Document into 10 step planning process										6/1/2019				
Task #5: Optional Emergency Management Accreditation Program														
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
EMAP Standards Incorporation										6/1/2019				

2.4 Hazard Mitigation Planning Committee

In order to guide the development of this Plan, the Unifour counties (Alexander County, Burke County, Caldwell County, and Catawba County) created the Unifour Hazard Mitigation Planning Committee (HMPC). This committee represented a community based planning team made up of representatives from various county departments and municipalities and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in November 2018, the planning committee members engaged in regular discussions as well as local meetings and planning workshops to discuss and complete tasks associated with preparing the Plan; including an email campaign to invite various stakeholders such as local/regional agencies and neighboring communities to participate in the planning process. This working group coordinated on all aspects of plan preparation and provided valuable input to the process. In addition to regular meetings, committee members routinely communicated and were kept informed through an email distribution list.

Specifically, the tasks assigned to the Unifour Hazard Mitigation Planning Committee included:

- Participate in hazard mitigation planning committee meetings and workshops (described in more detail in subsection 2.5);
- Provide best available data as required for the *Risk Assessment* portion of the Plan;
- Complete the *Local Capability Assessment Survey* and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan;
- Support the development of the *Mitigation Strategy* portion of the Plan, including the design and adoption of a regional vision statement, regional mitigation goal statements, and regional mitigation actions;
- Review the existing mitigation actions from each county's previous plan, provide an update on those previously adopted mitigation actions, and propose new mitigation actions for their department/agency for incorporation into the new regional Plan;

- Review and provide timely comments on all study findings and draft plan deliverables; and
- Support the adoption of the Unifour Regional Hazard Mitigation Plan.

Table 2.1 lists the members of the HMPC who were responsible for participating in the development of the Plan. Committee members are generally listed by jurisdiction in **Table 2.1** for ease of organizing and presenting the information but it should be noted that the committee worked extremely well as one regional unit thinking beyond traditional jurisdictional boundaries to focus on the mitigation planning issues and tasks at hand. For all jurisdictions unable to attend the meetings in person they were represented by their County Lead Coordinator and maintained communication in order to participate, review and make decisions regarding plan data. The County Lead Coordinators are: Russell Greene, Alexander County; Michael Willis, Burke County; Vic Misenheimer/Kenneth Teague, Caldwell County; Karyn Yaussy, Catawba County.

Table 2.1: Members of the Hazard Mitigation Planning Committee

Jurisdiction	Agency	Representative	Position or Title
ALEXANDER COUNTY			
Alexander County	Alexander County	Russell Greene (County Lead)	Emergency Services Director
Alexander County	Alexander County	Seth Harris	Planner
Alexander County	Alexander County Emergency Services	Mark Howell	Alexander County Emergency Services
Town of Taylorsville	Taylorsville Police Dept.	Dennis James	Chief of Police
BURKE COUNTY			
Burke County	Burke County	Mike Willis (County Lead)	Emergency Management Director
City of Morganton	City of Morganton	Scott Lookadoo	City of Morganton
City of Morganton	City of Morganton	Phillip Lookadoo	City of Morganton
Town of Connelly Springs	Town of Connelly Springs	Tamara Brooks	Town Clerk
Town of Drexel	Town of Drexel	Sherri Bradshaw	Town Manager
Town of Glen Alpine	Town of Glen Alpine	Sherry Farris	Town Clerk
Town of Hilderbran	Town of Hilderbran	Thomas Drum	Town Manager
Town of Rutherford College	Wpcog	Johnny Wear	Planner
Town of Valdese	Town of Valdese	Charles Watts	Fire Chief/Emergency Management
CALDWELL COUNTY			

Jurisdiction	Agency	Representative	Position or Title
Caldwell County	Caldwell County Schools	Jeff Church	Assistant Superintendent
Caldwell County	Caldwell County	Kenneth Teague (County Lead)	Emergency Management Director
Caldwell County	Collettsville Fire	Larry Price	Collettsville Fire
Caldwell County	Caldwell County Ems	Eddie Anderson	Caldwell County EMS
Caldwell County	Caldwell County	Kim McGee	Planning
Caldwell County	Grace Chapel Fire Department	Bryan Edwards	Grace Chapel Fire Department
Caldwell County	Caldwell County Sheriffs Office	Marc Jordan	Major
Caldwell County	Unc Healthcare	Jordan Cramer	UNC Healthcare
Caldwell County	Health Department	Chad Coffey	PC/AAC
Caldwell County	Caldwell County Environmental Health	Chad Gambill	Caldwell County Environmental Health
Caldwell County	Caldwell County	Shelley Stevens	Planning Director
Caldwell County	Yokefellow Inc.	Sharon Harmon	Yokefellow Inc.
City of Lenoir	Lenoir Fire	Kenny Nelson	Deputy Chief
City of Lenoir	City of Lenoir	Marty Waters	Marlin Company
City of Lenoir	Lenoir Fire	Ken Hair	Lenoir Fire
Town of Cajahs Mountain	Town of Cajahs Mountain	Logan Shook	Town Manager
Town of Gamewell	Town of Gamewell	Mary Carter	Town Administrator
Town of Granite Falls	Town of Granite Falls	Greg Wilson	Planner
Town of Granite Falls	Town of Granite Falls	Brandon Edwards	Fire Captain
Town of Hudson	Town of Hudson	Rebecca Bentley	Town Manager
Town of Rhodhiss	Town of Rhodhiss	Chris Wagoner	Town Manager
Town of Sawmills	Wpcog	Johnny Wear	Planner
Village of Cedar Rock	Village of Cedar Rock	Ernie McAteer	Councilman
CATAWBA COUNTY			

Jurisdiction	Agency	Representative	Position or Title
Catawba County	Catawba County	Karyn Yaussy (County Lead)	Emergency Management Coordinator
Catawba County	Catawba County	Chris Timberlake	Assistant Planning Director
City of Claremont	City of Claremont	Bart Travis	Fire Chief
City of Conover	City of Conover	Mark Hinson	Fire Chief
City of Conover	City of Conover	Donald Duncon	City Manager
City of Hickory	City of Hickory	Chelsey Brooks	Civil Engineer 1
City of Hickory	City of Hickory	Caleb Byrum	Utilities Engineer
City of Hickory	City of Hickory	Cal Overby	Principal Planner
City of Newton	City of Newton	Alex Fulbright	Assistant Planning Director
Town of Brookford	Town of Brookford	Marshall Eckard	Manager
Town of Catawba	Town of Catawba	Chase Winebarger	Manager
Town of Long View	Town of Long View	Charles Mullis	Planner
Town of Maiden	Town of Maiden	Blake Wright	Planning Director

Multi-jurisdictional Participation

The Plan Area Hazard Mitigation Plan includes four counties and 24 incorporated municipalities. To satisfy multi-jurisdictional participation requirements, each county and its participating jurisdictions were required to perform the following tasks via in person engagements and/or electronic data exchanges:

- Participate in mitigation planning meetings and workshops;
- Complete the Local Capability Assessment Survey;
- Provide an update on previously adopted mitigation actions;
- Review drafts of the Plan Area Hazard Mitigation Plan; and
- Adopt their updated local Mitigation Action Plan.

Each jurisdiction participated in the planning process and each jurisdiction has developed and adopted a local *Mitigation Action Plan* unique to that jurisdiction which will be updated over time per the *Plan Maintenance Procedures* described in Section 8.

2.5 Meetings and Workshops

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus, and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan.

The following is a summary of the key meetings and workshops held by the HMPC during the development of the Plan. In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency. For example, completing the *Local Capability Assessment Survey* or seeking approval of specific mitigation actions for their department or agency to undertake and include in their *Mitigation Action Plan*. Public meetings are summarized in subsection 2.6.

Meeting sign-in sheets, images and other attachments for each meeting below can be found in Appendix G.

HMPC Meeting #1

HMPC Meeting #1 (November 29, 2018)

The Project Kickoff meeting was initiated by Kenneth Teague, Caldwell County Emergency Management Coordinator, and was led by Brent Edwards (AECOM Mitigation Planner), and Kelly Keefe (AECOM Lead Planner). This meeting consisted of a detailed overview of the project, a review and discussion of the previous regional mitigation plan, an explanation of the process to be followed for updating the previous plan and integrating content from other resources, an open discussion session, and an explanation of next steps.

The meeting began with a brief welcome and opportunity for each of the 39 attendees to introduce themselves to the group. Particular emphasis was placed on identifying what jurisdiction or organization each participant was there to represent, as there were representatives from the 28 participating jurisdictions, the WPCOG, other state and local stakeholders, and AECOM. As part of this recognition process, a spreadsheet was passed around for representatives to designate one “Designated Local Jurisdiction Lead” to serve as a primary point of contact for each participating jurisdiction for the duration of the project.

The project overview consisted of an explanation of the purpose of the planning process. It also covered the geographic scope of the project, the proposed schedule for the project, and a detailed breakdown of the key project tasks. The roles and responsibilities for AECOM, Caldwell County as the lead local agency, and for all participating jurisdictions were also covered. These roles and responsibilities were presented as follows:

- AECOM
 - Oversee, manage, and document the completion of all key project tasks
 - Monthly progress reports
- Caldwell County
 - Serving as lead coordinating agency
 - Designation of local project manager

- Assistance with the collection of documents, data, and other information
- Logistics for project meetings
- Hosting and managing project website
- Responding to general questions or inquiries from the public or stakeholders
- Coordinating with participating jurisdictions
- All participating jurisdictions
 - Designate local jurisdiction lead
 - Attend Hazard Mitigation Planning Committee meetings
 - Coordination between counties, municipalities, and local stakeholders
 - Data collection and information sharing
 - Mitigation strategy development (*Mitigation Action Plans*)
 - Assist with public outreach
 - Review and comment on draft plan materials

A discussion was also facilitated to discuss ways that existing resources could be leveraged, such as existing plans, studies, and reports; existing data and information; local knowledge sharing; and other resources. Three primary planning resources were also introduced to the HMPC at this time: the *Local Mitigation Planning Handbook*, *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, and *Integrating Hazard Mitigation Into Local Planning*, all recent publications from FEMA providing mitigation planning guidance.

Emphasis was also placed on the need for effective communication throughout the duration of the project. This included an overview of the planning team’s organization and the idea that municipal jurisdictions would coordinate first through their Designated Local Jurisdiction Lead who would in turn coordinate with the Designated Local Jurisdiction Lead for that county, who would in turn coordinate with the overall local project leads, Kenneth Teague with Caldwell County. Active participation and responsiveness were also stressed in light of the aggressive schedule to complete the plan in the desired timeframe.

A detailed discussion also centered on GIS data collection needs and the process to be followed for collecting and submitting the needed data (which was to follow the chain of communication described in the paragraph above). Emphasis was placed on the need for the GIS data to be submitted in a readily usable format and to be the best data readily available.

The committee was also given an overview of a Public Outreach Strategy that would be developed between HMPC Meeting #1 and HMPC Meeting #2. The goals of the Public Outreach Strategy were stated as:

- Generate public interest;
- Solicit citizen input; and
- Engage additional partners in the planning process.

Specific opportunities for public participation were identified as being two in-person open public meetings, the creation of a public project information website, a web-based public participation survey, and use of social media (Facebook, Twitter, RSS, and other various options).

Next steps were defined as assignment of Designated Local Jurisdiction Leads (to be completed as soon as possible); open the online Public Participation Survey (to be completed by December 5, 2018); finalize Public Outreach Strategy (to be completed by January 24, 2019); prepare preliminary risk assessment decisions, analysis, and map templates (to be completed by January 24, 2019); and prepare for HMPC Meeting #2 (to be held January 24, 2019).

HMPC Meeting #2

HMPC Meeting #2 (January 24, 2019)

The Public Outreach Strategy meeting was initiated by Kenneth Teague, Caldwell County Catawba County Assistant Planning Director, and was led by Mike Robinson, CFM (AECOM Lead Planner) with assistance from William Hague (AECOM GIS Specialist). This meeting consisted of a detailed overview of the final draft Public Outreach Strategy, a hazard identification exercise, recommendations for the *Risk Assessment*, an overview of the *Local Capability Assessment Survey* and *Safe Growth Survey*, discussion of a regional vision statement and mitigation goals, an update on data collection progress, an open discussion session, and an explanation of next steps.

The meeting began with a brief welcome and opportunity for each of the 21 attendees to introduce themselves to the group.

A printed handout containing the final draft Public Outreach Strategy was distributed to the committee and a review of the document was provided via PowerPoint. The strategy (found in Appendix C) follows the outline presented at the first meeting in terms of goals, outreach opportunities, etc.

Additional details were provided regarding the two proposed in-person open public meetings:

- Public meetings would be scheduled at two key points during the project timeline: following completion of the draft risk and capability assessments and following completion of the draft plan;
- The primary purpose of the meetings would be to inform the public on the process and current status of the regional planning process and to gain input to the process during the drafting stage and prior to plan completion and approval; and
- AECOM would prepare presentations and handout materials to help facilitate two-way communication with public meeting attendees and would also have plotter-sized maps, videos, and other resources available for discussion with meeting attendees.

An update was also given on the public project information website proposed at the first meeting. At the time of the first meeting, the website was live and already contained the final project information fact sheet; contacts, task lists, meeting slides, and handouts for the planning committee; existing plan documents; planning guidance and resources; social media integration; and project contact information.

The project information fact sheet was also presented to the group and additional opportunities were discussed for disseminating the fact sheet to the public. The fact sheet contains an overview of the regional mitigation planning effort; an explanation of the planning process including the six main planning steps of public outreach, risk assessment, capability assessment, mitigation strategy development, plan maintenance, and plan adoption; project leadership; project schedule; and contact information.

Another significant topic covered at the meeting was the online public participation survey. At the time of the second meeting, screen mock-ups were shown to the group along with several sample questions. It was explained that the survey would go live around December 5, 2018 and would remain open until April 18, 2019. The survey was hosted by AECOM using the SurveyMonkey web hosting service. The primary purpose of the survey was to solicit input from any interested parties in the planning area. The survey also offered individuals that were unable to attend the in-person meetings the opportunity to participate in the planning process. Information from the online survey allows the project team to better understand the types of hazards that most concern the public and the mitigation actions that are of particular interest. The survey was made accessible through hyperlinks posted on the project information website and circulated via email, Facebook, newspaper articles, etc. Additionally, hard copies of the survey would be distributed at the first in-person public meeting on January 24, 2019. The feedback received was ultimately evaluated and incorporated into the HMPC's decision making process and the final plan. Bi-weekly updates on the survey results were submitted to Kenneth Teague as the local project manager from mid-December to April and responses were reviewed periodically to check for consistency with the development of various sections of the Plan.

Attendees were asked to participate in an exercise called "Mayor for the Day" in which each committee member was given \$40 in pretend currency (divided into one \$20, one \$10, one \$5, and five \$1's). Committee members were then asked to "spend" their limited funds on mitigation actions designed to address the natural hazards of most concern to them. The natural hazards were represented by a row of cups each labeled with the name of a natural hazard likely to be addressed in the regional plan. The results of this exercise are as follows:

- Flood \$167
- Tornado \$58
- Erosion \$50
- Winter Weather \$49
- Drought/Extreme Heat \$31
- Wildfire \$30
- Thunderstorm \$25
- Hurricane \$12
- Dam/Levee Failure \$9
- Landslide \$5
- Lightning \$3
- Hail \$2
- Earthquake \$0

The *Local Capability Assessment Survey* was distributed to the HMPC and explained. Essentially, the *Local Capability Assessment Survey* is designed to capture indicators of local capability in the following categories: planning and regulatory capability, administrative and technical capability, fiscal capability, education and outreach capability, political capability, and self assessment. The Designated Local Jurisdiction Lead was given approximately three weeks to complete the survey and return it to Kenneth Teague with Caldwell County. Results of this survey are presented in the *Capability Assessment* section (Section 5) and Appendix G.

The *Safe Growth Survey* was distributed to the HMPC and explained. Essentially, the *Safe Growth Survey* is designed to capture indicators of safe growth policy in the following categories: comprehensive planning (land use, transportation, environmental management, and public safety), zoning ordinances, subdivision regulations, capital improvement programming and infrastructure policies, and other indicators. The Designated Local Jurisdiction Lead was given approximately three weeks to complete the survey and return it to Kenneth Teague with Caldwell County. Results of this survey were taken into account by members of the HMPC as they reviewed, revised, and crafted their 2019 *Mitigation Action Plans*.

A suggestion was made by AECOM to develop a regional vision statement to help define the new regional plan. General thoughts about a vision statement that were shared as part of the presentation included that a vision statement:

- Captures the overall purpose of the planning process;
- Expresses the outcome that the participating jurisdictions seek to accomplish as the plan is implemented;
- Helps drive the planning process;
- Unites the planning team around a common purpose;
- Provides a foundation for the rest of the planning process; and
- Communicates the reason for the plan to stakeholders, elected officials, and the public.

The first draft of the vision statement shared with the HMPC was:

“Through a cohesive regional planning effort, create and implement an effective hazard mitigation plan that will identify and reduce risk to natural hazards in order to protect the health, safety, quality of life, environment and economy of the Unifour area.”

Based on discussion and input from the HMPC, a final draft vision statement was developed as shown in the *Introduction* section. This final draft vision statement is as follows:

“Through a coordinated regional planning effort, create and implement an effective hazard mitigation plan that will identify and prioritize risk reduction measures for natural hazards in order to protect the health, safety, quality of life, environment, and economy of the Unifour area.”

An update was given on the GIS data collection effort and a reminder of the upcoming deadline was provided. Other topics covered included early drafts of sample map templates to be used for the *Risk Assessment* and a review of available planning guidance and resources.

The meeting ended with open discussion and a list of next steps, which consisted of the following: development of draft risk assessment results (to be completed by April 18, 2019); development of draft capability assessment results (to be completed by April 18, 2019); and scheduling of HMPC Meeting #3.

The online survey was closed on April 18, 2019. This hyperlink is provided for documentation and reference purposes only as the link will no longer access the survey. A complete list of questions and responses can be found in Appendix D.

HMPC Meeting #3

HMPC Meeting #3 (March 14, 2019)

The Mitigation Strategy Workshop was initiated by Kenneth Teague, Caldwell County Emergency Management Coordinator, and was led by Brent Edwards (AECOM Planner) with assistance from Kelly Keefe (AECOM Lead Planner). This meeting consisted of a detailed overview of the draft risk assessment and draft capability assessment results, an update on public outreach, discussion of the regional vision statement, an exercise to formulate regional mitigation goals and regional mitigation actions, and an explanation of next steps.

The meeting began with a brief welcome and opportunity for each of the 23 attendees to introduce themselves to the group.

The meeting continued with an overview of the draft risk assessment findings. The hazards addressed included: flood; erosion; dam/levee failure; drought/extreme heat; thunderstorm, lightning, and hail; tornado; winter weather; hurricane and tropical storm; landslide; earthquake; sinkhole; and wildfire. For each hazard the following information was shared: hazard maps, tables of at-risk buildings and infrastructure, and historical hazard occurrences. Complete inventories and maps were shown for demographic data, parcels and buildings, critical facilities, infrastructure elements, high potential loss properties, and historic properties. The technical information shared during this portion of the presentation is too extensive to share in this section.

The next portion of the presentation consisted of an overview of the draft capability assessment findings. Participation from the *Local Capability Assessment Survey* was 100% (28 out of 28 surveys returned). The results centered on findings in the areas of planning and regulatory capability, administrative and technical capability, fiscal capability, education and outreach capability, political capability, and a community self assessment. The point system and overall capability assessment score for the Region were presented to the group along with a ranking of local capability by jurisdiction. All of this information is presented in its final form in the *Capability Assessment* section (Section 5).

An update on the Public Participation Survey was also provided just prior to a working lunch being served. At the time of the meeting, 363 online surveys had been started and preliminary notes and indications from these surveys were presented to the group. In general, the input being provided by the public was consistent and in-line with the discussions and decisions being made by the HMPC. A reminder was also issued that the second public meeting would be held that evening (April 4, 2019) at the Caldwell County Social Services building where the workshop was currently being held.

HMPC Meeting #4

HMPC Meeting #4 (April 18, 2019)

The Presentation of Draft Mitigation Plan meeting was initiated by Kenneth Teague, Caldwell County Emergency Management Coordinator, and was led by Brent Edwards (AECOM Planner) and Kelly Keefe (AECOM Lead Planner). This meeting consisted of a high-level walkthrough of the working draft Hazard Mitigation Plan including all of its sections, instructions for the committee's review and comment period, results of the public participation survey, an interactive Mitigation Action Plan exercise, discussion of plan maintenance procedures, an open discussion session, and an explanation of next steps.

The portion of the presentation covering a walkthrough of the working draft plan document consisted of an overview of the plan's organization (i.e., table of contents), a brief status update on each section, an explanation of the review and comment process, suggested areas of focus for the committee members, availability of the review files on the project information website, and instructions for submitting review comments.

For the Mitigation Action Plan exercise, participants were asked to pair up with others from their jurisdiction and/or county, to review the *Mitigation Strategy* section of the Plan including regional mitigation goals (provided as a handout), to review the 2019 mitigation actions for their jurisdiction, to review the status of the 2014 mitigation actions for their jurisdiction, make any additional changes that may be needed, and pose questions to the group about mitigation actions they were unsure of.

Some of the questions asked regarding plan maintenance procedures included the following:

- Who will be the lead agency for future mitigation planning meetings, updates, progress reports, etc.?
- What will be the schedule for any ongoing meetings of the HMPC, prior to the next 5-year plan update? (Such as annual meetings, bi-annual meetings, "as-needed" meetings, etc.)
- To what extent will you seek to integrate the regional plan with other local plans, policies and programs? (Such as comprehensive plans, land use plans, emergency operations plans, etc.)
- What other implementation strategies can you use?
- What criteria will be used for 5-year plan updates?
- What kind(s) of reporting procedures would you like to adopt?
- How will you keep the public involved?
- How will you keep stakeholders involved?

Responses and decisions based on these questions are reflected in the *Plan Maintenance Procedures* section (Section 8).

The discussion of next steps consisted of another reminder regarding the review/comment period and deadline, an explanation that the next version of the plan document would be considered a final draft based on the committee's review comments, an overview of the upcoming State and FEMA plan review process, and local adoption procedures and expectations.

HMPC Meeting #5

HMPC Meeting #5 (May 15, 2019)

The Presentation of Draft Mitigation Plan meeting was initiated by Vic Misenhimer, Caldwell County Emergency Management Coordinator, and was led by Brent Edwards (AECOM Planner) and Kelly Keefe, (AECOM Lead Planner). This meeting consisted of a high-level walkthrough of the working draft Hazard Mitigation Plan including all of its sections, instructions for the committee's review and comment period, results of the public participation survey, an interactive Mitigation Action Plan exercise, discussion of plan maintenance procedures, an open discussion session, and an explanation of next steps.

The portion of the presentation covering a walkthrough of the working draft plan document consisted of an overview of the plan's organization (i.e., table of contents), a brief status update on each section, an explanation of the review and comment process, suggested areas of focus for the committee members,

availability of the review files on the project information website, and instructions for submitting review comments by Friday, June 14 if possible.

2.6 Involving the Public

An important component of any mitigation planning process is public participation. Individual citizen and community-based input provides the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community’s overall mitigation strategy aimed at making a home, neighborhood, school, business, or entire planning area safer from the potential effects of hazards.

Public involvement in the development of the Unifour Regional Hazard Mitigation Plan was sought using various methods including open public meetings, an interactive public information website, a project information fact sheet with contact information, a public participation survey, and by making copies of draft Plan documents available for public review on county websites and at government offices. Public meetings were held at two distinct periods during the planning process: (1) during the drafting stage of the Plan; and (2) upon completion of a final draft Plan, but prior to official plan approval and adoption. These public meetings were held at a central location to the planning area to ensure that citizens from each of the four participating counties had reasonable access to the opportunity to participate in-person in the planning process. The public participation survey (discussed in greater detail in subsection 2.6.1) was made available online via the project information website, each county’s website, through web links forwarded via email and newspaper articles, Facebook, Twitter, etc., and in hardcopy form at the first public meeting.

Public Meeting #1

Public Meeting #1 was held from 5 p.m. to 6 p.m. on Thursday, January 24, 2019 at the Caldwell County Social Services building. Four “stations” were set up for members of the public to browse through with two AECOM staff to host the stations and “float” as needed. Station #1 consisted of a kiosk presenting a background video on “what is mitigation?” Station #2 consisted of a set of full color, plotter-sized maps of the planning area showing various hazard zones for discussion. Station #3 provided print copies of the Public Participation Survey for members of the public to complete that night. Station #4 consisted of a kiosk presenting a background video on flood insurance. This public meeting was attended by one member of the public and one newspaper reporter.

Public Meeting #2

Public Meeting #2 was held from 12 p.m. to 2 p.m. on Thursday, April 15, 2019 at the Caldwell County Social Services building. Four “stations” were set up for members of the public to browse through with two AECOM staff to host the stations and “float” as needed. Station #1 consisted of a kiosk presenting a background video on “what is mitigation?” Station #2 consisted of a set of full color, plotter-sized maps of the planning area showing various hazard zones for discussion. Station #3 provided print copies of the *Mitigation Strategy* section of the Plan and *Mitigation Action Plans* for each participating jurisdiction for

members of the public to review and comment on. (Printed comment forms were provided for the public to leave comments on.) Station #4 consisted of a kiosk presenting a background video on flood insurance. This public meeting was attended by three members of the public. No substantial comments were received.

2.6.1 Public Participation Survey

The Unifour Natural Hazard Mitigation Public Participation Survey was made available on December 5, 2018 and remained available until April 18, 2019 per the Public Outreach Strategy. During this time, 396 surveys were completed (100%). 26 of those surveys were submitted on hand-written forms and manually entered into the online system. The complete results of the survey can be found in a summary report found in [Appendix D](#).

The following list is a high-level summary of the dominant responses obtained from the survey.

- 77.1% said they have been personally impacted by a disaster. When asked which category of community assets are the most *susceptible* to natural hazards, most respondents chose cultural and historic resources. When asked which type(s) of mitigation actions are most important to them, most respondents said protecting critical facilities. 63.5% of respondents said that the best way for them to receive information related to natural hazards and hazard mitigation is via the Internet. 86.6% said their home is not located in the floodplain. 56.2% said they have lived in the Unifour area 20+ years. 90.4% live in a single-family home.
- 90.3% said they own their home.
- 88.5% said they do not carry flood insurance.
- 91.9% said they are interested in making their home or neighborhood more hazard resistant.
- When asked which category(ies) of mitigation techniques are most important to them, most respondents said actions relating to emergency services.
- When asked how *important* each type of community asset is to them, the top three answers were hospitals and medical care facilities, fire stations, and police stations, in that order.
- When asked how concerned they are about the possibility of their community being impacted by natural hazards, the top three concerns were severe thunderstorms, severe winter storms, and flooding, in that order.

The results of the survey were presented to members of the HMPC at HMPC Meeting #4 so that public opinion could be factored into final changes and additions to each jurisdiction's *Mitigation Action Plan*.

2.7 Involving Stakeholders

The Unifour Hazard Mitigation Planning Committee included a variety of stakeholders beyond the representatives from each participating jurisdiction. These included representatives from the American Red Cross, Duke Energy, Frye Regional Medical Center (FRMC), and the State of North Carolina Forest Service. Input from additional stakeholders, including neighboring communities, was welcomed through the open public meetings and online survey. If any additional stakeholders representing other agencies and organizations participated through the Public Participation Survey, that information is unknown due to the anonymous nature of the survey.

2.8 Documentation of Plan Progress

Progress in hazard mitigation planning for the participating jurisdictions in the Unifour Region is documented in this plan update. Since hazard mitigation planning efforts officially began in the participating counties with the development of the initial hazard mitigation plans in the early 2000s, many mitigation actions have been completed and implemented in the participating jurisdictions. These actions will help reduce the overall risk to natural hazards for the people and property in the Unifour Region. The actions that have been completed are documented in the Mitigation Action Plans found in Section 7.

In addition, community capability continues to improve with the implementation of new plans, policies, and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 5: *Capability Assessment*. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and hazard mitigation planning and have proven this by reconvening the Hazard Mitigation Planning Committee to update and combine the previous hazard mitigation plans into this new regional plan and by continuing to involve the public in the hazard mitigation planning process.

Section 3: Planning Area Profile

This section provides a general overview of the planning region which has been defined as the planning area for this Plan. It consists of the following five subsections:

- 3.1 Geography and the Environment
- 3.2 Basin Description
- 3.3 Population and Demographics
- 3.4 Housing, Infrastructure, and Land Use
- 3.5 Employment and Industry

3.1 Geography and the Environment

The Unifour Region is comprised of the four counties in the Catawba Valley region of western North Carolina: Alexander County, Burke County, Caldwell County, and Catawba County. The Unifour Region is the same as the “Hickory-Lenoir-Morganton Metropolitan Statistical Area” as defined by the U.S. Census Bureau.

Alexander County's main geographic feature is the Brushy Mountains, a deeply eroded spur of the Blue Ridge Mountains to the west. They rise from 300 to 1,000 feet above the surrounding countryside, and dominate the county's northern horizon. The highest point in Alexander County is Hickory Knob with an elevation of 2,560 feet above sea level. Barrett Mountain, an isolated mountain ridge, is located in the western portion of the county. The remainder of Alexander County's terrain consists of gently rolling countryside.

The varied landscape of Burke County ranges from the Blue Ridge escarpment to the rolling plains of the western piedmont. Table Rock, a prominent peak in Burke County in the east rim of Linville Gorge, is part of the Pisgah National Forest and has been described as “the most visible symbol in the region.” The county has abundant natural resources including South Mountains State Park, Pisgah National Forest and the Linville Gorge Wilderness Area, the Catawba River, the Johns River, the Henry River, Table Rock Mountain, the Blue Ridge Parkway, and the 3,000-acre expansion of the Lake James State Park. These natural resources offer excellent recreational opportunities and attract visitors from across the southeastern United States.

Caldwell County is divided into three distinct geographic sections: the Blue Ridge Mountains, which dominate the northern and western parts of the county; the gently rolling Piedmont country in the middle and southern parts of the county; and the Brushy Mountains, an isolated remnant of the Blue Ridge Mountains. The Brushy Mountains run across much of Caldwell County's eastern section. Hibriten Mountain, located within the city limits of Lenoir, the county's largest city, marks the western end of the Brushy Mountain range. In the western part of the county is the Wilson Creek area.

Catawba County is located in the foothills of the Blue Ridge Mountains. It is located in the region referred to as the Upper Piedmont Plateau, more commonly known as the “foothills.” The elevation of the county averages 995 feet with a range from a high of 1,780 feet at Bakers Mountain in the west-central portion of the county to a low of 705 feet where the Catawba River leaves the county. The county's landscape can be described as “rolling” with fairly broad ridges and some short steep slopes. Geologically,

Catawba County lies within the Inner Piedmont Belt comprised mostly of metamorphic and intrusive rocks. About 45.5% of the county’s acreage is wooded, of which 98% is privately owned.

The Catawba River, which is influential to all four counties in the planning area, begins in the Blue Ridge Mountains and flows 225 miles into Lake Wateree in South Carolina. The river is an extraordinary ecosystem that provides habitat for 50 fish species, 160 bird species, and 120 tree species. The river also serves as a source of electric power, provides recreational opportunities for residents and tourists, and is one of the major economic foundations of the region. It transects Burke County, creates the southern borders of Caldwell and Alexander counties, and the northern and eastern borders of Catawba County.

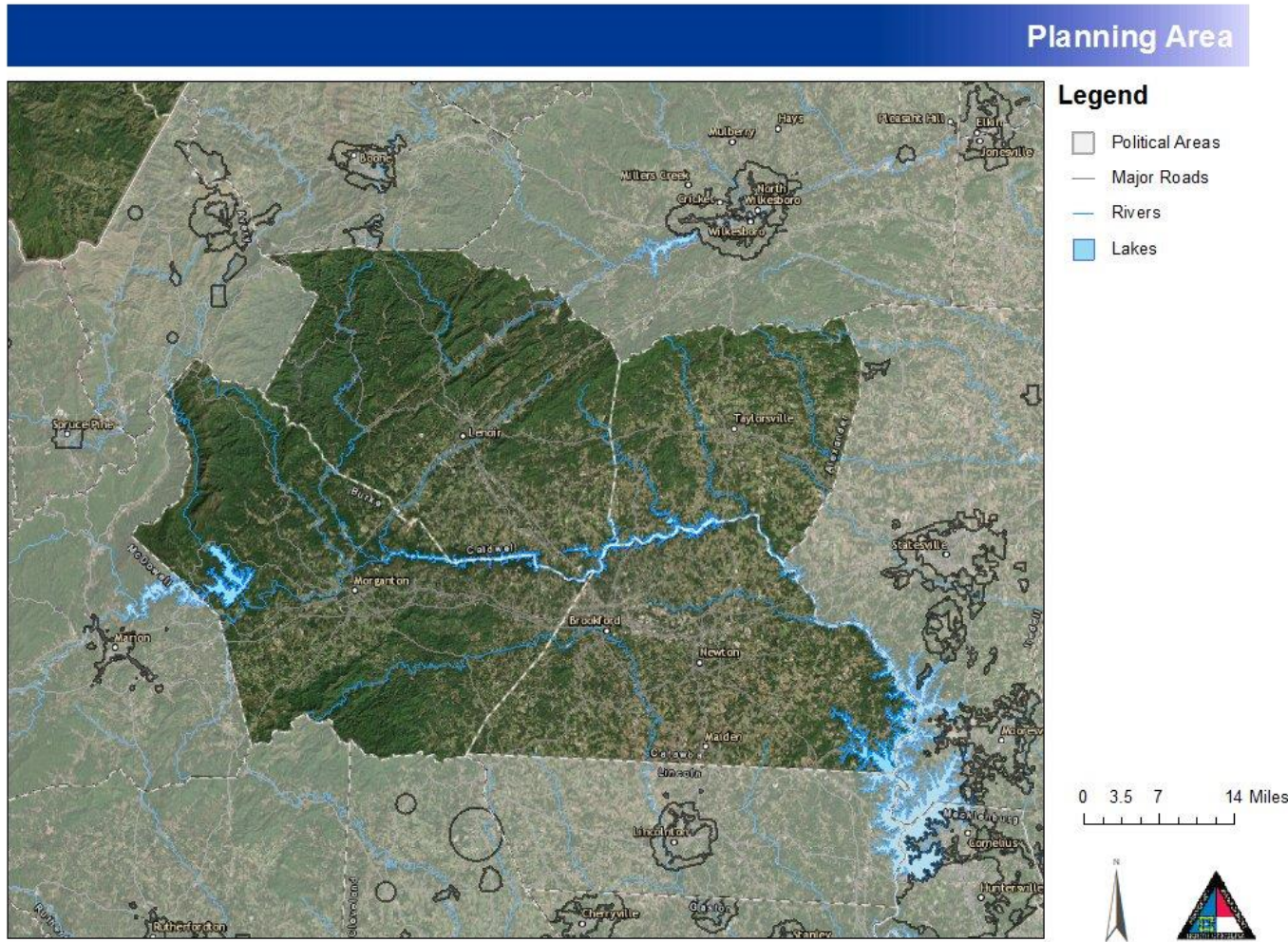
Table 3.1 shows total land and water area for the planning area.

Table 3.1: Total Land and Water Area for the Planning Area

County	Total Land Area (sq mi)	Total Water Area (sq mi)	Total Area (sq mi)
Alexander	260	3	263
Burke	506	8	514
Caldwell	472	3	475
Catawba	401	15	416
TOTAL PLAN AREA	1,639	29	1,668

A map profiling the planning area is shown in **Figure 3.1**.

Figure 3.1: Planning Area



3.2 Basin Description

Table 3.2, “Basin Description” contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 3.2: Basin Description

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin #	Primary Flooding Source	Description of Affected Area	DA (sq mi)
South Fork Catawba	03050102	South Fork Catawba River	The South Fork Catawba River Basin begins in the southeast portion of Burke County and continues to drain portions of Catawba, Gaston, and Lincoln Counties before ending at the Catawba River.	660.7
South Yadkin	03040102	South Yadkin River	The South Yadkin River Basin begins in Alexander and Wilkes Counties and drains southeast through Yadkin and Iredell Counties and ends in Davie and Rowan Counties at the confluence with the Yadkin River.	906.4
Upper Broad	03050105	Broad River	The Upper Broad River Basin begins with the Green River in the southwest corner of Henderson County and drains significant portions of Buncombe, Cleveland, McDowell, Polk, and Rutherford Counties before following the Broad River into South Carolina.	2477.9
Upper Catawba	03050101	Catawba River	The Upper Catawba River Basin headwaters are in the Appalachian Mountains (Avery, Caldwell, McDowell, and Watauga Counties) and drains through the Piedmont region (Gaston and Mecklenburg Counties) of North Carolina, ending in York County, South Carolina.	2357
Upper New	05050001	New River	The Upper New River Basin headwaters begin with the North and South Fork of the New River in Watauga County and then drains northeast through Ashe and Alleghany Counties and into Virginia, where the New River continues to Ohio.	2943.7
Upper Yadkin	03040101	Yadkin River	The Upper Yadkin River Basin headwaters are in Caldwell and Watauga County. The basin then follows the Yadkin River east, draining Surry and Yadkin Counties before turning south and draining Davidson and Davie Counties.	2454.8

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin #	Primary Flooding Source	Description of Affected Area	DA (sq mi)
Watauga, North Carolina, Tennessee	06010103	Watauga River	The Watauga River Basin drains Avery and Watauga Counties and follows the Watauga River west into Tennessee and into Boone Lake.	868.4

3.3 Population and Demographics

Catawba County has the largest population of the four participating counties and the City of Hickory is the largest city located within the planning area. Several participating jurisdictions experienced a decrease in population between 2000 and 2010. The Town of Catawba experienced the largest percentage decrease of -15.75% (from a 2000 population of 698 to a 2010 population of 603). The Town of Rhodhiss experienced the largest percentage increase with an increase of 65.79% (from a 2000 population of 366 to a 2010 population of 1,070). Population counts from the U.S. Census Bureau for 1990, 2000, and 2010 for each of the participating counties and jurisdictions are presented in **Table 3.3**.

Table 3.3: Population Counts for Participating Jurisdictions

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010
ALEXANDER				
Alexander County (Unincorporated Area)	24,730	29,712	33,016	11.12%
Town of Taylorsville	2,830	3,904	4,180	7.07%
Subtotal Alexander	27,560	33,616	37,196	10.65%
BURKE				
Burke County (Unincorporated Area)	41,534	47,174	49,470	4.87%
City of Morganton	20,425	23,049	22,546	-2.18%
Town of Connelly Springs	1,519	1,861	1,659	-10.85%
Town of Drexel	3,187	5,641	5,506	-2.39%
Town of Glen Alpine	1,174	1,574	1,964	24.78%
Town of Hil debran	1,389	1,742	1,945	11.65%
Town of Rutherford College	1,490	1,426	1,502	5.33%
Town of Valdese	3,610	4,901	4,387	-10.49%
Subtotal Burke	74,328	87,368	88,979	1.84%

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010
CALDWELL				
Caldwell County (Unincorporated Area)	30,059	31,638	34,680	9.62%
City of Lenoir	18,528	20,691	20,837	0.71%
Town of Cahah's Mountain	2,097	2,748	2,789	1.49%
Town of Gamewell	2,961	3,794	4,043	6.56%
Town of Granite Falls	4,997	6,742	7,104	5.37%
Town of Hudson	5,448	5,253	6,431	22.43%
Town of Rhodhiss	302	62	385	520.97%
Town of Sawmills	5,987	6,082	6,380	4.9%
Village of Cedar Rock	91	312	294	-5.77%
Subtotal Caldwell	70,470	77,322	82,943	7.27%
CATAWBA				
Catawba County (Unincorporated Area)	50,474	61,731	70,017	13.42%
City of Claremont	1,558	1,720	1,957	13.78%
City of Conover	6,874	7,958	9,669	21.5%
City of Hickory	40,445	46,238	48,481	4.85%
City of Newton	10,359	13,737	14,214	3.47%
Town of Brookford	210	444	371	-16.44%
Town of Catawba	1,181	1,324	1,152	-12.99%
Town of Long View	3,672	4,134	4,181	1.14%
Town of Maiden	3,929	4,910	4,964	1.1%
Subtotal Catawba	118,702	142,196	155,006	9.01%
TOTAL PLAN AREA	291,060	340,502	364,124	6.94%

Source: U.S. Census Bureau.

Based on the 2010 Census, the median age for residents of the participating counties ranges from 39 to 41 years. The racial characteristics of the participating counties are presented in **Table 3.4**. Generally,

whites make up the vast majority of the population of the Region, accounting for almost 89% percent of the Region’s population.

Table 3.4: Demographics of Participating Counties

County	White Persons	Black Persons	Other Race	Persons of Hispanic Origin*
Alexander	89.59%	5.49%	2.25%	4.31%
Burke	84.24%	6.72%	3.07%	5.1%
Caldwell	90.23%	4.93%	2.47%	4.58%
Catawba	81.77%	8.43%	4.13%	8.42%

Source: U.S. Census Bureau, 2010.

*Hispanics may be of any race, so also are included in applicable race categories.

3.4 Housing, Infrastructure, and Land Use

3.3.1 Housing

According to the U.S. Census Bureau, there are 163,144 housing units in the Unifour Region, most of which are single family homes (according to the 2010 census). Housing information for the four participating counties is presented in **Table 3.5**. As shown in the table, Catawba County has the highest number of housing units compared to the other counties. Alexander County has the least. In terms of median home value, Catawba County has the highest and Caldwell County has the lowest.

Table 3.5: Housing Characteristics

County	Housing Units (2011)	Median Home Value (2007-2011)
Alexander	16,189	\$121,400
Burke	40,879	\$110,500
Caldwell	37,659	\$106,800
Catawba	67,886	\$129,000
TOTAL/AVERAGE PLAN	162,613	\$118,451

Source: U.S. Census Bureau.

3.3.2 Infrastructure

Major roads in the planning area include I-40, US 64, US 70, US 221, US 321, NC 10, NC 16, NC 18, NC 90, NC 114, NC 126, NC 127, NC 150, NC 181, and NC 268. Hickory Regional Airport is the primary commercial aviation airport in the region. It was served by commercial airlines until 2005.

National protected areas in the planning area include Blue Ridge Parkway and Pisgah National Forest.

Colleges and universities in the planning area include Appalachian Center at Hickory, Appalachian Center at Lenoir, Appalachian Center at Morganton, Catawba Valley Community College Alexander Campus, Catawba Valley Community College in Hickory, Gardner-Webb University Hickory Center, Lenoir-Rhyne University in Hickory, N.C. Center for Engineering Technologies, and Western Piedmont Community College in Morganton.

3.3.3 Current and Future Land Use

Current land use in Alexander County can be characterized as being mainly “residential” or “vacant.” Given the county’s rural and agricultural history, these land use patterns are not surprising. Unlike other counties in the Unifour Region, Alexander County is the only county with a single municipality. Taylorsville, the County seat, is the center of its local government services and its low population also reflects the county’s rural heritage. The vast majority of land in Alexander County is devoted to residential uses. Of the nearly 160,800 acres in the county, 96% is occupied by residential uses or is vacant and could be used for residential purposes. To state the opposite, only slightly more than 1,000 of the county’s 24,300 land parcels are designated for uses other than residential, mostly industrial or commercial. In terms of future land use in Alexander County, future policy makers should continue to think about the amount of land currently zoned residential, especially in the RA-20 Zoning District and used primarily for agriculture. These parcels represent land that could potentially be subdivided into residential uses in the coming decades. While market forces basically drive these decisions, existing data provides some indication of development pressures across the Unifour Region.

Growth and development in Burke County is predominantly located around the incorporated areas along the I-40 corridor. There is also a growing trend of second home development in the area around Lake James and the Jonas Ridge Community in the northwest portion of the county. Small area plans have been completed for the I-40 corridor and for the watershed around Lake James. In some cases, growth and development result in the alteration of natural topographic features that, in turn, affect the extent of flooding and the boundary of the floodplain.

In terms of undeveloped land in Caldwell County that could potentially be developed for allowable uses, there are approximately 149,140 undeveloped acres currently zoned as residential, 1,060 undeveloped acres zoned commercial, 1,255 undeveloped acres zoned industrial, and 51,400 undeveloped acres zoned for other land use types. This is a total of 202,855 undeveloped acres that could be developed and that could potentially be located in various hazard areas.

While Catawba County is becoming more developed and more urban in nature, it still consists of a large amount of rural and farm lands. As described in Catawba County’s Farm & Food Sustainability Plan (2013), Catawba County has a cropland acreage of approximately 36,600 acres with 14,100 acres of woodland. The total “farmland” of 71,906 acres represents approximately 28 percent of the county’s land area. These non-urban uses represent approximately 210 square miles; roughly half of the county. Furthermore, nearly half of the county’s population is now located within incorporated areas. These numbers all seem to paint a picture of a changing county; one with a generous amount of rural, undisturbed land and at the same time one with a number of emerging centers of human activity. Catawba County has seven small area plans that were completed from 2000 to 2005 which serve as County long-range plans. All have a goal of rural preservation which came from citizen input during a series of community meetings.

3.5 Employment and Industry

The Hickory area in Catawba County is home to many leading manufacturers of furniture, fiber optic cable, and pressure-sensitive tape. It is estimated that 60% of the nation's furniture used to be produced within a 200-mile radius of the City of Hickory. 40% of the world's fiber optic cable is made in the Hickory area. The Hickory area is additionally known as a datacenter corridor and is home to large datacenters operated by Apple and Google. Hickory is the retail hub of the foothills and Unifour Region, and is home to the largest shopping mall in the region, Valley Hills Mall.

Section 4: Risk Assessment

This section comprises the risk assessment portion of the Plan Area Hazard Mitigation Plan, including identification of hazards, hazard profiling and analysis, and assessment of vulnerability. It consists of the following six subsections:

- 4.1 Overview
- 4.2 Hazard Selection
- 4.3 Methodologies and Assumptions
- 4.4 Inventory of Community Assets
- 4.5 Hazard Profiles, Analysis, and Vulnerability
- 4.6 Conclusions on Hazard Risk

4.1 Overview

A risk assessment is performed to determine the potential impacts of hazards on the people, built and natural environments, and economy of a given planning area. The Risk Assessment provides the foundation for the rest of the mitigation planning process, which is focused on identifying and prioritizing actions to reduce risk to hazards. In addition to informing the Mitigation Strategy, the Risk Assessment can also be used to establish emergency preparedness and response priorities, for land use and comprehensive planning, and for decision making by elected officials, city and county departments, businesses, and organizations in the community.

A typical risk assessment consists of three primary components. Some form of hazard identification process needs to take place, followed by a detailed profiling of the hazards that will be addressed in the plan. Then the profiled hazards are assessed to determine the vulnerability of the planning area to each hazard being addressed. It is also important to document key details regarding the methodologies and assumptions used to perform the risk assessment, the asset inventories used to perform the risk assessment, and finally conclusions on hazard risk. The conclusions on hazard risk essentially consist of a prioritized ranking of hazards of concern.

This risk assessment was completed using data from North Carolina Emergency Management's Risk Management Tool Suite (RMT): The power of a centralized data clearinghouse realized. NCEM's Risk Management Tool (RMT) is a web-based suite of tools designed to provide enhanced mitigation planning, preparedness assessment, and resiliency assessment capabilities to communities. This web-enabled system is actually three unique tools in one, all based on the same core geodatabase. This new RMT GBD functions as a data clearinghouse feeding multiple unique applications such as the Hazard Mitigation Planning Tool, the Resiliency Assessment Tool, and the Preparedness Assessment Tool. In the following sections of the plan, all data pulled from the NCEM iRISK database is listed as "GIS Analysis".

4.2 Hazard Selection

The Plan Area is vulnerable to a wide range of natural hazards that threaten life and property. Current regulations and interim guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards.¹

Upon a thorough review of the full range of natural hazards covered in the existing mitigation plans for the four participating counties in the Plan area, the hazards suggested under FEMA mitigation planning guidance, and the hazards addressed in the North Carolina State Hazard Mitigation Plan, the participating jurisdictions in the Plan Area have identified 15 hazards that are to be addressed in the Plan Area. These hazards were identified through an extensive process that included input from Hazard Mitigation Planning Committee (HMPC) members.

Table 4.1 lists the full range of natural hazards initially considered for inclusion in the Plan. This table includes a total of 15 individual hazards and documents the evaluation process used for determining which of the initially identified hazards were considered significant enough for further evaluation in the *Risk Assessment*. For each hazard considered, the table indicates whether or not the hazard was identified as a significant hazard to be assessed further, how this determination was made, and why this determination was made. The table works to summarize not only those hazards that were identified (and why) but also those that were not identified (and why not).

Table 4.1: Documentation of the Hazard Selection Process

Hazard Considered	Hazard Type (Natural, Intentional, Accidental)	Was this hazard considered significant/appropriate enough to be addressed in the plan at this time?	How was this determination made?	Why was this determination made?
River Flooding	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee
Levee Failure	Natural	Yes	The threat of damage and loss of life from the failure of a dam or levee is of sufficient concern to warrant study.	By consensus of the planning committee

¹An evaluation of human-caused hazards (e.g., technological hazards, terrorism, etc.) is permitted, though not required, for plan approval. The Unifour Region has chosen to focus solely on natural hazards for the purposes of this plan, except where technological hazards directly relate to a natural hazard (for example, a hazardous materials facility located in a mapped floodplain).

Hazard Considered	Hazard Type (Natural, Intentional, Accidental)	Was this hazard considered significant/appropriate enough to be addressed in the plan at this time?	How was this determination made?	Why was this determination made?
Wildfire	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee
Tornado	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee
Earthquake	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee
Landslide	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee
Snow	Natural	Yes	The threat of damage and loss of life from winter weather is of sufficient concern to warrant study.	By consensus of the planning committee
Dam Failure	Natural	Yes	The threat of damage and loss of life from the failure of a dam or levee is of sufficient concern to warrant study.	By consensus of the planning committee
Hail	Natural	Yes	The threat of property damage from hail is of sufficient concern to warrant study.	By consensus of the planning committee
Drought	Natural	Yes	The threat of damage and loss of life is of sufficient concern to warrant study.	By consensus of the planning committee

Hazard Considered	Hazard Type (Natural, Intentional, Accidental)	Was this hazard considered significant/appropriate enough to be addressed in the plan at this time?	How was this determination made?	Why was this determination made?
Hurricane Winds	Natural	Yes	Despite the inland location of the planning area, hurricanes and tropical storms are of sufficient concern to warrant study.	By consensus of the planning committee
Ice	Natural	Yes	The threat of damage and loss of life from winter weather is of sufficient concern to warrant study.	By consensus of the planning committee
Thunderstorm Winds	Natural	Yes	The threat of damage from thunderstorms is of sufficient concern to warrant study.	By consensus of the planning committee
Erosion	Natural	Yes	The threat of damage from erosion is of sufficient concern to warrant study.	By consensus of the planning committee
Sinkholes	Natural	Yes	Due to local concerns and recent occurrences.	By consensus of the planning committee

The final list of hazards to be presented in the Plan, as agreed upon by the HMPC, is as follows:

Natural Hazard

- River Flooding
- Levee Failure
- Wildfire
- Tornado
- Earthquake
- Landslide
- Snow
- Dam Failure
- Hail
- Drought

- Hurricane Winds
- Ice
- Thunderstorm Winds
- Erosion
- Sinkholes

This list is repeated at the beginning of subsection 4.5.

The table below represents how hazards are listed in the NC State HMP compared to how they are listed in this Plan.

Unifour Regional HMP Hazard List	NC State HMP Hazard List
River Flooding	Flooding
Levee Failure	Not Addressed
Wildfire	Wildfire
Tornado	Tornadoes/Thunderstorm
Earthquake	Earthquake
Landslide	Landslide/Rock Fall
Snow	Severe Winter Weather
Dam Failure	Dam Failure
Hail	Tornadoes/Thunderstorm
Drought	Drought
Hurricane Winds	Hurricanes and Coastal Hazards
Ice	Severe Winter Weather
Thunderstorm Winds	Tornadoes/Thunderstorm
Erosion	Not Addressed
Sinkholes	Sinkholes

Another consideration in the selection of the hazards to be addressed in the Plan is the history of major disaster declarations in the planning area. According to the FEMA Disaster Declarations web page, there have been 46 major disaster declarations issued in the state of North Carolina since 1974 (see **Table 4.2**).

Table 4.2: Major Disaster Declarations for Burke, Caldwell, Catawba and Alexander counties from 1974 to 2013

Event	Declaration Date	Declaration Number	County(s) in the Planning Area Declared
TORNADOES	04/12/1974	DR-428	Burke
TORNADOES	04/12/1974	DR-428	Caldwell
Drought and Freezing	03/02/1977	EM-3033	Catawba
Drought	08/11/1977	EM-3049	Alexander
Drought	08/11/1977	EM-3049	Burke
Drought	08/11/1977	EM-3049	Caldwell
Drought	08/11/1977	EM-3049	Catawba
SEVERE STORMS, FLOODING	11/09/1977	DR-542	Burke
SEVERE STORMS, FLOODING	11/09/1977	DR-542	Caldwell
SEVERE STORMS, FLOODING	11/09/1977	DR-542	Catawba
TORNADOES	05/17/1989	DR-827	Catawba
HURRICANE HUGO	09/25/1989	DR-844	Alexander
HURRICANE HUGO	09/25/1989	DR-844	Burke
HURRICANE HUGO	09/25/1989	DR-844	Caldwell
HURRICANE HUGO	09/25/1989	DR-844	Catawba
Severe Snowfall and Winter Storm	03/17/1993	EM-3110	Alexander
Severe Snowfall and Winter Storm	03/17/1993	EM-3110	Burke
Severe Snowfall and Winter Storm	03/17/1993	EM-3110	Caldwell
Severe Snowfall and Winter Storm	03/17/1993	EM-3110	Catawba
Blizzard	01/13/1996	DR-1087	Alexander
Blizzard	01/13/1996	DR-1087	Burke
Blizzard	01/13/1996	DR-1087	Caldwell
Blizzard	01/13/1996	DR-1087	Catawba

Event	Declaration Date	Declaration Number	County(s) in the Planning Area Declared
Storms/Flooding	02/23/1996	DR-1103	Alexander
Storms/Flooding	02/23/1996	DR-1103	Burke
Storms/Flooding	02/23/1996	DR-1103	Caldwell
Storms/Flooding	02/23/1996	DR-1103	Catawba
Severe Ice Storm	12/12/2002	DR-1448	Alexander
Severe Ice Storm	12/12/2002	DR-1448	Burke
Severe Ice Storm	12/12/2002	DR-1448	Caldwell
Severe Ice Storm	12/12/2002	DR-1448	Catawba
Tropical Storm Frances	09/10/2004	DR-1546	Alexander
Tropical Storm Frances	09/10/2004	DR-1546	Burke
Tropical Storm Frances	09/10/2004	DR-1546	Caldwell
Tropical Storm Frances	09/10/2004	DR-1546	Catawba
Hurricane Ivan	09/18/2004	DR-1553	Burke
Hurricane Ivan	09/18/2004	DR-1553	Caldwell
Hurricane Katrina Evacuation	09/05/2005	EM-3222	Alexander
Hurricane Katrina Evacuation	09/05/2005	EM-3222	Burke
Hurricane Katrina Evacuation	09/05/2005	EM-3222	Caldwell
Hurricane Katrina Evacuation	09/05/2005	EM-3222	Catawba
Severe Winter Storms and Flooding	02/02/2010	DR-1871	Burke
Severe Winter Storms and Flooding	02/02/2010	DR-1871	Caldwell
Severe Storms, Flooding, Landslides, and Mudslides	09/25/2013	DR-4146	Burke
Severe Storms, Flooding, Landslides, and Mudslides	09/25/2013	DR-4146	Caldwell
Severe Storms, Flooding, Landslides, and Mudslides	10/29/2013	DR-4153	Catawba

Source: Federal Emergency Management Agency.

As shown in **Table 4.2**, the earliest major disaster declaration to occur in the planning area was in 1974. The last were in 2013. The 46 major disaster declarations shown above cover the hazards of flood, hurricane/tropical storm, severe storms, severe winter weather, and tornado relevant to the planning area. This history of disaster declarations is consistent with the hazards identified by the HMPC to be addressed in the Plan.

4.3 Methodologies and Assumptions

Certain assumptions are inherent in any risk assessment. For the Unifour Regional HMP, three primary assumptions were discussed by the HMPC from the beginning of the risk assessment process: (1) that the best readily available data would be used, (2) that the hazard data selected for use is reasonably accurate for mitigation planning purposes, and (3) that the risk assessment will be regional in nature with local, municipal-level data provided where appropriate and practical.

The following list provides key points by hazard type that are relevant to understanding the risk assessment presented in this section:

Flood

- Pre-FIRM buildings have been selected as a subset of at-risk buildings following the assumption that structures built prior to the community joining the National Flood Insurance Program (NFIP) are likely to be at greater risk than post-FIRM buildings.
- Effective FEMA DFIRM data was used for the flood hazard areas. Flood zones used in the analysis consist of Zone AE (1-percent-annual-chance flood), Zone AE Floodway, and the 0.2-percent-annual-chance flood hazard area.
- Building footprints were received from all four participating counties. To refine the results, footprints with an area less than 500 square feet were excluded from the analysis. To determine if a building is in a hazard area, the building footprints were intersected with each of the mapped hazard areas. If a building intersects two or more hazard areas (such as the 1-percent-annual-chance flood zone and the 0.2-percent-annual-chance flood zone), it is counted as being in the hazard area of highest risk.
- Parcels were received from all four participating counties. The parcel data provided building value and year built. Building value was used to determine the value of buildings at risk. Year built was used to determine if the building was constructed prior to or after the community had joined the NFIP and had an effective FIRM and building codes enforced.
- Census blocks and Summary File 1 from the 2010 Census were used to determine population at risk. This included the total population, as well as the vulnerable elderly and children age groups. To determine population at risk, the census blocks were intersected with the hazard area. To better determine the actual number of people at risk, the intersecting area of the census block was calculated and divided by the total area of the census block to determine a ratio of area at risk. This ratio was applied to the population of the census block. For example, a census block has a population of 400 people. Five percent of the census block intersects the 1-percent-annual-chance flood hazard area. The ratio estimates that 20 people are then at risk within the 1-percent-annual-chance flood hazard area (5% of the total population for that census block).

- Limitations: There can be multiple buildings located on one parcel. However, the parcel only provides one value for building value and year built, and it is not known from the provided data if the building value is cumulative or for the primary structure on the parcel. For the analysis, building value was only counted once per parcel, regardless of the number of structures. This was done to prevent grossly over-estimating the value of buildings at risk. For example, a parcel has three buildings with a value of \$300,000. If two of those buildings intersect the 1-percent-annual-chance flood hazard area, the assumed building value at risk is \$300,000 not \$600,000. Even though only two out of three buildings are at risk, there is no way to determine the individual value of each building, so the building value for the whole parcel is counted. The value at risk is also the value of the entire building, and does not take into account flood damage based on elevation, number of floors, or value of contents.

Lightning

- Based on NCDC data, the number of cloud-to-ground lightning flashes was calculated for each day, month, and year as well as for the 1986-to-present period of record. Additionally, the number of flashes was calculated for each hour and summarized by month, year, and period of record. Grids were created to show only positive polarity flashes for all time periods. The summary grids are defined as a 4 km Albers Equal Area grid, fit to the continental United States. The data was re-sampled to 150-meter cells using bilinear interpolation (for cartographic purposes).
- Average annual lightning strikes are the 25-year-average of annual average lightning strikes from 1987-2012. Accuracy depends on the distribution of lightning detection sensors which is unknown.

Wildfire

- Wildfire hazard areas were determined using the Wildland Fire Susceptibility Index (WFSI)
 - o Areas with a WFSI value of 0.01 – 0.05 were considered to be at moderate risk.
 - o Areas with a WFSI value greater than 0.05 were considered to be at high risk.
 - o Areas with a WFSI value less than 0.01 were considered to not be at risk.
- The WFSI data used for the wildfire risk analysis is a value between 0 and 1. It was developed consistent with the mathematical calculation process for determining the probability of an acre burning. The WFSI integrates the probability of an acre igniting and the expected final fire size based on the rate of spread in four weather percentile categories into a single measure of wildland fire susceptibility. Due to some necessary assumptions, mainly fuel homogeneity, it is not the true probability. But since all areas of the state have this value determined consistently, it allows for comparison and ordination of areas of the state as to the likelihood of an acre burning.
- Building footprints were received from all four participating counties. To refine the results, footprints with an area less than 500 square feet were excluded from the analysis. To determine if a building is in a hazard area, the building footprints were intersected with each of the hazard areas. If a building intersects two or more hazard areas, it is considered to be in the hazard area of highest risk.
- Parcels were received from all four participating counties. This data provided building value and year built. Building value was used to determine the value of buildings at risk.

- Census blocks and Summary File 1 from the 2010 Census were used to determine population at risk. This included the total population, as well as the vulnerable elderly and children age groups. To determine population at risk, the census blocks were intersected with the hazard area. To better determine the actual number of people at risk, the intersecting area of the census block was calculated and divided by the total area of the census block to determine a ratio of area at risk. This ratio was applied to the population of the census block. For example, a census block has a population of 400 people. Five percent of the census block intersects a high wildfire hazard area. The ratio estimates that 20 people are at risk within that hazard area (5% of the total population for that census block).
- There can be multiple buildings on one parcel. However, the parcel only provides one value for building value and year built, and it is not known from the provided data if the building value is cumulative or for the primary structure on the parcel. For the analysis, building value was only counted once per parcel, regardless of the number of structures. This was done to prevent grossly over-estimating the value of buildings at risk. For example, a parcel has three buildings with a value of \$300,000. If two of those buildings intersect the high risk area, the assumed building value at risk is \$300,000 not \$600,000. Even though only two out of three buildings are at risk, there is no way to determine the individual value of each building, so the building value for the whole parcel is counted. The value at risk is also the value of the entire building, and does not take into account the value of contents.

Winter Weather

- Winter storm maps are an interpolation of recorded values (historical maximums and 30-year-average) derived from individual point locations.

4.4 Inventory of Community Assets

Each participating jurisdiction assisted in the identification of assets to be used for analysis to determine what assets may be potentially at risk to the hazards covered in the Plan. These assets are defined broadly as anything that is important to the function and character of the community. For the purposes of this Risk Assessment, the individual types of assets include:

- Population
- Parcels and Buildings
- Critical Facilities
- Infrastructure
- High Potential Loss Properties
- Historic Properties

Although all assets may be affected by certain hazards (such as hail or tornadoes), some assets are more vulnerable because of their location (e.g., the floodplain), certain physical characteristics (e.g., slab-on-grade construction), or socioeconomic uses (e.g., major employers). The following subsections document the numbers and values used for the

4.4.1 Population

The population counts shown in **Table 4.3** are derived from 2010 census data and include a breakdown of two subpopulations assumed to be at greater risk to natural hazards than the “general” population: elderly (ages 65 and older) and children (under the age of 5). **Figure 4.1** shows population density per square mile, along with the distribution of potentially at-risk populations, across the planning area.

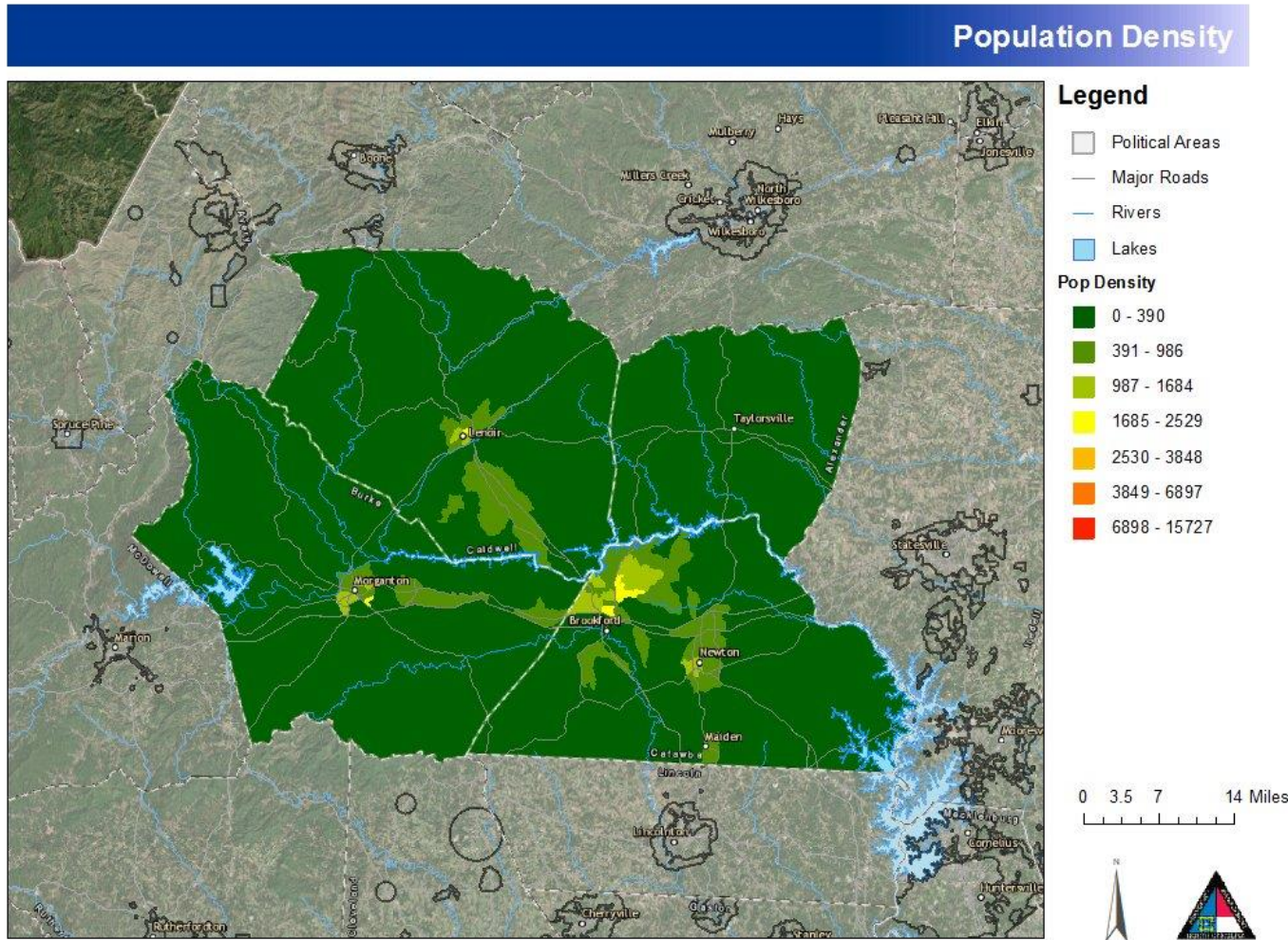
Table 4.3: Population Counts with Vulnerable Population Breakdown

Jurisdiction	2010 Census Population	Elderly (Age 65 and Over)	Children (Age 5 and Under)
Alexander			
Alexander County (Unincorporated Area)	33,016	4,995	1,961
Town of Taylorsville	4,180	632	248
Subtotal Alexander	37,196	5,627	2,209
Burke			
Burke County (Unincorporated Area)	49,470	7,997	2,762
City of Morganton	22,546	3,645	1,259
Town of Connelly Springs	1,659	268	93
Town of Drexel	5,506	890	307
Town of Glen Alpine	1,964	318	110
Town of Hildebran	1,945	314	109
Town of Rutherford College	1,502	243	84
Town of Valdese	4,387	709	245
Subtotal Burke	88,979	14,384	4,969
Caldwell			
Caldwell County (Unincorporated Area)	34,680	5,352	1,940
City of Lenoir	20,837	3,216	1,166
Town of Cahaj's Mountain	2,789	430	156
Town of Gamewell	4,043	624	226
Town of Granite Falls	7,104	1,096	397
Town of Hudson	6,431	992	360

Jurisdiction	2010 Census Population	Elderly (Age 65 and Over)	Children (Age 5 and Under)
Town of Rhodhiss	385	59	22
Town of Sawmills	6,380	985	357
Village of Cedar Rock	294	45	16
Subtotal Caldwell	82,943	12,799	4,640
Catawba			
Catawba County (Unincorporated Area)	70,017	9,835	4,368
City of Claremont	1,957	275	122
City of Conover	9,669	1,358	603
City of Hickory	48,481	6,810	3,024
City of Newton	14,214	1,997	887
Town of Brookford	371	52	23
Town of Catawba	1,152	162	72
Town of Long View	4,181	587	261
Town of Maiden	4,964	697	310
Subtotal Catawba	155,006	21,773	9,670
TOTAL PLAN AREA	364,124	54,583	21,488

Source: U.S. Census Bureau.

Figure 4.1: Population Density



4.4.2 Parcels and Buildings

The parcel counts, building counts, and building values shown in **Table 4.4** represent the built environment inventories used for the analyses included in the Risk Assessment. In order to provide a more accurate reflection of buildings that contain livable space and/or commercial, industrial, or other uses, all building footprints less than 500 square feet have been eliminated from the counts and analysis.

Table 4.4: Parcel and Building Counts and Values by Jurisdiction

Jurisdiction	Number of Developed Parcels	Number of Undeveloped Parcels	Building Count	Building Value	Number of Pre-FIRM Buildings
Alexander					
Alexander County (Unincorporated Area)	17,971	7,874	24,663	\$3,840,434,043	0
Town of Taylorsville	0	0	2,824	\$856,433,184	0
Subtotal Alexander	17,971	7,874	27,487	\$4,696,867,227	0
Burke					
Burke County (Unincorporated Area)	333	304	28,091	\$2,232,053,874	29
City of Morganton	195	144	10,727	\$1,772,443,185	4
Town of Connelly Springs	0	1	889	\$63,845,104	0
Town of Drexel	8	2	2,949	\$309,763,169	1
Town of Glen Alpine	5	10	1,086	\$81,890,752	0
Town of Hildebran	13	5	1,069	\$137,930,831	0
Town of Rutherford College	0	0	827	\$93,523,599	0
Town of Valdese	48	48	2,132	\$428,687,357	4
Subtotal Burke	18,573	8,388	75,257	\$9,817,005,098	38
Caldwell					
Caldwell County (Unincorporated Area)	477	335	20,774	\$1,707,933,363	19
City of Lenoir	407	171	10,316	\$1,482,757,665	58
Town of Cahaj's Mountain	2	2	1,350	\$118,985,723	0
Town of Gamewell	37	29	2,062	\$145,493,182	1
Town of Granite Falls	13	22	3,394	\$601,795,107	0
Town of Hudson	41	40	3,116	\$349,667,781	1

Jurisdiction	Number of Developed Parcels	Number of Undeveloped Parcels	Building Count	Building Value	Number of Pre-FIRM Buildings
Town of Rhodhiss	0	0	490	\$32,914,533	0
Town of Sawmills	45	29	3,234	\$266,030,835	0
Village of Cedar Rock	2	2	135	\$35,687,645	0
Subtotal Caldwell	19,597	9,018	120,128	\$14,558,270,932	117
Catawba					
Catawba County (Unincorporated Area)	782	608	50,060	\$4,638,045,955	11
City of Claremont	11	8	1,351	\$188,796,219	0
City of Conover	112	58	5,089	\$738,362,172	4
City of Hickory	516	257	22,507	\$3,764,227,757	29
City of Newton	202	122	7,657	\$890,405,966	1
Town of Brookford	29	12	304	\$13,048,710	2
Town of Catawba	38	18	1,016	\$67,585,895	1
Town of Long View	50	24	2,716	\$186,187,111	3
Town of Maiden	25	18	3,230	\$508,315,681	0
Subtotal Catawba	21,362	10,143	214,058	\$25,553,246,398	168
TOTAL PLAN	21,362	10,143	214,058	\$25,553,246,398	168

Source: Participating jurisdictions.

4.4.3 Critical Facilities

Table 4.5 shows counts of critical facilities under a variety of categories attributed to each participating jurisdiction.

Table 4.5: Critical Facilities Counts by Jurisdiction Part A

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial		Communications	Critical Manufacturing	EM	Healthcare	Government Facilities
Alexander										
Alexander County (Unincorporated Area)	0	0	0	0		0	0	0	0	0
Town of Taylorsville	0	0	0	0		0	0	0	0	0

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial		Communications	Critical Manufacturing	EM	Healthcare	Government Facilities
Subtotal Alexander	0	0	0	0		0	0	0	0	0
	Burke									
Burke County (Unincorporated Area)	0	0	0	0		0	0	0	0	0
City of Morganton	0	0	0	0		1	0	0	0	0
Town of Connelly Springs	0	0	0	0		0	0	0	0	0
Town of Drexel	0	0	0	0		0	0	0	0	0
Town of Glen Alpine	0	0	0	0		0	0	0	0	0
Town of Hildebran	0	0	0	0		0	0	0	0	0
Town of Rutherford College	0	0	0	0		0	0	0	0	0
Town of Valdese	0	0	0	0		0	0	0	0	0
Subtotal Burke	0	0	0	0		1	0	0	0	0
	Caldwell									
Caldwell County (Unincorporated Area)	0	0	0	0		0	0	0	0	0
City of Lenoir	0	0	0	0		1	0	0	0	0
Town of Cahaj's Mountain	0	0	0	0		0	0	0	0	0
Town of Gamewell	0	0	0	0		0	0	0	0	0
Town of Granite Falls	0	0	0	0		0	0	0	0	0
Town of Hudson	0	0	0	0		0	0	0	0	0
Town of Rhodhiss	0	0	0	0		0	0	0	0	0
Town of Sawmills	0	0	0	0		0	0	0	0	0
Village of Cedar Rock	0	0	0	0		0	0	0	0	0
Subtotal Caldwell	0	0	0	0		1	0	0	0	0
	Catawba									
Catawba County (Unincorporated Area)	0	0	0	0		0	0	0	0	0
City of Claremont	0	0	0	0		0	0	0	0	0

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial		Communications	Critical Manufacturing	EM	Healthcare	Government Facilities
City of Conover	0	0	0	0		0	0	0	0	0
City of Hickory	0	0	0	0		0	0	0	0	0
City of Newton	0	0	0	0		0	0	0	0	0
Town of Brookford	0	0	0	0		0	0	0	0	0
Town of Catawba	0	0	0	0		0	0	0	0	0
Town of Long View	0	0	0	0		0	0	0	0	0
Town of Maiden	0	0	0	0		0	0	0	0	0
Subtotal Catawba	0	0	0	0		0	0	0	0	0
TOTAL PLAN	0	0	0	0		2	0	0	0	0

Table 4.6: Critical Facilities Counts by Jurisdiction Part B

Jurisdiction	Defense Industrial Base	National Monuments and Icons	Nuclear Reactors, Materials and Waste	Postal and Shipping	Transportation Systems	Energy	Emergency Services	Water	Other
Alexander									
Alexander County (Unincorporated Area)	1	0	0	0	1	1	1	0	0
Town of Taylorsville	0	0	0	0	1	1	1	0	0
Subtotal Alexander	1	0	0	0	2	2	2	0	0
Burke									
Burke County (Unincorporated Area)	0	0	0	0	1	1	1	0	0
City of Morganton	0	0	1	0	1	1	1	0	0
Town of Connelly Springs	0	0	0	0	1	0	0	0	0
Town of Drexel	0	0	0	0	1	1	1	0	0
Town of Glen Alpine	0	0	0	0	1	0	1	0	0
Town of Hildebran	0	0	0	0	1	1	1	0	0
Town of Rutherford College	0	0	0	0	1	0	0	0	0

Jurisdiction	Defense Industrial Base	National Monuments and Icons	Nuclear Reactors, Materials and Waste	Postal and Shipping	Transportation Systems	Energy	Emergency Services	Water	Other
Town of Valdese	0	0	0	0	1	1	1	0	0
Subtotal Burke	0	0	1	0	8	5	6	0	0
Caldwell									
Caldwell County (Unincorporated Area)	1	0	0	0	1	1	0	0	0
City of Lenoir	0	0	0	0	1	1	0	1	0
Town of Cahah's Mountain	0	0	0	0	1	0	0	0	0
Town of Gamewell	0	0	0	0	1	0	0	0	0
Town of Granite Falls	0	0	0	0	1	1	0	1	0
Town of Hudson	0	0	0	0	1	0	0	0	0
Town of Rhodhiss	0	0	0	0	1	0	1	0	0
Town of Sawmills	0	0	0	0	1	0	0	0	0
Village of Cedar Rock	0	0	0	0	1	0	0	0	0
Subtotal Caldwell	1	0	0	0	9	3	1	2	0
Catawba									
Catawba County (Unincorporated Area)	0	0	0	1	1	1	1	1	0
City of Claremont	0	0	0	0	1	0	1	0	0
City of Conover	0	0	0	0	1	1	1	0	0
City of Hickory	1	0	0	0	1	1	1	0	0
City of Newton	1	0	0	0	1	1	1	0	0
Town of Brookford	0	0	0	0	1	0	0	0	0
Town of Catawba	0	0	0	0	1	0	1	0	0
Town of Long View	0	0	0	0	1	0	1	0	0
Town of Maiden	0	0	0	0	1	1	1	1	0
Subtotal Catawba	2	0	0	1	9	5	8	2	0
TOTAL PLAN	4	0	1	1	28	15	17	4	0

Source: Numbers in black supplied by participating jurisdictions. Numbers in orange derived from alternate sources via NC One Map.

**** A facility exists but a GPS point location for GIS analysis is not currently available.*

Figure 4.2 shows the general locations of critical facilities across the planning area by county.

Figure 4.2: Critical Facilities

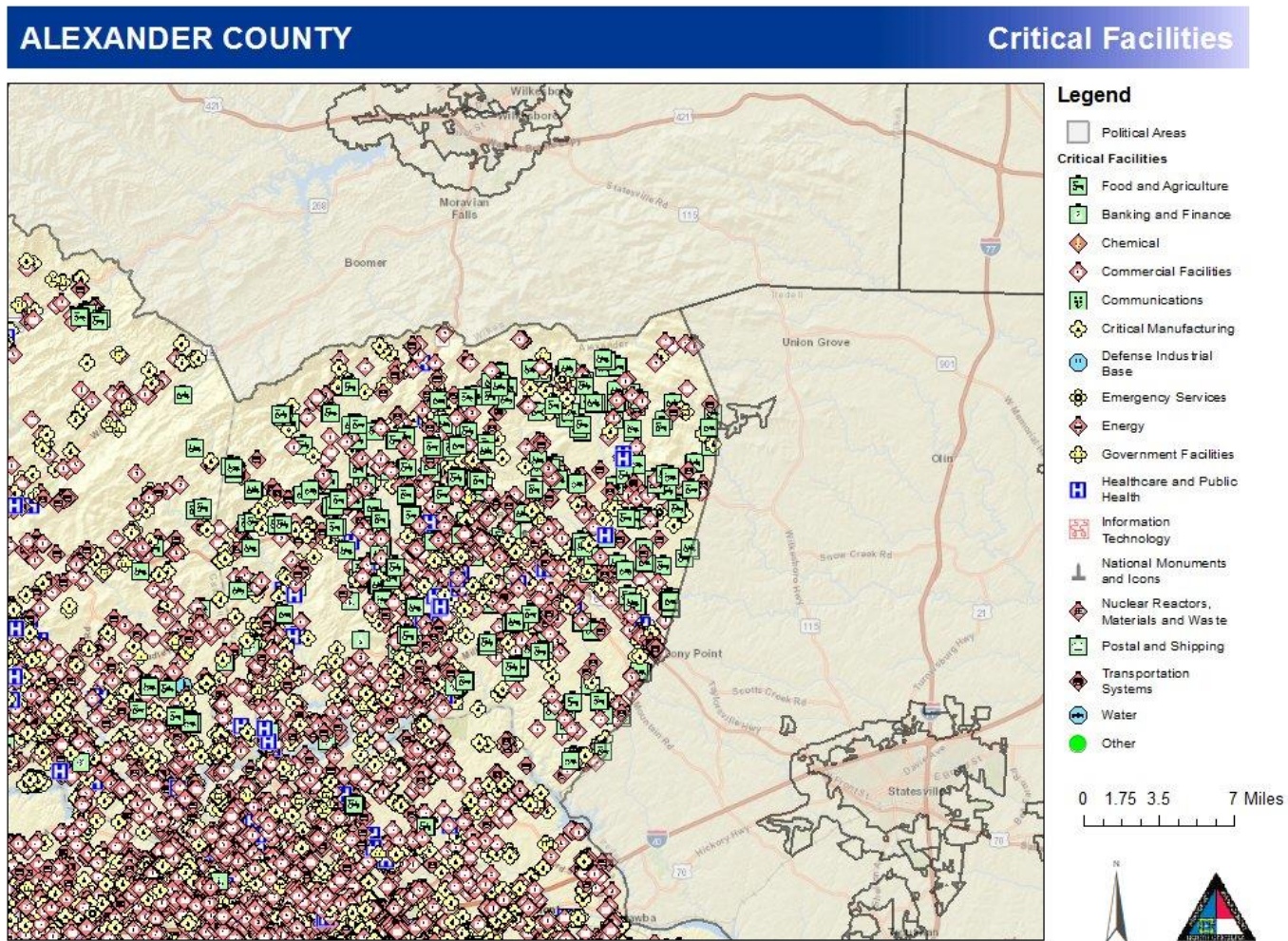


Figure 4.3: Critical Facilities

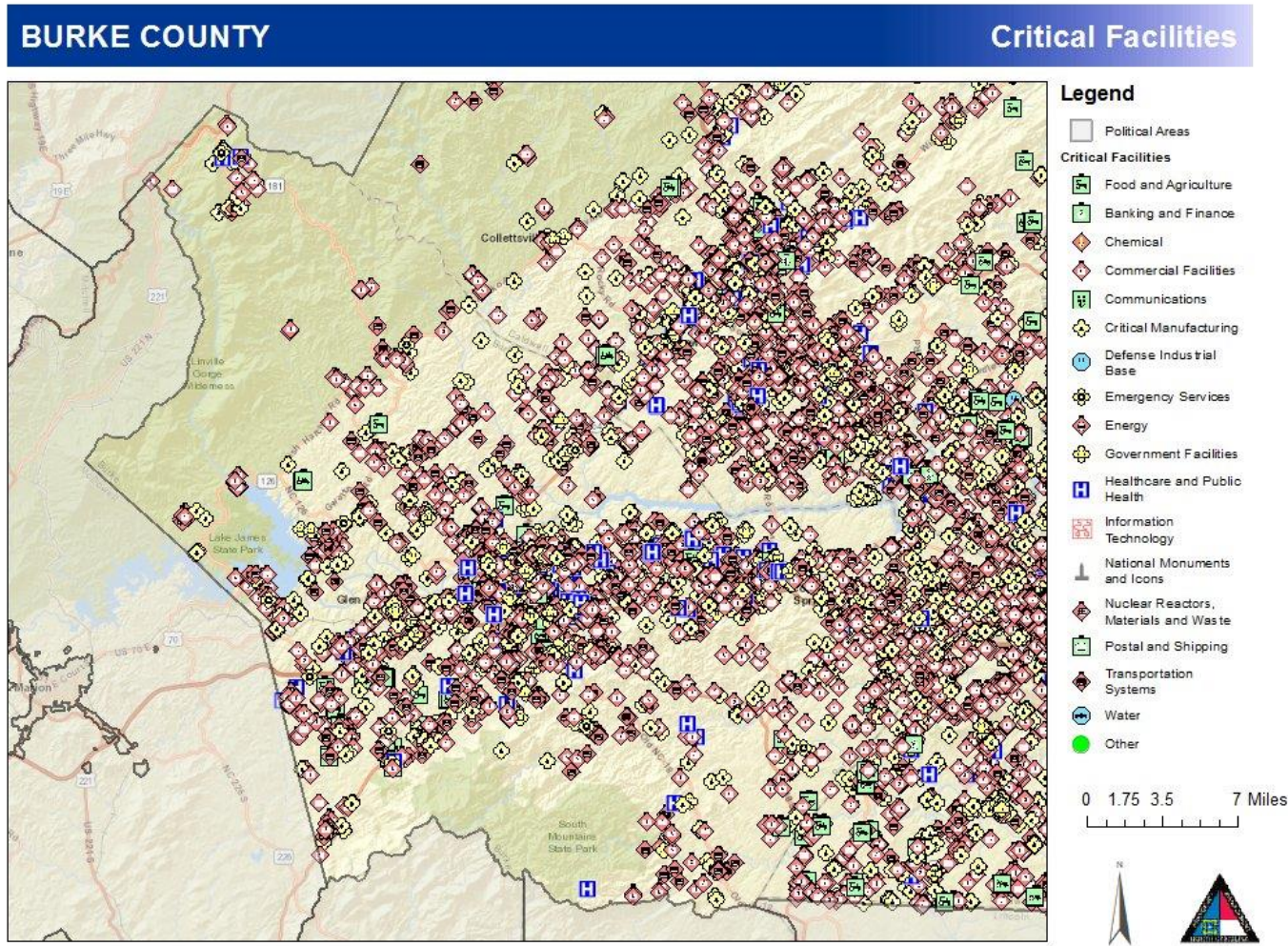


Figure 4.4: Critical Facilities

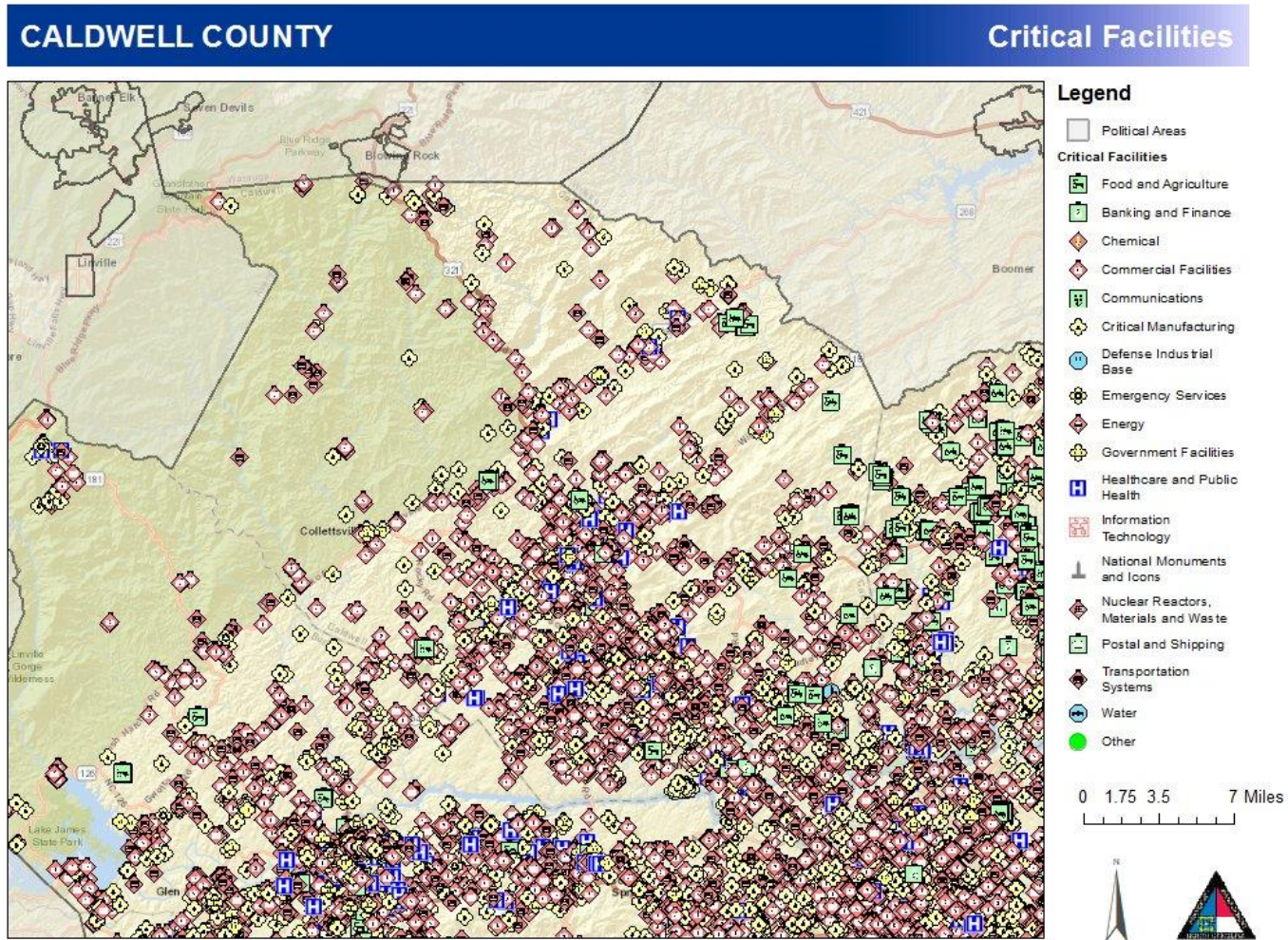
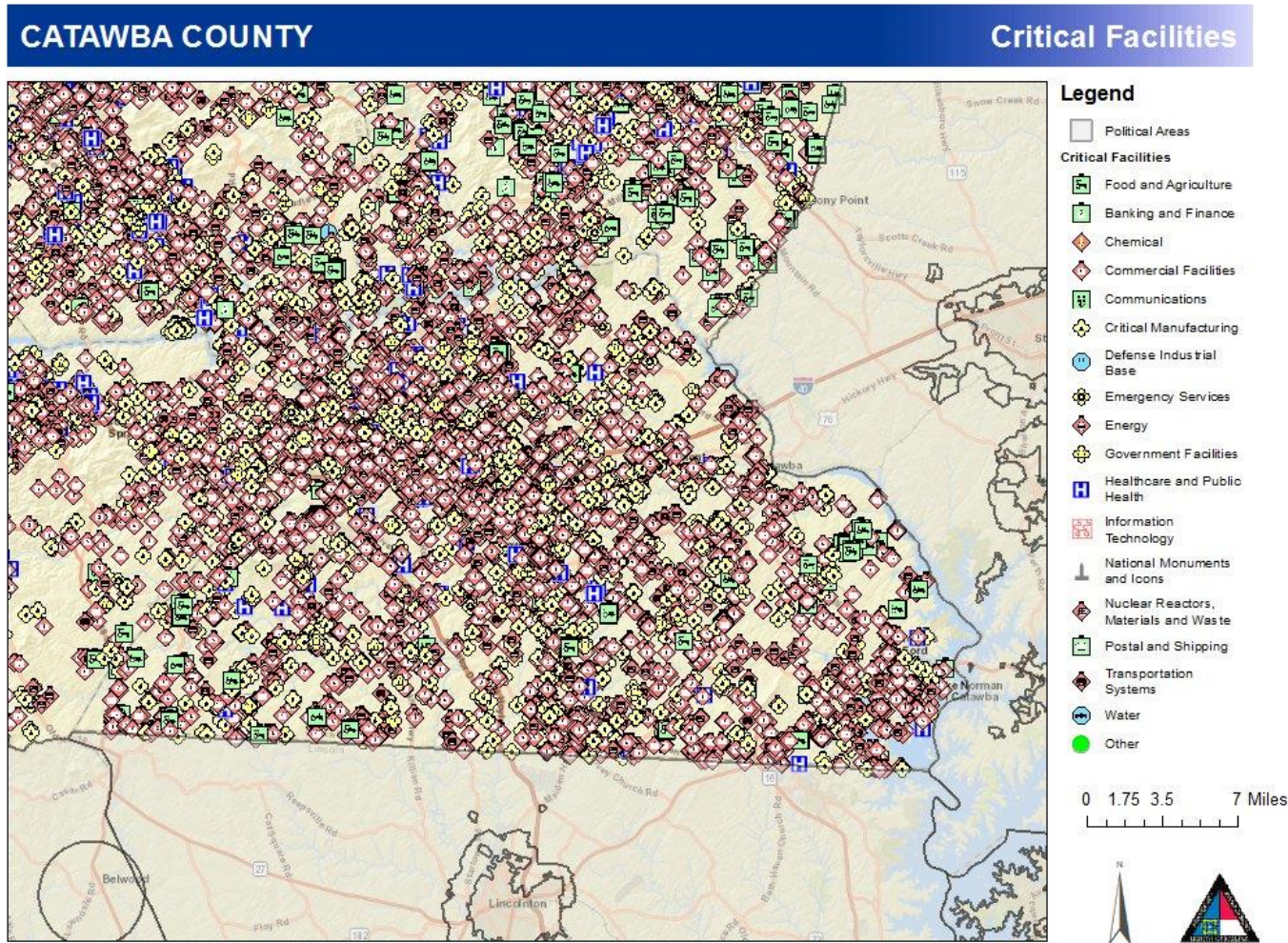


Figure 4.5: Critical Facilities



4.4.4 Infrastructure

Certain infrastructure elements as shown in **Table 4.7** were identified for analysis. These include major roads, railroads, power plants, water/wastewater facilities, and water/wastewater lines.

Table 4.7: Infrastructure Counts and Measurements (in Miles) by Jurisdiction

Jurisdiction	Major Roads ²	Railroad ³	Energy (Power Plants)	Water (Treatment Facilities)	Water / Wastewater Lines
Alexander					
Alexander County (Unincorporated Area)	51.8	8.0	1	0	384.6
Town of Taylorsville	4.3	1.7	1	0	43.5
Subtotal Alexander	56.1	9.7	2	0	428.1
Burke					
Burke County (Unincorporated Area)	139.5	18.0	1	0	362.8
City of Morganton	31.4	7.7	1	0	307.2
Town of Connelly Springs	2.1	1.8	0	0	8.2
Town of Drexel	0.6	1.0	1	0	30.2
Town of Glen Alpine	1.2	1.3	0	0	15.6
Town of Hildebran	1.9	1.9	1	0	34.6
Town of Rutherford College	3.2	2.5	0	0	21.1
Town of Valdese	2.5	0.6	1	0	103.2
Subtotal Burke	182.4	34.8	5	0	882.9
Caldwell					
Caldwell County (Unincorporated Area)	95.8	1.5	1	0	317.6
City of Lenoir	21.2	12.1	1	1	337.1

²The major roads and railroads accounted for in this table are the same as those depicted on the “Community Profile” map found in Section 2.

³Does not include inactive/abandoned railroads.

Jurisdiction	Major Roads ²	Railroad ³	Energy (Power Plants)	Water (Treatment Facilities)	Water / Wastewater Lines
Town of Cahah's Mountain	0.0	0.0	0	0	31.1
Town of Gamewell	3.2	0.0	0	0	9.8
Town of Granite Falls	6.1	3.2	1	1	96.2
Town of Hudson	7.5	2.5	0	0	72.9
Town of Rhodhiss	0.0	0.6	0	0	8.6
Town of Sawmills	4.4	2.4	0	0	20.1
Village of Cedar Rock	0.0	0.0	0	0	6.3
Subtotal Caldwell	138.2	22.3	3	2	899.7
Catawba					
Catawba County (Unincorporated Area)	119.2	41.3	1	1	0.0
City of Claremont	2.6	3.9	0	0	0.0
City of Conover	17.8	9.1	1	0	0.0
City of Hickory	32.2	11.7	1	0	1,417.0
City of Newton	14.6	4.9	1	0	0.0
Town of Brookford	1.6	0.0	0	0	0.0
Town of Catawba	2.3	5.1	0	0	0.0
Town of Long View	5.0	2.2	0	0	11.1
Town of Maiden	6.0	0.0	1	1	0.0
Subtotal Catawba	201.3	78.2	5	2	1,428.1
TOTAL PLAN	578.0	145.0	15	4	3,638.8

Source: NC IRISK and participating jurisdictions.

Figure 4.6 shows the general locations of infrastructure elements across the planning area.

Figure 4.6: Critical Infrastructure

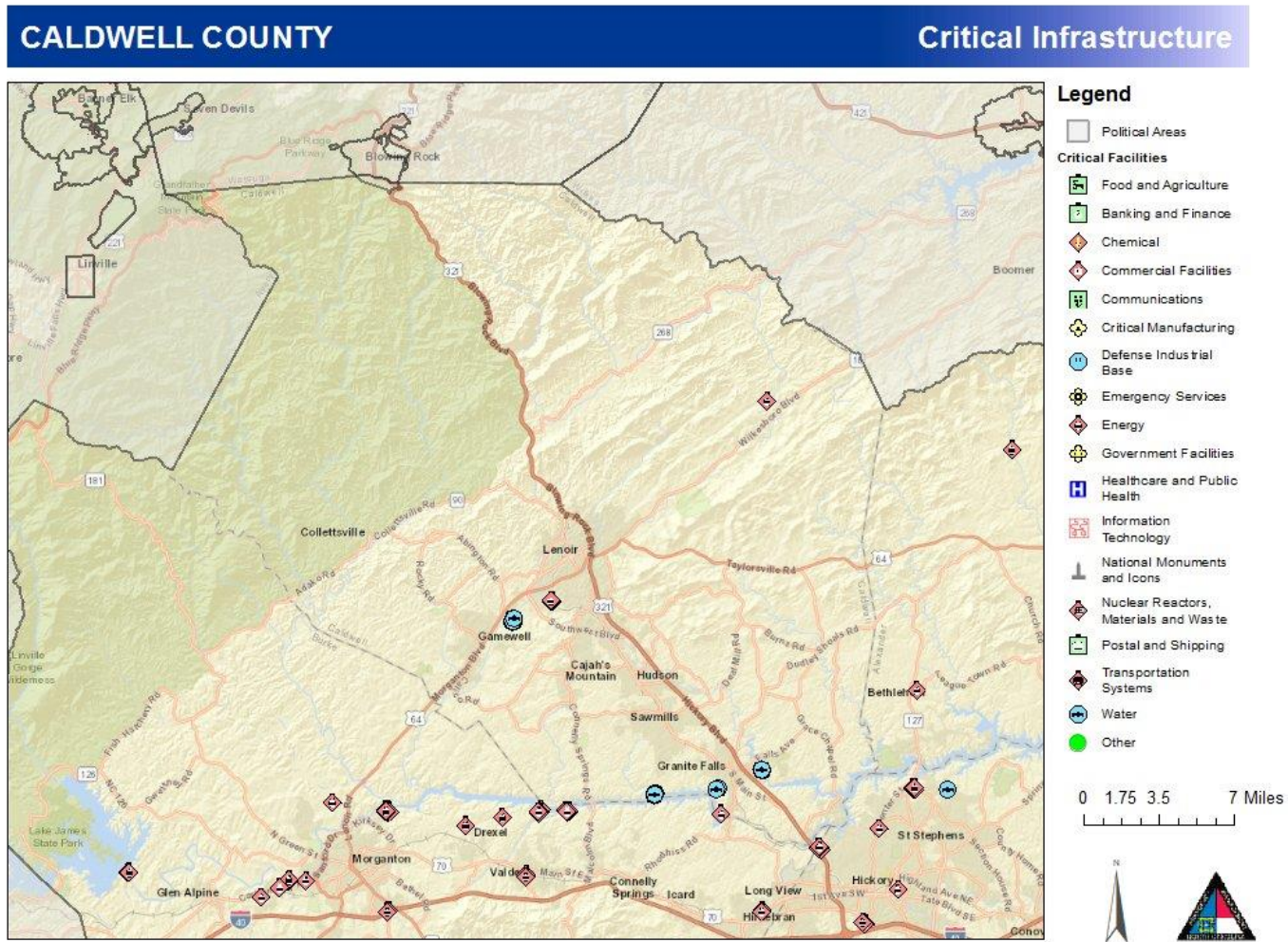


Figure 4.7: Critical Infrastructure

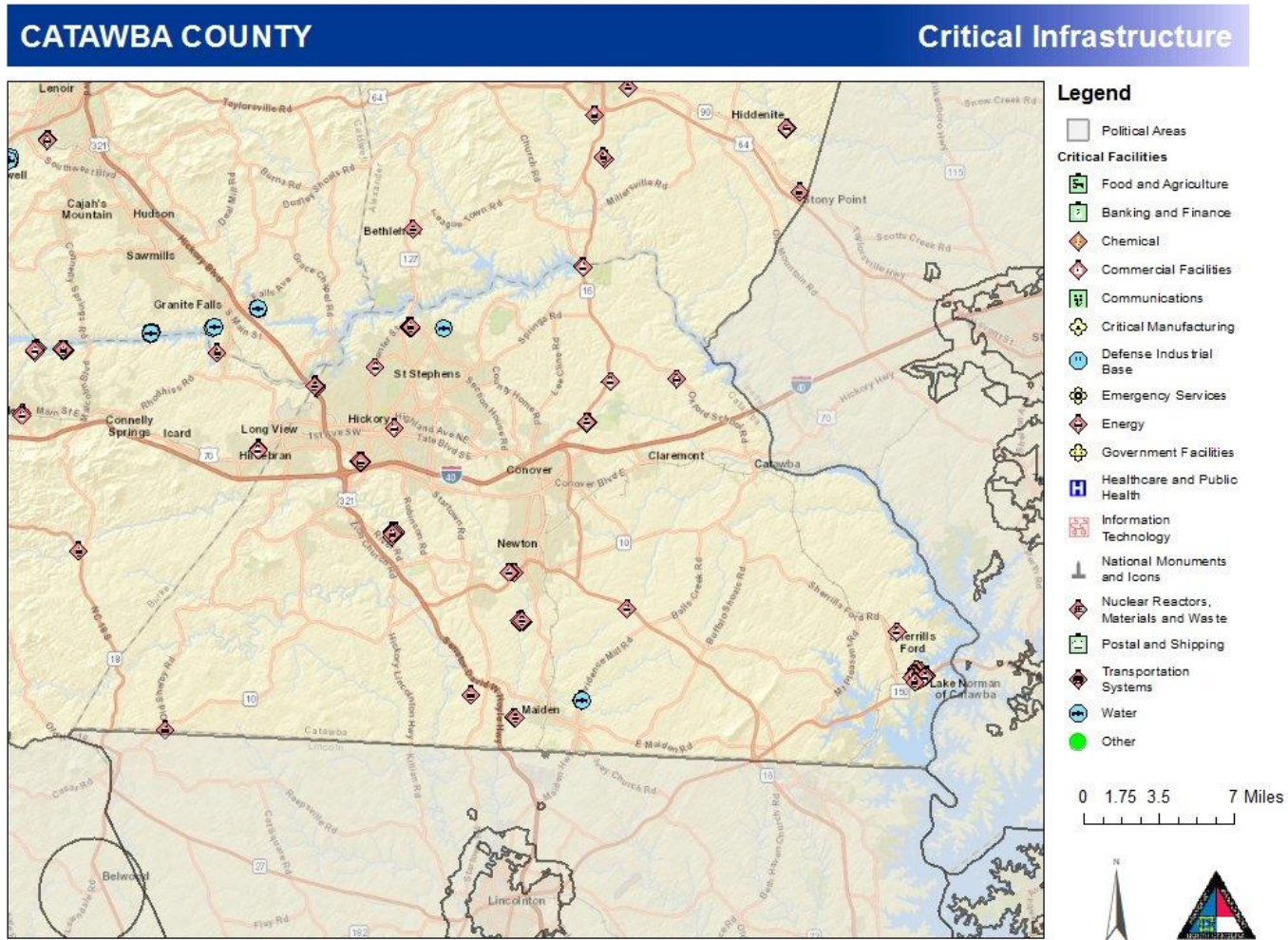


Figure 4.8: Critical Infrastructure

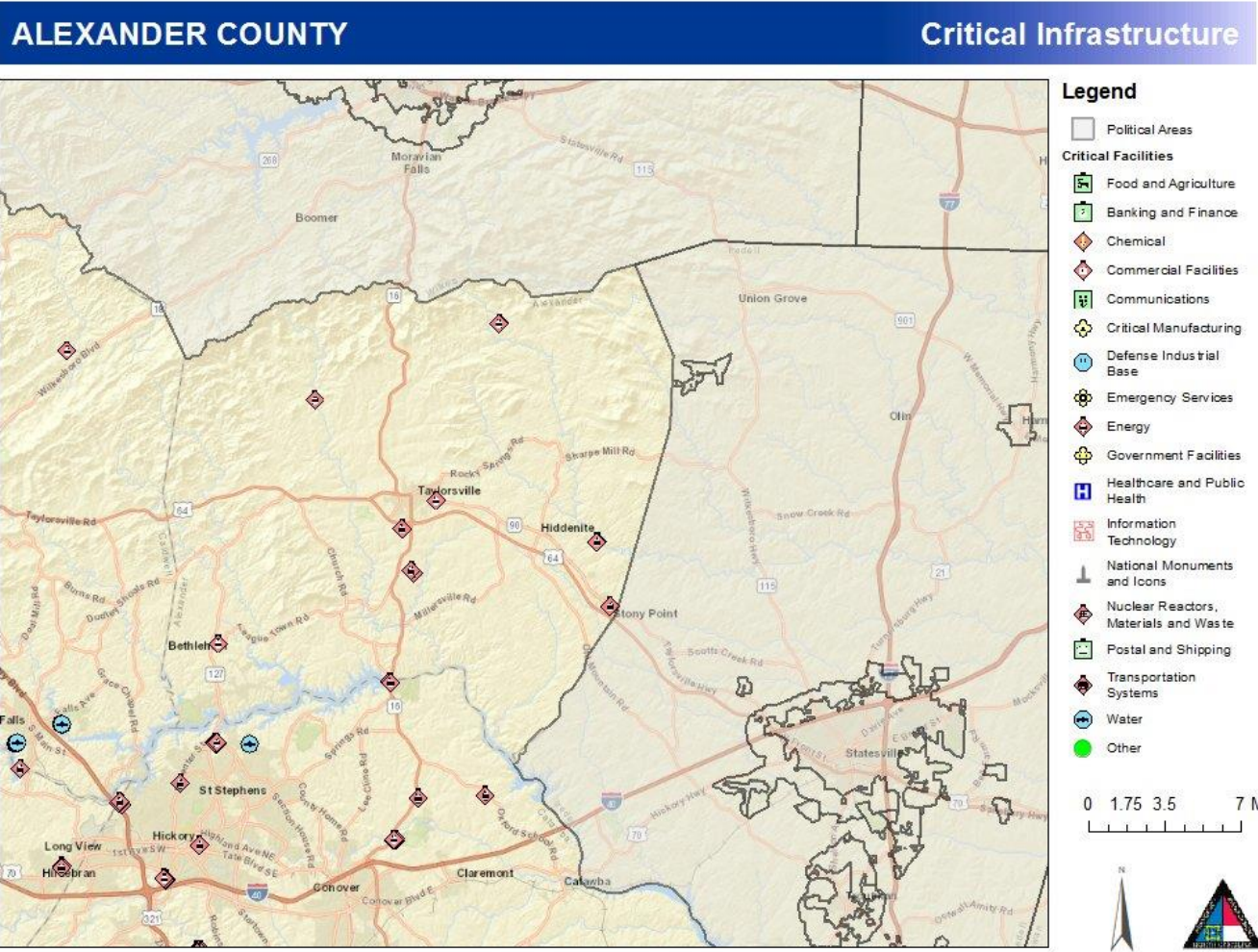
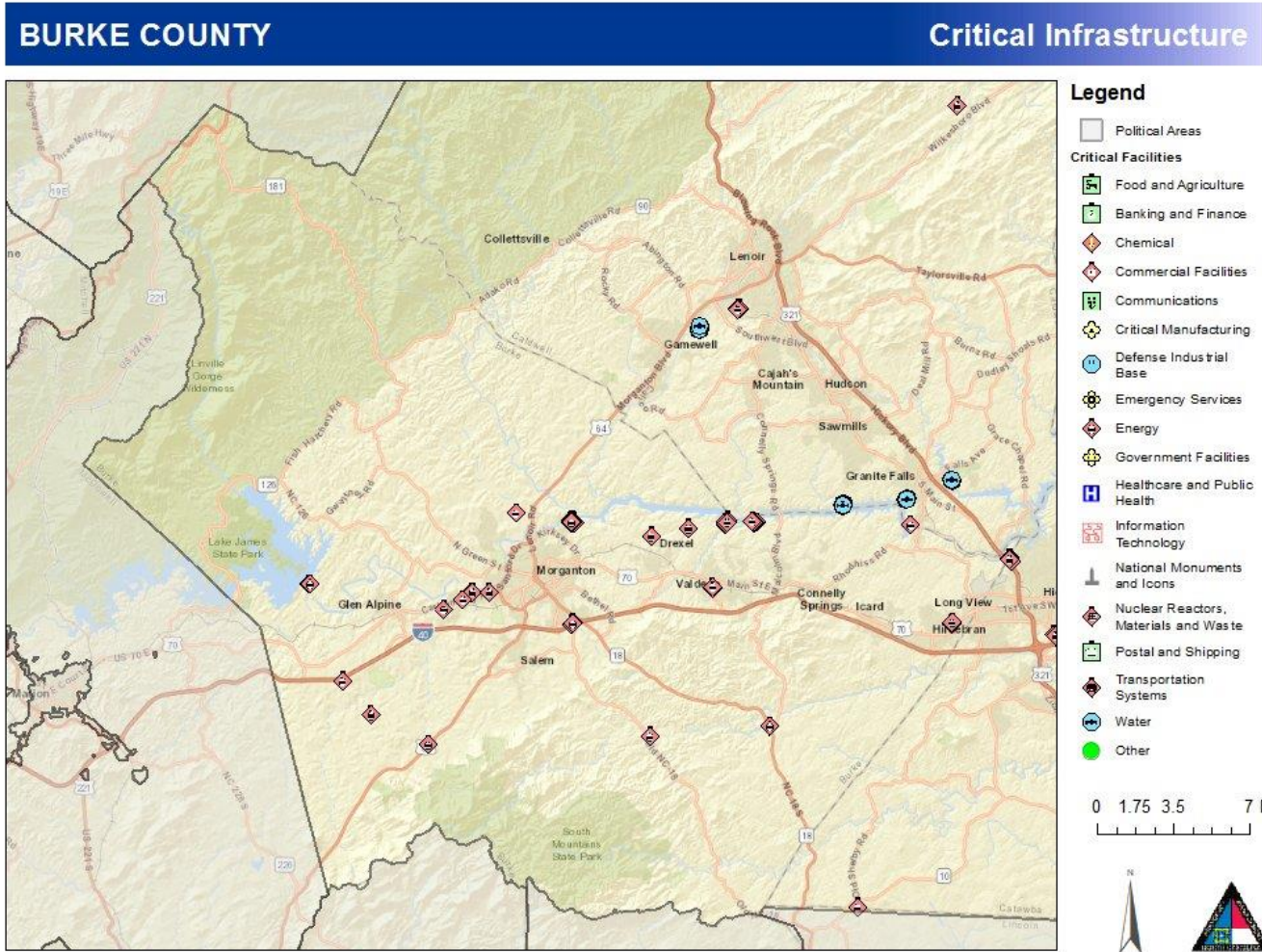


Figure 4.9: Critical Infrastructure



4.4.5 High Potential Loss Properties

Table 4.8 shows counts of high potential loss properties attributed to each participating jurisdiction.

Figure 4.10 shows the general locations of these properties across the planning area.

Table 4.8: High Potential Loss Properties by Jurisdiction

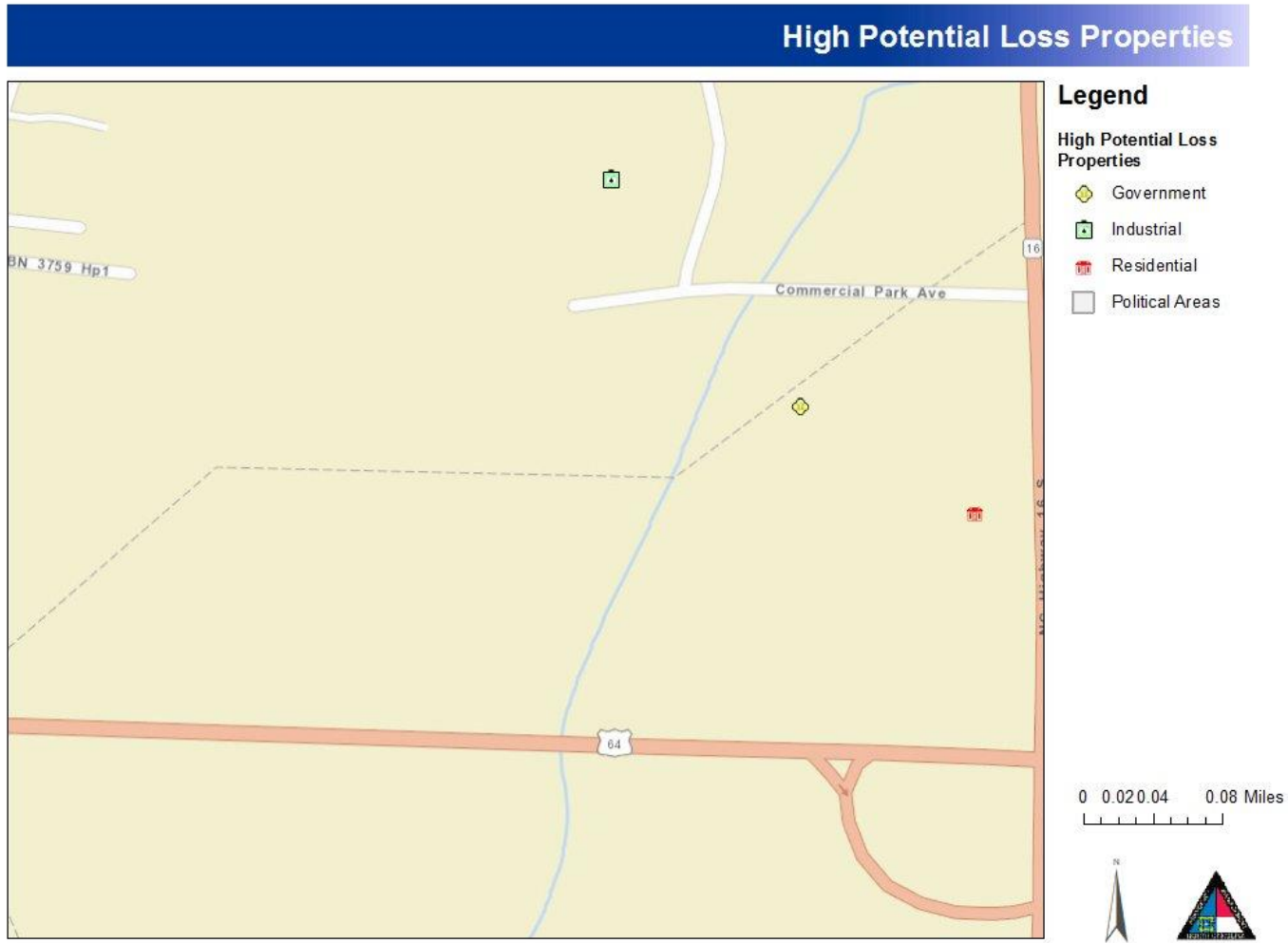
Jurisdiction	Residential ⁴	Commercial	Industrial	Government	Agricultural	Religious	Utilities	Other
Alexander								
Alexander County (Unincorporated Area)	1	1	1	1	0	1	1	0
Town of Taylorsville	1	1	1	1	0	1	1	0
Subtotal Alexander	2	2	2	2	0	2	2	0
Burke								
Burke County (Unincorporated Area)	1	1	1	1	0	1	1	0
City of Morganton	1	1	1	1	0	1	1	0
Town of Connelly Springs	1	0	0	0	0	1	0	0
Town of Drexel	1	1	0	1	0	1	1	0
Town of Glen Alpine	1	1	0	1	0	0	0	0
Town of Hildebran	0	1	1	1	0	0	1	0
Town of Rutherford College	1	1	1	1	0	0	0	0
Town of Valdese	1	1	1	1	0	0	1	0
Subtotal Burke	7	7	5	7	0	4	5	0
Caldwell								
Caldwell County (Unincorporated Area)	1	1	1	1	0	1	1	0
City of Lenoir	1	1	1	1	0	1	1	0
Town of Cahah's Mountain	1	1	0	0	0	0	0	0

⁴This category consists of a variety of facilities specified by participating jurisdictions.

Jurisdiction	Residential ⁴	Commercial	Industrial	Government	Agricultural	Religious	Utilities	Other
Town of Gamewell	0	1	1	1	0	0	0	0
Town of Granite Falls	1	1	1	1	0	1	1	0
Town of Hudson	1	1	1	1	0	1	0	0
Town of Rhodhiss	1	1	0	1	0	0	0	0
Town of Sawmills	1	1	1	1	0	0	0	0
Subtotal Caldwell	7	8	6	7	0	4	3	0
Catawba								
Catawba County (Unincorporated Area)	1	1	1	1	0	1	1	0
City of Claremont	0	1	1	1	0	0	0	0
City of Conover	1	1	1	1	0	0	1	0
City of Hickory	1	1	1	1	0	1	1	0
City of Newton	1	1	1	1	0	1	1	0
Town of Catawba	0	1	0	1	0	0	0	0
Town of Long View	1	1	1	1	0	0	0	0
Town of Maiden	0	1	1	1	0	0	1	0
Subtotal Catawba	5	8	7	8	0	3	5	0
TOTAL PLAN	21	25	20	24	0	13	15	0

Source: Local sources

Figure 4.10: High Potential Loss Properties



4.4.6 Historic Properties

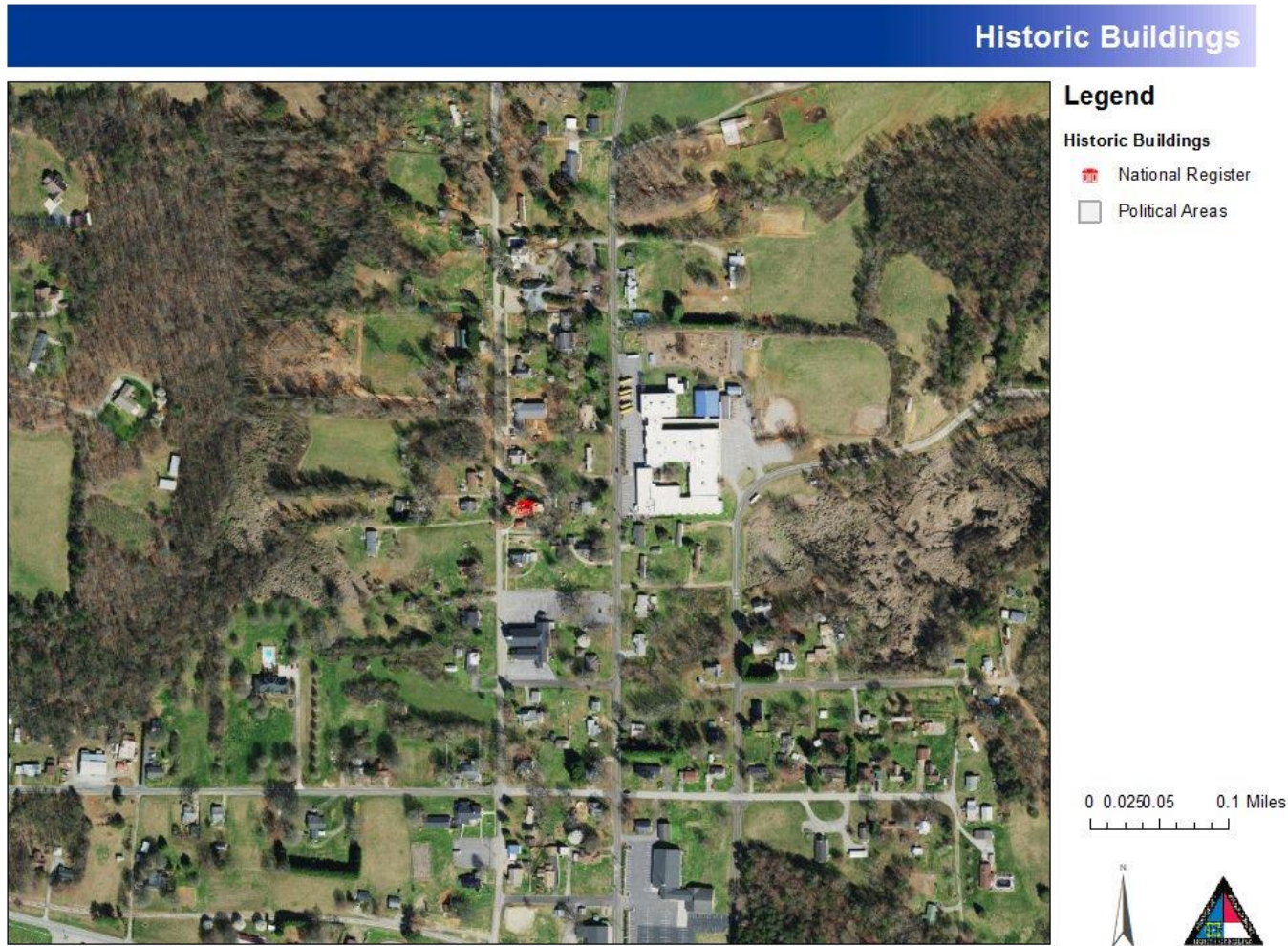
Historic property counts including districts, buildings, and other cultural resources as shown in **Table 4.9** were derived from a combination of sources consisting of the National Register of Historic Places (National Park Service) and participating jurisdictions.

Table 4.9: Historic Property Counts by Jurisdiction

Jurisdiction	Districts	Buildings and Landmarks	Other
Alexander			
Alexander County (Unincorporated Area)	0	1	0
Subtotal Alexander	0	1	0
TOTAL PLAN	0	1	0

Source: Jurisdictions and National Register of Historic Places.

Figure 4.11: Historic Buildings



4.5 Hazard Profiles, Analysis, and Vulnerability

As stated in subsection 4.2, the following hazards are addressed in this Risk Assessment and are presented in the following order in the subsections to follow:

Natural Hazard

- River Flooding
- Levee Failure
- Wildfire
- Tornado
- Earthquake
- Landslide
- Snow
- Dam Failure
- Hail
- Drought
- Hurricane Winds
- Ice
- Thunderstorm Winds
- Erosion
- Sinkholes

4.5.1 River Flooding

Flooding is the most frequent and costly of all the natural hazards in the United States, and has caused more than 10,000 death(s) since 1900. Approximately 90 percent of presidentially declared disasters result from flood-related natural hazard events. Taken as a whole, more frequent, localized flooding problems that do not meet federal disaster declaration thresholds ultimately cause the majority of damages across the United States.

Floods are generally the result of excessive precipitation, and can be characterized as follows: general floods, in which precipitation occurs over a given river basin for a long period of time; and flash floods, which are the product of heavy localized precipitation falling in a short time period over a given location. The severity of a flood event is determined by the following factors: a combination of stream and river basin topography and physiography, hydrology, precipitation and weather patterns, recent soil moisture conditions, and the degree of vegetative clearing in and around flood-prone areas.

General floods may last for several days or even weeks. The primary types of general flooding include riverine, coastal and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, nor'easters and other large coastal storms. Urban flooding occurs where man-made development has obstructed the natural flow of water and decreased the ability of natural groundcover to absorb and retain surface water runoff.

Most flash flooding is caused by slow-moving thunderstorms in a localized area or by heavy rains associated with hurricanes and tropical storms. Flash flooding can also occur due to accelerated snow melt, a dam or levee failure, or from a sudden release of water held by an ice jam. Although flash flooding occurs often along mountain streams, it is also common in urbanized areas where much of the ground is covered by impervious surfaces. Flash flood waters can move at very high speeds and “walls” of water have been known to reach heights of 10 to 20 feet. Flash flood waters and the accompanying debris can uproot trees, roll boulders, destroy buildings, and obliterate bridges and roads.

The periodic flooding of lands including and adjacent to rivers, streams, and shorelines, referred to as the floodplain, is a natural and inevitable occurrence that can be expected to take place based upon established recurrence intervals. The recurrence interval of a flood is defined as the average time interval, in years, expected between a flood event of a particular magnitude and an equal or larger flood. As the magnitude of a hypothetical flood scenario increases the recurrence interval increases. That is, the greater the magnitude of a given event, the less likely it will occur over time.

Floodplains are delineated by the frequency of the flood that is large enough to cover them. For example, the 10-year floodplain will be covered by a 10-year flood (should it occur) and the 100-year floodplain by the 100-year flood. Flood frequencies such as the 100-year flood are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Another way of expressing the flood frequency is the chance of occurrence (expressed as a percent) in a given year of a flood event of a given magnitude. For example, the 100-year flood has a 1 percent chance of occurring in any given year.

Table 4.10 lists flooding sources that were revised or newly studied by detailed methods for previous FISs but were not part of this revision. Their effective analysis remains valid.

Table 4.10: Flooding Sources Studied by Detailed Methods: Revised or Newly Studied

Sources	Riverine Sources		Affected Communities
	From	To	
Abingdon Creek	Approximately 940 feet upstream of Huffman Road	Approximately 325 feet upstream of M.W. Setzer Road	Caldwell County
Amos Creek	The confluence with Mulberry Creek	Approximately 1.4 miles upstream of the confluence with Mulberry Creek	Caldwell County
Angley Creek	The confluence with Gunpowder Creek	Approximately 600 feet upstream of SE Starcross Road	Caldwell County, City of Lenoir, Town of Hudson
Angley Creek Tributary 1	The confluence with Angley Creek	Approximately 1.2 miles upstream of the confluence with Angley Creek	Caldwell County, City of Lenoir

	Riverine Sources		
Sources	From	To	Affected Communities
Anthony Creek	Approximately 55 feet upstream of the confluence with Prong Creek and Racket Creek	Approximately 1.4 miles upstream of the confluence with Prong Creek and Rocket Creek	Caldwell County
Back Creek	The confluence with Irish Creek	Approximately 0.5 mile upstream of the confluence with Irish Creek	Burke County
Bailey Fork	Approximately 0.8 mile upstream of I-40	At US-64	Burke County, City of Morganton
Bakers Creek Tributary	The confluence with Bakers Creek	Approximately 1.4 miles upstream of Swinging Bridge Road	Catawba County
Bakers Creek Tributary 1	The confluence with Bakers Creek	Approximately 0.7 mile upstream of Stratford Drive (SR 3000)	Catawba County
Balls Creek	The confluence with Catawba River	Approximately 970 feet upstream of Little Mountain Road	Catawba County, Town of Catawba
Barger Branch	The confluence with Henry Fork	Approximately 200 feet upstream of 8th Avenue SE	City of Hickory, Town of Brookford
Barger Branch Tributary 1	The confluence with Barger Branch	Approximately 800 feet upstream of 8th Avenue SE	City of Hickory
Barger Branch Tributary 2	The confluence with Barger Branch Tributary 1	Approximately 1,050 feet upstream of confluence with Barger Branch Tributary 1	City of Hickory
Barger Branch Tributary 3	The confluence with Barger Branch	Approximately 130 feet upstream of 8th Avenue SE	City of Hickory
Beaver Branch	The confluence with Lambert Creek	Approximately 500 feet upstream of SR 1307	Alexander County
Beaver Creek	The confluence with Yadkin River	Approximately 1.5 miles upstream of the Wilkes / Caldwell County boundary	Caldwell County
Beaverdam Creek	The confluence with Big Branch into South Yadkin River	Approximately 2.5 miles upstream of Vashti Road (SR 1403)	Alexander County
Big Branch	The confluence with Elk Shoals Creek	Approximately 550 feet upstream of SR 1619	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Big Branch into South Yadkin River	The confluence with South Yadkin River	Approximately 0.5 mile upstream of Vashti Cemetery Road (SR 1430)	Alexander County
Bills Branch	Approximately 830 feet upstream of US 321	Approximately 0.5 mile upstream of US Highway 321	Catawba County, City of Newton, Town of Maiden
Billy Branch	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of North Highland Avenue	Town of Granite Falls
Blairs Fork Creek	Approximately 130 feet upstream of Collettsville Road / NC-90	Approximately 780 feet upstream of Parson's Park Drive	Caldwell County
Blairs Fork Creek	The confluence with Lower Creek	Approximately 130 feet upstream of Collettsville Road / NC-90	Caldwell County, City of Lenoir
Blue Creek	The confluence with Kings Creek 1 and Little Kings Creek	Approximately 2.9 miles upstream of Grandin Road (SR 1552)	Caldwell County
Boone Fork	The confluence with Mulberry Creek	Approximately 2.1 miles upstream of the confluence with Mulberry Creek	Caldwell County
Bristol Creek	The confluence with Lower Creek	Approximately 180 feet downstream of the Burke / Caldwell County boundary	Burke County, Caldwell County
Bristol Creek Tributary 1	The confluence with Bristol Creek	Approximately 0.4 mile upstream of the confluence with Bristol Creek	Burke County
Camp Creek	The confluence with Jacob Fork	Approximately 0.5 mile downstream of SR 1736	Burke County, Catawba County
Camp Creek	The confluence with Wilson Creek	The confluence of Raider Camp Creek and Harper Creek	Caldwell County
Canoe Creek	Approximately 150 feet upstream of NC 126	Approximately 0.4 mile upstream of SR 1254	Burke County, City of Morganton
Carroll Creek	The confluence with Parks Creek	Approximately 1,000 feet upstream of SR 1424	Burke County
Catawba River	Approximately 0.6 mile downstream of Hudson Chapel Road	Toe at Lookout Shoals Dam	Catawba County, Town of Catawba
Catawba River	Approximately 0.9 mile upstream of confluence of Elk Shoal Creek	Lake Hickory/ Oxford Dam	Alexander County, Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Catawba River	Approximately 1,100 feet upstream of Watermill Glen Alpine Road (SR 1147)	At Bridgewater Dam (Power Plant)	Burke County, Town of Glen Alpine
Catawba River	Approximately 1,100 feet upstream of Watermill Glen Alpine Road (SR1147)	Approximately 1,100 feet downstream of SR 1501	Burke County
Catawba River	At Malcolm Boulevard	The confluence of Johns River	Burke County, Caldwell County, City of Morganton, Town of Rutherford College, Town of Valdese
Catawba River	North Center Street/State Highway 127	At Lake Rhodhiss Dam	Alexander County, Burke County, Caldwell County, Catawba County, City of Hickory, Town of Granite Falls, Town of Rhodhiss
Catawba River	The confluence of Johns River	Approximately 1,100 feet upstream of Watermill Glen Alpine Road (SR 1147)	Burke County, City of Morganton, Town of Glen Alpine
Catawba River Tributary 1	Approximately 370 feet downstream of 39th Avenue Drive NW	Approximately 1,080 feet upstream of 31st Avenue NW	Catawba County, City of Hickory
Catawba River Tributary 1	The confluence with Catawba River	Approximately 0.5 mile upstream of SR 1223	Burke County
Catawba River Tributary 2	The confluence with Catawba River	Approximately 2.8 miles upstream of the confluence with Catawba River	Burke County
Celia Creek	The confluence with Husband Creek	Approximately 1.0 mile upstream of Celia Creek Road	Caldwell County
Clarks Creek	Approximately 100 feet downstream of confluence of Clarks Creek Tributary 2	Approximately 310 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Clarks Creek	Approximately 310 feet upstream of Catawba/Lincoln County line	Approximately 60 feet downstream of 15th Street SE	Catawba County, City of Hickory, City of Newton, Town of Maiden
Clear Creek	The confluence with Silver Creek	Approximately 500 feet upstream of US 64	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Cline Creek	Approximately 30 feet downstream of the confluence of Cline Creek Tributary 1	Approximately 150 feet downstream of Interstate 40	City of Conover
Cline Creek	The confluence with Clarks Creek	Approximately 30 feet downstream of confluence of Cline Creek Tributary 1	Catawba County, City of Conover, City of Newton
Cline Creek North	Approximately 0.4 mile upstream of Rifle Range Road	Approximately 2.0 miles upstream of the confluence of Cline Creek North Tributary 1	Catawba County
Cline Creek North Tributary 1	The confluence with Cline Creek North	Approximately 0.5 mile upstream of Rifle Range Road	Catawba County
Cline Creek Tributary 1	The confluence with Cline Creek	Approximately 450 feet upstream of Interstate 40	City of Conover
Cline Creek Tributary 2	The confluence with Cline Creek	Approximately 1,300 feet upstream of Interstate 40	City of Conover
Cold Water Creek	The confluence with Johns River	Approximately 1.7 miles upstream of the confluence with Johns River	Caldwell County
Conover Creek	The confluence with Lyle Creek	Approximately 1,420 feet upstream of 5th Street Place NE	Catawba County, City of Conover
Cow Branch	The confluence with Pott Creek	Approximately 0.8 mile upstream of Grace Church Road	Catawba County
Craig Creek	The confluence with Wilson Creek	Approximately 1.9 miles upstream of the confluence with Wilson Creek	Caldwell County
Cripple Creek	The confluence with Frye Creek and Horseford Creek	Approximately 1,000 feet upstream of 4th Street Drive NW	City of Hickory
Cripple Creek Tributary 1	The confluence with Cripple Creek	Approximately 1,910 feet upstream of confluence with Cripple Creek	City of Hickory
Cub Creek	The confluence with Henry Fork	Approximately 200 feet downstream of SR 1737	Burke County
Dellinger Creek	The confluence with Elk Shoal Creek	Approximately 725 feet upstream of Rest Home Road (SR 1702)	Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Dennis Creek	The confluence with Yadkin River	Approximately 0.8 mile upstream of Hines Branch Road	Caldwell County
Double Branch	The confluence with McGalliard Creek	Approximately 1,800 feet upstream of I-40	Burke County, Town of Valdese
Double Branch Tributary 1	The confluence with Double Branch	Approximately 900 feet upstream of SR 1722	Burke County
Douglas Creek	The confluence with Jacob Fork	Approximately 0.4 mile downstream of Old Rock Quarry Road	Burke County, Catawba County
Drowning Creek	Approximately 300 feet downstream of SR 1621	Approximately 1.8 miles upstream of I-40	Burke County
Drowning Creek Tributary 1	Approximately 800 feet upstream of Wilson Road	Approximately 1,700 feet upstream of Cline Park Drive	Town of Hildebran
Drowning Creek Tributary 2	Approximately 100 feet downstream of the confluence of Drowning Creek Tributary 2B	Approximately 200 feet downstream of the Railroad	Burke County
Drowning Creek Tributary 2B	The confluence with Drowning Creek Tributary 2	Approximately 150 feet downstream of the Railroad	Burke County
Duck Creek	The confluence with Middle Little River	The confluence of Holsclaw Creek and White Creek	Alexander County
Dye Branch	The confluence with McGalliard Creek	Approximately 150 feet downstream of Ribet Avenue SE	Burke County, Town of Valdese
Elk Branch	The confluence with Jones Creek	Approximately 1,310 feet upstream of Old Sampson Road (SR 1574)	Caldwell County
Elk Shoal Creek	The confluence with Catawba River	Approximately 1,980 feet upstream of Rest Home Road (SR 1702)	Catawba County
Elk Shoals Creek	The confluence with Catawba River	Approximately 350 feet upstream of SR 1631	Alexander County
Elk Shoals Creek Tributary 1	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of the confluence with Elk Shoals Creek	Alexander County
Elk Shoals Creek Tributary 2	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of confluence with Elk Shoals Creek	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Estes Mill Creek	The confluence with Wilson Creek	Approximately 1.2 miles upstream of the confluence with Wilson Creek	Caldwell County
Falling Creek	Approximately 0.4 mile downstream of Cloninger Mill Road NE	Approximately 50 feet downstream of 12th Avenue NE	Catawba County, City of Hickory
Falling Creek Tributary 1	The confluence with Falling Creek	Approximately 275 feet upstream of 14th Avenue NE	City of Hickory
Falling Creek Tributary 2	The confluence with Falling Creek	Approximately 380 feet upstream of 12th Avenue NE	City of Hickory
Fiddle Creek	The confluence with Mulberry Creek	Approximately 1,620 feet upstream of the confluence with Mulberry Creek	Caldwell County
Franklin Branch	The confluence with Johns River	Approximately 1,500 feet upstream of the confluence with Franklin Branch Tributary 1	Caldwell County
Franklin Branch Tributary 1	The confluence with Franklin Branch	Approximately 1,540 feet upstream of the confluence with Franklin Branch	Caldwell County
Freemason Creek	The confluence with Catawba River	Approximately 300 feet upstream of Stamey Road	Caldwell County, Town of Sawmills
Freemason Creek Tributary 1	The confluence with Freemason Creek	Approximately 1.5 miles upstream of the confluence with Freemason Creek	Caldwell County, Town of Sawmills
Freemason Creek Tributary 1A	The confluence with Freemason Creek Tributary 1	Approximately 1,690 feet upstream of Hickory Nut Ridge Road	Town of Sawmills
Freemason Creek Tributary 2	The confluence with Freemason Creek	Approximately 0.8 mile upstream of Horseshoe Bend Road	Town of Sawmills
Freemason Creek Tributary 2A	The confluence with Freemason Creek Tributary 2	Approximately 620 feet upstream of Lafayette Avenue	Town of Sawmills
Frye Creek	The confluence with Cripple Creek and Horseford Creek	Approximately 425 feet upstream of 33rd Street NW	City of Hickory, Town of Long View

	Riverine Sources		
Sources	From	To	Affected Communities
Geitner Branch	The confluence with Henry Fork	Approximately 1,900 feet upstream of 7th Avenue SW	City of Hickory
Geitner Branch Tributary 1	The confluence with Geitner Branch	Approximately 1,250 feet upstream of confluence with Geitner Branch	City of Hickory
Geitner Branch Tributary 2	The confluence with Geitner Branch	Approximately 1,670 feet upstream of 7th Avenue SW	City of Hickory
Ginger Creek	The confluence with Middle Little River	Approximately 0.7 mile upstream of Draco Road	Caldwell County
Ginger Creek Tributary 1	The confluence with Ginger Creek	Approximately 1.3 miles upstream of Scout Road	Caldwell County
Glade Creek	The confluence with Lower Little River	Approximately 1.1 miles upstream of SR 1604	Alexander County
Glade Creek Tributary 1	The confluence with Glade Creek	Approximately 0.8 mile upstream of SR 1607	Alexander County, Town of Taylorsville
Grassy Creek	The confluence with Lower Little River	Approximately 0.4 mile upstream of SR 1344	Alexander County
Grassy Creek Tributary 1	The confluence with Grassy Creek	Approximately 0.7 mile upstream of the confluence with Grassy Creek	Alexander County
Grassy Creek Tributary 2	The confluence with Grassy Creek	Approximately 0.7 mile upstream of NC 16	Alexander County
Greasy Creek	The confluence with Lower Little River	Approximately 0.4 mile upstream of SR 1344	Alexander County
Greasy Creek Tributary 1	The confluence with Grassy Creek	Approximately 0.7 mile upstream of the confluence with Grassy Creek	Alexander County, Town of Taylorsville
Green Rock Branch	The confluence with Buffalo Creek	Approximately 1.5 miles upstream of Buffalo Cove Road (SR 1504)	Caldwell County
Gunpowder Creek	Approximately 785 feet upstream of SE Starcross Road	Approximately 600 feet upstream of SE Applegate Court	City of Lenoir
Gunpowder Creek	The confluence with Catawba River	Approximately 0.5 mile upstream of Pine Mountain Road (SR 1809)	Caldwell County, City of Hickory, Town of Granite Falls, Town of Hudson
Gunpowder Creek Tributary 1	The confluence with Gunpowder Creek	Approximately 280 feet downstream of Temple Hill Church Road	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Gunpowder Creek Tributary 2	The confluence with Gunpowder Creek	Approximately 45 feet downstream of Christie Road (SR 1717)	Caldwell County
Gunpowder Creek Tributary 2A	The confluence with Gunpowder Creek Tributary 2	Approximately 1,550 feet upstream of Christie Road (SR 1717)	Caldwell County, Town of Hudson
Gunpowder Creek Tributary 3	The confluence with Gunpowder Creek	Approximately 2,340 feet upstream of the confluence with Gunpowder Creek	Town of Hudson
Gunpowder Creek Tributary 4	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of the confluence with Gunpowder Creek	Town of Hudson
Gunpowder Creek Tributary 5	The confluence with Gunpowder Creek	Approximately 1,115 feet upstream of SE Eastwood Park Circle	City of Lenoir
Gunpowder Creek Tributary 6	The confluence with Gunpowder Creek	Approximately 0.5 mile upstream of Renwick Street	City of Lenoir
Guys Branch	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of the confluence with Elk Shoals Creek	Alexander County
Haas Creek	The confluence with Pott Creek	Approximately 0.8 mile upstream of Grace Church Road	Catawba County
Hall Creek	The confluence with Silver Creek	Approximately 0.4 mile upstream of US 64	Burke County
Harper Creek	The confluence with Camp Creek and Raider Camp Creek	The confluence of South Harper Creek	Caldwell County
Hayes Mill Creek	The confluence with Catawba River	Approximately 0.6 mile upstream of Helton Road	Caldwell County, Town of Granite Falls, Town of Sawmills
Hayes Mill Creek Tributary 1	The confluence with Hayes Mill Creek	Approximately 1,700 feet upstream of the confluence with Hayes Mill Creek	Town of Granite Falls, Town of Sawmills
Hayes Mill Creek Tributary 2	The confluence with Hayes Mill Creek	Approximately 1,900 feet upstream of the confluence with Hayes Mill Creek	Town of Sawmills
Henry Fork	Approximately 0.6 mile upstream of SR 1002	Approximately 0.9 mile upstream of SR 1918	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Henry Fork	The confluence with South Fork Catawba River and Jacob Fork	The Catawba/Burke County boundary	Catawba County, City of Hickory, City of Newton, Town of Brookford, Town of Long View
Henry Fork Tributary 1	The confluence with Henry Fork	Approximately 0.5 mile upstream of Catawba Valley Boulevard SE	City of Hickory
Henry Fork Tributary 2	The confluence of Henry Fork	Approximately 1,930 feet upstream of Brookford Boulevard	City of Hickory, Town of Brookford
Henry Fork Tributary 3	The confluence with Henry Fork	Approximately 2,000 feet upstream of Robinson Road	Catawba County
Hildebran Creek	The confluence with Clarks Creek	Approximately 150 feet upstream of A. C. Little Drive	City of Newton
Holdsclaw Creek	The confluence with Catawba River	Approximately 1,500 ft upstream of the confluence of Holdsclaw Creek Tributary 1	Catawba County
Holdsclaw Creek Tributary 1	The confluence with Holdsclaw Creek	Approximately 1,450 feet upstream of the confluence with Holdsclaw Creek	Catawba County
Holly Branch	Approximately 220 feet downstream of the confluence of Holly Branch Tributary 1 and Shady Branch	The confluence of Shady Branch and Holly Branch Tributary 1	Town of Maiden
Holly Branch Tributary 1	The confluence with Holly Branch	Approximately 200 feet upstream of South Main Avenue	Town of Maiden
Holdsclaw Creek	The confluence with Duck Creek	Approximately 0.8 mile upstream of SR 1302	Alexander County
Hop Creek	The confluence with Holly Branch	Approximately 200 feet upstream of South Main Avenue	Catawba County
Horseford Creek	Approximately 1,520 feet upstream of confluence with Catawba River	The confluence of Frye Creek and Cripple Creek	Catawba County, City of Hickory
Howard Creek	The confluence with Catawba River	Approximately 850 feet upstream of SR 1512	Burke County, Town of Drexel, Town of Valdese
Howard Creek Tributary 1	The confluence with Howard Creek	Approximately 350 feet upstream of Railroad	Town of Drexel

	Riverine Sources		
Sources	From	To	Affected Communities
Howards Creek	The confluence with South Fork Catawba River	Approximately 500 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Hoyle Creek	The confluence with Catawba River	Approximately 1,500 feet upstream of the confluence with Micol Creek	Burke County, Town of Rutherford College, Town of Valdese
Hoyle Creek Tributary 1	The confluence with Hoyle Creek	Approximately 0.9 mile upstream of the confluence with Hoyle Creek	Burke County, Town of Rutherford College, Town of Valdese
Hoyle Creek Tributary 2	The confluence with Hoyle Creek	Approximately 0.7 mile upstream of the confluence with Hoyle Creek	Town of Rutherford College, Town of Valdese
Hunting Creek	Approximately 250 feet upstream of the confluence of Hunting Creek Tributary 3	Approximately 1,100 feet upstream of SR 2002	Burke County, City of Morganton
Hunting Creek Tributary 2	The confluence with Hunting Creek	Approximately 0.7 mile upstream of Walker Road (SR 1942)	City of Morganton
Hunting Creek Tributary 3	The confluence with Hunting Creek	Approximately 0.4 mile upstream of the confluence with Hunting Creek	Burke County, City of Morganton
Husband Creek	The confluence with Lower Creek	Approximately 1,925 feet upstream of Rocky Road (SR 1143)	Caldwell County, Town of Gamewell
Husband Creek Tributary 1	The confluence with Husband Creek	Approximately 140 feet downstream of Fleming Chapel Church Road (SR 1322)	Caldwell County
Husband Creek Tributary 2	The confluence with Husband Creek	Approximately 750 feet upstream of Crooked Creek Way	Caldwell County
Indian Creek	The Lincoln/Gaston County boundary	Approximately 550 ft upstream of the Catawba/Lincoln County boundary	Catawba County
Irish Creek	The confluence with Upper Creek and Warrior Fork	Approximately 800 feet upstream of the confluence with Reedys Fork Creek	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Irish Creek Tributary 1	The confluence with Irish Creek	At SR 1240	Burke County
Isaac Creek	The confluence with Upper Little River	Approximately 0.7 mile upstream of SR 1143	Alexander County
Island Creek	The confluence with Catawba River	Approximately 0.4 mile upstream of SR 1621	Alexander County
Island Creek	The confluence with Catawba River	Approximately 0.7 mile upstream of I-40	Burke County, Town of Connelly Springs, Town of Rutherford College
Jackson Camp Creek	The confluence with Yadkin River	Approximately 1.0 mile upstream of Richland Road (SR 1372)	Caldwell County
Jacob Fork	Approximately 220 feet upstream of Providence Church Road	Approximately 990 feet upstream of the Catawba/Burke County boundary	Burke County, Catawba County
Jacob Fork	Approximately 990 feet upstream of the Catawba/Burke County boundary	Approximately 450 feet upstream of SR 1904	Burke County
Jacob Fork Tributary 1	The confluence with Jacob Fork	Approximately 1.3 miles upstream of Cooksville Road	Catawba County
Jesse Fork	The confluence with Buffalo Creek	Approximately 0.8 mile upstream Stone Mountain Road (SR 1503)	Caldwell County
Jesse Fork Tributary 1	The confluence with Jesse Fork	Approximately 330 feet upstream of Wallace Coffey Place	Caldwell County
Johns River	Approximately 1.1 miles upstream of Triple T Lane	Approximately 3.8 miles upstream of the confluence of Thunderhole Creek	Caldwell County
Johns River	The confluence with Catawba River	Approximately 1,500 feet upstream of the Burke / Caldwell County boundary	Burke County, Caldwell County, City of Morganton
Jones Creek	The confluence with Buffalo Creek	Approximately 50 feet downstream of the Watauga / Caldwell County boundary	Caldwell County
Jumping Run	The confluence with Rock Creek	Approximately 500 feet upstream of NC 127	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Kings Creek 1	The confluence with Yadkin River	The confluence of Little Kings Creek and Blue Creek	Caldwell County
Kings Creek 2	The confluence with Blue Creek	Approximately 1.9 miles upstream of the confluence of Kings Creek 2 Tributary 1	Caldwell County
Kings Creek 2 Tributary 1	The confluence with Kings Creek 2	Approximately 1.6 miles upstream of Blue Door School Road	Caldwell County
Lambert Creek	The confluence with Lower Little River	Approximately 0.8 mile upstream of SR 1307	Alexander County
Lambert Creek Tributary 1	The confluence with Lambert Creek	Approximately 800 feet upstream of SR 1307	Alexander County
Laurel Creek	The confluence with Henry Fork	Approximately 1.2 miles upstream of Shouppe Way	Burke County
Laurel Creek	The confluence with Wilson Creek	Approximately 1.1 miles upstream of the confluence with Wilson Creek	Caldwell County
Laytown Creek	The confluence with Yadkin River	Approximately 1.8 miles upstream of Laytown Road (SR 1507)	Caldwell County
Linville River	Approximately 2.6 miles upstream of NC 126	Approximately 800 feet downstream of the Land Harbors Dam	Burke County
Linville River	The confluence with Catawba River	Approximately 0.7 mile downstream of NC 126	Burke County
Lippard Creek	The confluence with Sawmill Branch and Leepers Creek	Approximately 1,940 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Little Creek	The confluence with Upper Little River	Approximately 1.4 miles upstream of Cove Mountain Lane	Caldwell County
Little Gunpowder Creek (near City of Lenoir)	Approximately 700 feet upstream of SW Walt Arney Road	Approximately 1,075 feet upstream of Connelly Springs Road	Town of Cahah's Mountain
Little Gunpowder Creek (near Town of Hudson)	Approximately 0.8 mile upstream of Little Gunpowder Creek Drive (SR 1133)	Approximately 1.4 miles upstream of Little Gunpowder Creek Drive (SR 1133)	Caldwell County, Town of Cahah's Mountain

	Riverine Sources		
Sources	From	To	Affected Communities
Little Gunpowder Creek (near Town of Hudson)	The confluence with Gunpowder Creek	Approximately 0.8 mile upstream of Little Gunpowder Creek Drive (SR 1133)	Caldwell County, Town of Granite Falls, Town of Hudson, Town of Sawmills
Little Gunpowder Creek (near Town of Hudson) Tributary 1	The confluence with Little Gunpowder Creek (near Town of Hudson)	Approximately 50 feet upstream of Madison MHP Drive	Town of Hudson
Little Gunpowder Creek (near Town of Hudson) Tributary 2	The confluence with Little Gunpowder Creek (near Town of Hudson)	Approximately 0.4 mile upstream of Chickadee Trail Place	Town of Hudson
Little Kings Creek	The confluence with Kings Creek and Blue Creek	Approximately 1,620 feet upstream of Zacks Fork Road (SR 1511)	Caldwell County
Little Mulberry Creek 1	The confluence with Mulberry Creek	Approximately 0.5 mile upstream of Planters Way	Caldwell County
Little Mulberry Creek 2	The confluence with Mulberry Creek	Approximately 0.4 mile upstream of Shallow Creek Road (SR 1530)	Caldwell County
Little Silver Creek	Approximately 0.6 mile upstream of Causby Road (SR 1147)	Approximately 1.1 miles upstream of Ceramic Tile Drive	Burke County, City of Morganton, Town of Glen Alpine
Long Creek	The confluence with McLin Creek	Approximately 1,450 feet upstream of Railroad	City of Claremont, City of Conover
Long Shoal Creek	The confluence with Catawba River (Lake Hickory)	Approximately 0.4 mile upstream of Pinecrest Drive NE	Catawba County, City of Hickory
Long View Creek	The confluence with Henry Fork	Approximately 1,500 feet upstream of US-70 SW	City of Hickory, Town of Long View
Long View Creek Tributary 1	The confluence with Long View Creek	Approximately 100 feet upstream of US-70	City of Hickory
Long View Creek Tributary 2	The confluence with Long View Creek	Approximately 1,460 feet upstream of confluence with Long View Creek	Town of Long View
Lost Cove Creek	The confluence with Wilson Creek	Approximately 2.1 miles upstream of the confluence with Gragg Prong Creek	Caldwell County
Lower Creek	Approximately 800 feet downstream of the confluence of Abingdon Creek	Approximately 1,830 feet upstream of the second crossing of Cedar Rock Circle (SR 1706)	Caldwell County, City of Lenoir, Town of Gamewell
Lower Creek	The confluence with Catawba River	Approximately 1,290 feet downstream of the confluence with Husband Creek	Burke County, Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Lower Creek Tributary 1	The confluence with Lower Creek	Approximately 0.7 mile upstream of SE Haigler Road	City of Lenoir
Lower Little River	The confluence with Catawba River	Approximately 0.9 mile upstream of SR 1332	Alexander County
Lower Little River Tributary 1	The confluence with Lower Little River	Approximately 1.9 miles upstream of the confluence with Lower Little River	Alexander County
Lower Little River Tributary 2	The confluence with Lower Little River	Approximately 1,600 feet upstream of SR 1124	Alexander County
Lower Little River Tributary 2A	The confluence with Lower Little River Tributary 2	Approximately 1,600 feet upstream of confluence with Lower Little River Tributary 2	Alexander County
Lower Little River Tributary 3	The confluence with Lower Little River	Approximately 1.4 miles upstream of SR 1110	Alexander County
Lower Little River Tributary 4	The confluence with Lower Little River	Approximately 1,000 feet upstream of SR 1104	Alexander County, Town of Taylorsville
Lyle Creek	Approximately 0.6 miles downstream of confluence of Bakers Creek	Approximately 550 feet upstream of 18th Street NE	Catawba County, City of Conover, City of Hickory
Lyle Creek Tributary	The confluence with Lyle Creek	Approximately 1,950 feet upstream of Community Road	Catawba County
Lyle Creek Tributary 1	The confluence with Lyle Creek	Approximately 1.0 mile upstream of Crossing Creek Drive (SR 2454)	Catawba County
Maiden Creek	Approximately 1.3 miles upstream of Providence Mill Road	Approximately 80 feet downstream of North Olivers Cross Road	Catawba County
McGalliard Creek	Approximately 250 feet upstream of confluence of McGalliard Creek Tributary 2	The confluence of Double Branch	Burke County, Town of Valdese
McGalliard Creek	The confluence of Double Branch	Approximately 400 feet upstream of SR 1722	Burke County
McGalliard Creek	The confluence with Catawba River	Approximately 1.1 miles upstream of the confluence with Catawba River	Burke County, Town of Valdese
McGalliard Creek Tributary 1	The confluence with McGalliard Creek	Approximately 1,800 feet upstream of Louise Avenue NE	Burke County, Town of Valdese

	Riverine Sources		
Sources	From	To	Affected Communities
McGalliard Creek Tributary 2	The confluence with McGalliard Creek	Approximately 600 feet downstream of I-40	Burke County, Town of Drexel
McGalliard Creek Tributary 2A	The confluence with McGalliard Creek Tributary 2	Approximately 800 feet upstream of Drexel Road	Town of Drexel
McGalliard Creek Tributary 2B	The confluence with McGalliard Creek Tributary 2	Approximately 200 feet downstream of SR 1721	Burke County, Town of Drexel
McLin Creek Tributary 1	The confluence with McLin Creek	Approximately 1,250 feet upstream of Frazier Drive	City of Claremont
McRory Creek	The confluence with Upper Little River	Approximately 0.6 mile upstream of McRory Creek Road (SR 1721)	Caldwell County
Micol Creek	The confluence with Hoyle Creek	Approximately 350 feet downstream of I-40	Burke County, Town of Valdese
Micol Creek Tributary 1	The confluence with Micol Creek	Approximately 0.5 mile upstream of Montonya View Drive	Burke County, Town of Rutherford College, Town of Valdese
Micol Creek Tributary 1A	The confluence with Micol Creek Tributary 1	Approximately 75 feet downstream of SR 1001	Burke County, Town of Rutherford College
Micol Creek Tributary 1A1	The confluence with Micol Creek Tributary 1A	Approximately 0.4 mile upstream of the confluence with Micol Creek Tributary 1A	Burke County
Middle Little River	The confluence with Catawba River/Lake Hickory	Approximately 280 feet upstream of the Alexander / Caldwell County boundary	Alexander County, Caldwell County
Middle Little River	The most downstream crossing of the Alexander / Caldwell County boundary	Approximately 0.4 mile upstream of Brush Mountain Road (SR 1733)	Alexander County, Caldwell County
Middle Little River Tributary 2	The confluence with Middle Little River	Approximately 300 feet downstream of SR 1152	Alexander County
Middle Little River Tributary 3	The confluence with Middle Little River	Approximately 1,480 feet upstream of Taylorsville Road	Caldwell County
Middle Little River Tributary 4	The confluence with Middle Little River	Approximately 1,300 feet upstream of Duck Creek Road (SR 1730)	Caldwell County
Middle Little River Tributary 5	The confluence with Middle Little River	Approximately 0.5 mile upstream of the confluence with Middle Little River	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Mill Creek	The confluence with South Yadkin River	Approximately 0.4 mile upstream of the confluence with South Yadkin River	Alexander County
Mill Creek	The confluence with Upper Little River	Approximately 1.0 mile upstream of Petra Mill Road (SR 1740)	Caldwell County
Mill Creek (into Yadkin River)	The confluence with Yadkin River	Approximately 1.2 miles upstream of NC Highway 268	Caldwell County
Miller Branch	The confluence with Clarks Creek	Approximately 1.9 miles upstream of confluence with Clarks Creek	City of Hickory
Miller Creek	The confluence with South Yadkin River	Approximately 260 feet upstream of Sprinkle Dairy Road (SR 1475)	Alexander County
Morris Creek	The confluence with Upper Little River	Approximately 490 feet upstream of Sheriffs Road (SR 1730)	Caldwell County
Mountain Creek	The confluence with Catawba River (Lake Norman)	Approximately 1.6 miles upstream of the confluence of Mountain Creek Tributary 3	Catawba County
Mountain Creek	The confluence with Middle Little River	Approximately 200 feet upstream of SR 1150	Alexander County
Mountain Creek Tributary 2	The confluence with Mountain Creek	Approximately 1.6 miles upstream of the confluence with Mountain Creek	Catawba County
Mountain Creek Tributary 2A	The confluence with Mountain Creek Tributary 2	Approximately 1.4 miles upstream of the confluence with Mountain Creek Tributary 2	Catawba County
Mountain Creek Tributary 3	The confluence with Mountain Creek	Approximately 1.0 mile upstream of the confluence with Mountain Creek	Catawba County
Mountain Creek Tributary 3A	The confluence with Mountain Creek Tributary 3	Approximately 0.5 mile upstream of the confluence with Mountain Creek Tributary 3	Catawba County
Mountain Run	The confluence with Upper Little River	Approximately 125 feet upstream of Fox Road (SR 1726)	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Muddy Creek	Approximately 0.4 mile downstream of Robinson Road (SR 1146)	The confluence of Muddy Creek Tributary 2 and Muddy Creek Tributary 3	Catawba County
Muddy Creek	The confluence of Old Catawba River	The confluence of North Muddy Creek and South Muddy Creek	Burke County
Muddy Creek Tributary 1	The confluence with Muddy Creek	Approximately 0.7 mile upstream of Robinwood Road (SR 1148)	Catawba County
Muddy Creek Tributary 2	The confluence with Muddy Creek	Approximately 0.6 mile upstream of Robinwood Road (SR 1148)	Catawba County
Muddy Creek Tributary 3	The confluence with Muddy Creek	Approximately 1.3 miles upstream of the confluence with Muddy Creek	Catawba County, City of Hickory
Muddy Fork Creek	The confluence with Lower Little River	Approximately 600 feet downstream of SR 1405	Alexander County, Town of Taylorsville
Muddy Fork Creek Tributary 1	The confluence with Muddy Fork Creek	Approximately 1.6 miles upstream of Old Wilkesboro Road	Alexander County, Town of Taylorsville
Mulberry Creek	Approximately 90 feet downstream of Collettsville Road	Approximately 0.7 mile upstream of the confluence of Amos Creek	Caldwell County
Mull Creek	The confluence with Lyle Creek	Approximately 500 feet upstream of 9th Avenue NE	Catawba County, City of Claremont, City of Conover
Mundy Creek	The confluence with Reed Creek	Approximately 500 feet upstream of Lineberger Road	Catawba County
Mundy Creek Tributary 1	The confluence with Mundy Creek	Approximately 1,400 feet upstream of Grassy Creek Road	Catawba County
Naked Creek	Approximately 0.5 mile downstream of St. Peters Church Road (SR 1453)	Approximately 0.5 mile upstream of Timber Ridge Road	Catawba County
Nolden Creek	The confluence with Catawba River	Approximately 1,900 feet upstream of Nolden Creek Road	Burke County, Town of Connelly Springs
Old Catawba River	The confluence with Catawba River	The Burke / McDowell County boundary	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Old Field Branch	The confluence with Buffalo Creek	Approximately 1.7 miles upstream of the confluence with Buffalo Creek	Caldwell County
Ooten Creek	The confluence with Yadkin River	Approximately 0.6 mile upstream of the confluence with Yadkin River	Caldwell County
Paddy Creek	The confluence with Catawba River	Approximately 2.9 miles upstream of SR 1237	Burke County
Parks Creek	The confluence with Johns River	Approximately 100 feet downstream of SR 1405	Burke County
Pearcy Creek	The confluence with Parks Creek	Approximately 1.1 miles upstream of SR 1405	Burke County
Pearcy Creek Tributary 1	The confluence with Pearcy Creek	Approximately 20 feet downstream of SR 1405	Burke County
Pilot Branch	The confluence with Upper Little River	Approximately 440 feet upstream of Burns Road (SR 1749)	Caldwell County
Pinch Gut Creek	Approximately 120 feet upstream of Saint James Church Road	Approximately 0.9 mile upstream of Saint James Church Road	Catawba County
Pinch Gut Creek Tributary 1	The confluence with Pinch Gut Creek	Approximately 0.5 mile upstream of the confluence with Pinch Gut Creek	Catawba County
Poplar Creek	The confluence with Lambert Creek	Approximately 0.5 mile upstream of SR 1305	Alexander County
Pott Creek	The confluence with South Fork Catawba River	Approximately 1.9 miles upstream of Plateau Road	Catawba County
Preston Creek	The confluence with Yadkin River	Approximately 650 feet upstream of Kirby Mountain Road (SR 1370)	Caldwell County
Prong Creek	The confluence with Johns River	Approximately 65 feet downstream of the confluence Racket Creek and Anthony Creek	Caldwell County
Propst Creek	Approximately 1.9 miles upstream of confluence with Lyle Creek	Approximately 75 feet downstream of Sipe Road (SR 1492)	Catawba County, City of Hickory
Racket Creek	Approximately 65 feet downstream of the confluence with Prong Creek and Anthony Creek	Approximately 145 feet upstream of the confluence with Ballew Creek	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Raider Camp Creek	The confluence with Camp Creek	Approximately 1,795 feet upstream of the confluence with Camp Creek	Caldwell County
Reed Creek	The confluence with Mountain Creek	Approximately 1.1 miles upstream of Mount Pleasant Road (SR 1849)	Catawba County
Reedys Fork Creek	The confluence with Irish Creek	Approximately 0.5 mile upstream of the confluence with Irish Creek	Burke County
Rhodes Mill Creek	The confluence with Pott Creek	Approximately 1,100 feet upstream of Leatherman Road	Catawba County
Rhodes Mill Creek Tributary 1	The confluence with Rhodes Mill Creek	Approximately 0.4 mile upstream of the confluence with Rhodes Mill Creek	Catawba County
Rock Creek	The confluence with Middle Little River	The confluence of Jumping Run	Alexander County
Rock Creek	The confluence with Upper Little River	Approximately 200 feet downstream of Fowler Road (SR 1747)	Caldwell County
Rock Creek Tributary 1	The confluence with Rock Creek	Approximately 1,000 feet upstream of confluence with Rock Creek	Alexander County
Rockhouse Creek	The confluence with Buffalo Creek	Approximately 30 feet downstream of the Watauga / Caldwell County boundary	Caldwell County
Rockhouse Creek	The confluence with Lost Cove Creek	Approximately 0.4 mile upstream of Avery/Caldwell County boundary	Caldwell County
Rocky Creek	The confluence with South Yadkin River	The Alexander/Iredell County boundary	Alexander County
Rocky Creek	The Iredell/Alexander County boundary	Approximately 1.0 mile upstream of the confluence of Rocky Creek Tributary 1	Alexander County
Roses Creek	The confluence with Irish Creek	Approximately 1.7 miles upstream of SR 1262	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Roses Creek Tributary 1	The confluence with Roses Creek	Approximately 0.6 mile upstream of the confluence with Roses Creek	Burke County
Rush Branch	The confluence with Mulberry Creek	Approximately 0.9 mile upstream of the confluence with Mulberry Creek	Caldwell County
Russell Creek	The confluence with Irish Creek	Approximately 1.6 miles upstream of SR 1240	Burke County
Secrets Creek	The confluence with Howard Creek	Approximately 0.8 mile upstream of South Main Street	Town of Drexel, Town of Valdese
Shady Branch	The confluence with Holly Branch	Approximately 500 feet upstream of South 11th Avenue	Town of Maiden
Shady Branch Tributary 1	The confluence with Shady Branch	Approximately 1,800 feet upstream of South 8th Avenue	Town of Maiden
Silver Creek	Approximately 1.6 miles upstream of I-40	Approximately 1,800 feet upstream of US 64	Burke County, City of Morganton
Silver Creek	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of Falls Avenue (SR 1107)	Caldwell County, Town of Granite Falls
Silver Creek Tributary 1	The confluence with Silver Creek	Approximately 100 feet downstream of the Railroad	City of Morganton
Simpson Creek	The confluence with Roses Creek	Approximately 1.5 miles upstream of the confluence with Roses Creek	Burke County
Smokey Creek	The confluence with Catawba River	The Burke / Caldwell County boundary	Burke County
Smokey Creek Tributary 1	The confluence with Smokey Creek	Approximately 0.4 mile upstream of the confluence with Smokey Creek	Burke County
Smyre Creek	Approximately 120 feet downstream of the confluence of Smyre Creek Tributary 1	Approximately 50 feet downstream of NC-16	Catawba County, City of Newton
Smyre Creek Tributary 1	The confluence with Smyre Creek	Approximately 1,500 feet upstream of the confluence with Smyre Creek	Catawba County, City of Newton

	Riverine Sources		
Sources	From	To	Affected Communities
Snow Creek	The confluence with Catawba River	Approximately 1,040 feet upstream of 15th Avenue NE	Catawba County, City of Hickory
Snow Creek	The confluence with South Yadkin River	Approximately 260 feet upstream of Mountain View Road (SR 1614E)	Alexander County
Snow Hill Branch	The confluence with Town Creek	Approximately 1,100 feet upstream of East 11th Street	City of Newton
South Fork Catawba River	Approximately 2.6 miles upstream of the confluence of Howards Creek	Approximately 125 feet downstream of NC-10	Catawba County, City of Newton
South Fork Catawba River Tributary 6	The confluence with South Fork Catawba River	Approximately 530 feet upstream of Herter Road (SR 2022)	Catawba County
South Fork Catawba River Tributary 7	The confluence with South Fork Catawba River	Approximately 0.9 mile upstream of the confluence with South Fork Catawba River	Catawba County
South Fork Catawba River Tributary 8	The confluence with South Fork Catawba River	Approximately 0.7 mile upstream of Wilfong Road (SR 2020)	Catawba County
South Fork Catawba River Tributary 9	The confluence with South Fork Catawba River	Approximately 1.1 miles upstream of US Highway 321	Catawba County
South Fork Catawba River Tributary 9A	The confluence with South Fork Catawba River Tributary 9	Approximately 1,500 feet upstream of the confluence with South Fork Catawba River Tributary 9	Catawba County
South Muddy Creek	The confluence with Muddy Creek	Approximately 0.7 mile upstream of SR 1780	Burke County
South Muddy Creek Tributary 1	The confluence with South Muddy Creek	Approximately 920 feet upstream of McDowell/Burke County boundary	Burke County
South Yadkin River	The confluence with Yadkin River	Approximately 510 feet downstream of Vashti Road (SR 1403)	Alexander County
Spainhour Creek	The confluence with Blairs Fork Creek	Approximately 1,800 feet upstream of Blowing Rock Boulevard	City of Lenoir
Spring Creek	The confluence with Lower Little River	Approximately 1.7 miles upstream of SR 1121	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Stirewalt Creek	The confluence with Lower Little River	Just upstream of the Railroad	Alexander County, Town of Taylorsville
Stratford Creek	The confluence with Catawba River	Approximately 130 feet downstream of Lee Pearson Road (SR 1136)	Caldwell County
Stratford Creek Tributary 1	The confluence with Stratford Creek	Approximately 1,815 feet upstream of Baton School Road (SR 1139)	Caldwell County
Terrapin Creek	The confluence with Catawba River (Lake Norman)	Approximately 1.2 miles upstream of the confluence of Terrapin Creek Tributary 1	Catawba County
Terrapin Creek Tributary 1	The confluence with Terrapin Creek	Approximately 1 mile upstream of the confluence with Terrapin Creek	Catawba County
Third Creek	Approximately 1,130 feet downstream of Interstate 40	Approximately 0.5 mile upstream of Lentz Road	Alexander County
Thorps Creek	The confluence with Wilson Creek	Approximately 1,375 feet upstream of Edgemont Road	Caldwell County
Thunderhole Creek	The confluence with Johns River	Approximately 0.4 mile upstream of the confluence of New Years Creek	Caldwell County
Tims Creek	The confluence with Henry Fork	Approximately 1.3 miles upstream of SR 1788	Burke County
Town Branch	The confluence with Catawba River	Approximately 0.5 mile upstream of 2nd Street S.W.	Town of Catawba
Town Creek	Approximately 1,400 feet upstream of St. James Church Road	Approximately 0.8 miles upstream of State Route 10	City of Newton
Tributary to Lyle Creek Tributary	The confluence with Lyle Creek Tributary	Approximately 0.7 mile upstream of the confluence with Lyle Creek Tributary	Catawba County
Upper Creek	The confluence with Irish Creek and Warrior Fork	Approximately 0.5 mile upstream of SR 1405	Burke County
Upper Little River	The confluence with Catawba River	Approximately 0.7 mile upstream of Teaberry Lane	Alexander County, Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Upper Little River Tributary 1	The confluence with Upper Little River	Approximately 2,380 feet upstream of Charlie Little Road (SR 1741)	Caldwell County
Wallace Creek	The confluence with South Yadkin River	Approximately 1,200 feet upstream of the confluence of Greasy Creek	Alexander County
Walnut Bottom Creek	The confluence with Johns River	Approximately 0.6 mile upstream of the confluence with Johns River	Caldwell County
Warrior Creek	The confluence with Yadkin River	Approximately 210 feet upstream of Warrior Road (SR 1346)	Caldwell County
Warrior Fork	Approximately 0.5 mile upstream of the confluence of Wilson Creek	The confluence of Irish Creek and Upper Creek	Burke County, City of Morganton
White Creek	The confluence with Duck Creek	Approximately 1.9 miles upstream of SR 1304	Alexander County
Wilson Creek	Approximately 1.1 miles upstream of Adako Road (SR 1337)	Approximately 500 feet upstream of the confluence of Cary Flat Branch	Caldwell County
Yadkin River	Approximately 90 feet upstream of Whisnant Road (SR 1517)	Approximately 2.2 miles upstream of the confluence of Ooten Creek	Caldwell County
Yadkin River	The confluence of Elk Creek	Approximately 0.5 mile upstream of the confluence of Mill Creek (into Yadkin River)	Caldwell County
Yadkin River Tributary 25	The confluence with Yadkin River	Approximately 1.3 miles upstream of NC Highway 268	Caldwell County
Zacks Fork Creek	The confluence with Lower Creek	Approximately 900 feet downstream of NE Georgetown Road	City of Lenoir
Zacks Fork Creek Tributary 1	The confluence with Zacks Fork Creek	Approximately 1.2 miles upstream of the confluence with Zacks Fork Creek	Caldwell County, City of Lenoir

Table 4.11 lists flooding sources that were studied by detailed methods for the pre-statewide FIS and re-delineated for previous FISs. These flooding sources were not part of this revision and their effective analyses remain valid.

Table 4.11: Flooding Sources Studied by Detailed Methods: Redelineation

Sources	Riverine Sources		Affected Communities
	From	To	
Abingdon Creek	The confluence with Lower Creek	Approximately 940 feet upstream of Huffman Road	Caldwell County, City of Lenoir, Town of Gamewell
Allen Creek	The confluence with Maiden Creek	Approximately 50 feet downstream of Jim Beard Road (SR 1867)	Catawba County, Town of Maiden
Bailey Fork	The confluence with Silver Creek	Approximately 0.8 mile upstream of I-40	City of Morganton
Bakers Creek	The confluence with Lyle Creek	Approximately 900 feet downstream of Lee Cline Road (SR 1486)	Catawba County
Betts Branch	The confluence with Clarks Creek	Approximately 2.0 miles upstream of Sigmon Dairy Road	Catawba County
Bills Branch	The confluence with Clarks Creek	Approximately 830 feet upstream of US Highway 321	Catawba County, City of Newton
Canoe Creek	The confluence with Catawba River	Approximately 150 feet upstream of NC 126	Burke County, City of Morganton
Catawba River	At Lake Rhodhiss Dam	At Malcolm Boulevard	Burke County, Caldwell County, City of Lenoir, Town of Connelly Springs, Town of Granite Falls, Town of Rhodhiss, Town of Rutherford College, Town of Sawmills
Catawba River (Lake Hickory)	Lake Hickory/Oxford Dam	NC 127	Alexander County, Catawba County, City of Hickory
Catawba River (Lake Norman)	Cowans Ford Dam	Approximately 0.6 mile downstream of Hudson Chapel Road (SR 1004)	Catawba County
Catawba River (Lookout Shoals Lake)	Toe at Lookout Shoals Dam	Approximately 0.4 mile upstream of the confluence of Elk Shoal Creek	Alexander County, Catawba County
Cline Creek North	The confluence with Lyle Creek	Approximately 0.4 mile upstream of Rifle Range Road (SR 1488)	Catawba County, City of Conover

	Riverine Sources		
Sources	From	To	Affected Communities
DrowningCreek	The confluence with Catawba River	Approximately 300 feet downstream of SR 1621	Burke County
DrowningCreek Tributary 1	The confluence with DrowningCreek	Approximately 800 feet upstream of Wilson Road	Burke County, Town of Hildebran
DrowningCreek Tributary 2	The confluence with DrowningCreek	Approximately 100 feet downstream of the confluence of Drowning Creek Tributary 2B	Burke County, Town of Hildebran
DrowningCreek Tributary 2A	The confluence with DrowningCreek Tributary 2	Approximately 1,600 feet upstream of the confluence with DrowningCreek Tributary 2	Burke County
East Prong Creek	The confluence with Hunting Creek	Approximately 500 feet downstream of Mount Home Church Road	City of Morganton
East Tributary to McLin Creek	The confluence with McLin Creek	Approximately 0.5 mile upstream of confluence with McLin Creek	City of Conover
Fiddlers Run	The confluence with East Prong Creek	Approximately 100 feet downstream of Old Colony Road	City of Morganton
Fitz Creek	The confluence with Cripple Creek	Approximately 175 feet upstream of 2nd Avenue NW	City of Hickory
Greasy Creek	The confluence with Lower Creek	Approximately 0.4 mile upstream of SW Morganton Boulevard	City of Lenoir
Gunpowder Creek	Approximately 0.5 mile upstream of Pine Mountain Road (SR 1809)	Approximately 785 feet upstream of SE Starcross Road	City of Lenoir, Town of Hudson
Hagan ForkCreek	The confluence with McLin Creek	Upstream side of Mount Olive Church Road	Catawba County
Henry Fork	Burke / Catawba County boundary	Approximately 0.6 mile upstream of SR 1002	Burke County, Catawba County
Herman Branch Creek	The confluence with Lyle Creek	Approximately 25 feet downstream of 26th Street NE	Catawba County, City of Hickory
HickoryCreek	The confluence with Lyle Creek	Approximately 1,350 ft upstream of 20th Street NE	City of Hickory

	Riverine Sources		
Sources	From	To	Affected Communities
Holly Branch	The confluence with Maiden Creek	Approximately 220 feet downstream of the confluence of Holly Branch Tributary 1 and Shady Branch	Town of Maiden
Howard Creek	Approximately 850 feet upstream of SR 1512	Approximately 300 feet upstream of US-70	Burke County, Town of Drexel, Town of Valdese
Hunting Creek	The confluence with Catawba River	Approximately 250 feet upstream of the confluence of Hunting Creek Tributary 3	Burke County, City of Morganton
Hunting Creek Tributary 1	The confluence with Hunting Creek	Approximately 0.7 mile upstream of the confluence with Hunting Creek	Burke County, City of Morganton
Jacob Fork	The confluence with Henry Fork and South Fork Catawba River	Approximately 220 feet upstream of Providence Church Road	Catawba County, City of Newton
Johns River	Approximately 1,500 feet upstream of the Burke / Caldwell County boundary	Approximately 1.1 miles upstream of Triple T Lane	Caldwell County
Lake Norman	Cowans Ford Dam	Approximately 0.6 mile downstream of Hudson Chapel Road (SR 1004)	Catawba County
Linville River	Approximately 0.7 mile downstream of NC 126	Approximately 2.6 miles upstream of NC 126	Burke County
Little Gunpowder Creek (near City of Lenoir)	The confluence with Gunpowder Creek	Approximately 700 feet upstream of SW Walt Arney Road	City of Lenoir, Town of Cahah's Mountain, Town of Hudson
Little Silver Creek	The confluence with Silver Creek	Approximately 0.6 mile upstream of Causby Road (SR 1147)	City of Morganton, Town of Glen Alpine
Lower Creek	Approximately 1,830 feet upstream of the second crossing of Cedar Rock Circle (SR 1706)	Approximately 1,900 feet upstream of K and B Farm Lane	Caldwell County, Village of Cedar Rock
Lower Creek	The Burke / Caldwell County boundary	Approximately 800 feet downstream of the confluence of Abingdon Creek	Burke County, Caldwell County, Town of Gamewell
Lyle Creek	The confluence with Catawba River	Approximately 0.6 mile downstream of the confluence of Bakers Creek	Catawba County, City of Claremont, City of Conover, Town of Catawba

	Riverine Sources		
Sources	From	To	Affected Communities
Maiden Creek	The confluence with Clarks Creek	Approximately 1.3 miles upstream of Providence Mill Road	Catawba County, Town of Maiden
McGalliard Creek	Approximately 1.1 miles upstream of the confluence with Catawba River	Approximately 250 feet upstream of the confluence of McGalliard Creek Tributary 2	Burke County, Town of Valdese
McLin Creek	The confluence with Lyle Creek	Approximately 0.8 mile upstream of East 20th Street	Catawba County, City of Claremont, City of Conover, City of Newton, Town of Catawba
Mulberry Creek	The confluence with Johns River	Approximately 90 feet downstream of Collettsville Road	Caldwell County
Pinch Gut Creek	The confluence with Maiden Creek	Approximately 120 feet upstream of Saint James Church Road	Catawba County, Town of Maiden
Propst Creek	The confluence with Lyle Creek	Approximately 1.9 miles upstream of the confluence with Lyle Creek	Catawba County, City of Conover
Sandy Run	The confluence with Hunting Creek	Approximately 2.4 miles upstream of the confluence with Hunting Creek	Burke County, City of Morganton
Silver Creek	The confluence with Catawba River	Approximately 1.6 miles upstream of I-40	Burke County, City of Morganton
Smokey Creek	The Burke / Caldwell County boundary	Approximately 1,500 feet upstream of Smokey Creek Road (SR 1134)	Burke County, Caldwell County
Smyre Creek	The confluence with Clarks Creek	Approximately 120 feet downstream of the confluence of Smyre Creek Tributary 1	Catawba County, City of Newton
South Fork Catawba River	Approximately 125 feet downstream of NC 10	The confluence of Jacob Fork and Henry Fork	Catawba County, City of Newton
Town Creek	The confluence with Smyre Creek	Approximately 1,400 feet upstream of St. James Church Road	City of Newton
Warrior Fork	The confluence with Catawba River	Approximately 0.5 mile upstream of the confluence of Wilson Creek	Burke County, City of Morganton
West Tributary McLin Creek	The confluence with McLin Creek	Approximately 850 feet upstream of Ann Avenue	City of Newton

	Riverine Sources		
Sources	From	To	Affected Communities
Wilson Creek	The confluence with Johns River	Approximately 1.1 miles upstream of Adako Road (SR 1337)	Caldwell County
Wilson Creek	The confluence with Warrior Fork	Approximately 0.8 mile upstream of St. Mary's Church Road (SR 1414)	Burke County, City of Morganton
Yadkin River	Approximately 0.5 mile upstream of the confluence of Mill Creek	Approximately 90 feet upstream of Whisnant Road (SR 1517)	Caldwell County
Zacks Fork Branch	The confluence with Zacks Fork Creek	Approximately 100 feet upstream of NE Sherlee Street	City of Lenoir
Zacks Fork Creek	Approximately 900 feet downstream of NE Georgetown Road	Approximately 1.1 miles upstream of Westover Heights Road	Caldwell County, City of Lenoir

Table 4.12 lists flooding sources that studied using limited detailed methods for previous FISs but were not part of this revision. Their effective analysis remains valid.

Table 4.12: Flooding Sources Studied by Detailed Methods: Limited Detailed

	Riverine Sources		
Sources	From	To	Affected Communities
Abingdon Creek	Approximately 940 feet upstream of Huffman Road	Approximately 325 feet upstream of M.W. Setzer Road	Caldwell County
Amos Creek	The confluence with Mulberry Creek	Approximately 1.4 miles upstream of the confluence with Mulberry Creek	Caldwell County
Angle Creek Tributary 1	The confluence with Angle Creek	Approximately 1.2 miles upstream of the confluence with Angle Creek	Caldwell County, City of Lenoir
Anthony Creek	Approximately 55 feet upstream of the confluence with Prong Creek and Racket Creek	Approximately 1.4 miles upstream of the confluence with Prong Creek and Rocket Creek	Caldwell County
Back Creek	The confluence with Irish Creek	Approximately 0.5 mile upstream of the confluence with Irish Creek	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Bailey Fork	Approximately 0.8 mile upstream of I-40	At US-64	Burke County, City of Morganton
Bakers Creek Tributary	The confluence with Bakers Creek	Approximately 1.4 miles upstream of Swinging Bridge Road	Catawba County
Bakers Creek Tributary 1	The confluence with Bakers Creek	Approximately 0.7 mile upstream of Stratford Drive (SR 3000)	Catawba County
Balls Creek	The confluence with Catawba River	Approximately 970 feet upstream of Little Mountain Road	Catawba County, Town of Catawba
Beaver Branch	The confluence with Lambert Creek	Approximately 500 feet upstream of SR 1307	Alexander County
Beaver Creek	The confluence with Yadkin River	Approximately 1.5 miles upstream of the Wilkes / Caldwell County boundary	Caldwell County
Beaverdam Creek	The confluence with Big Branch into South Yadkin River	Approximately 2.5 miles upstream of Vashti Road (SR 1403)	Alexander County
Big Branch	The confluence with Elk Shoals Creek	Approximately 550 feet upstream of SR 1619	Alexander County
Big Branch into South Yadkin River	The confluence with South Yadkin River	Approximately 0.5 mile upstream of Vashti Cemetery Road (SR 1430)	Alexander County
Bills Branch	Approximately 830 feet upstream of US 321	Approximately 0.5 mile upstream of US Highway 321	Catawba County, City of Newton, Town of Maiden
Billy Branch	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of North Highland Avenue	Town of Granite Falls
Blairs Fork Creek	Approximately 130 feet upstream of Collettsville Road / NC-90	Approximately 780 feet upstream of Parson's Park Drive	Caldwell County
Blue Creek	The confluence with Kings Creek 1 and Little Kings Creek	Approximately 2.9 miles upstream of Grandin Road (SR 1552)	Caldwell County
Boone Fork	The confluence with Mulberry Creek	Approximately 2.1 miles upstream of the confluence with Mulberry Creek	Caldwell County
Bristol Creek	The confluence with Lower Creek	Approximately 180 feet downstream of the Burke / Caldwell County boundary	Burke County, Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Bristol Creek Tributary 1	The confluence with Bristol Creek	Approximately 0.4 mile upstream of the confluence with Bristol Creek	Burke County
Camp Creek	The confluence with Jacob Fork	Approximately 0.5 mile downstream of SR 1736	Burke County, Catawba County
Camp Creek	The confluence with Wilson Creek	The confluence of Raider Camp Creek and Harper Creek	Caldwell County
Canoe Creek	Approximately 150 feet upstream of NC 126	Approximately 0.4 mile upstream of SR 1254	Burke County, City of Morganton
Carroll Creek	The confluence with Parks Creek	Approximately 1,000 feet upstream of SR 1424	Burke County
Catawba River	Approximately 0.6 mile downstream of Hudson Chapel Road	Toe at Lookout Shoals Dam	Catawba County, Town of Catawba
Catawba River	Approximately 0.9 mile upstream of confluence of Elk Shoal Creek	Lake Hickory/ Oxford Dam	Alexander County, Catawba County
Catawba River	Approximately 1,100 feet upstream of Watermill Glen Alpine Road (SR 1147)	At Bridgewater Dam (Power Plant)	Burke County, Town of Glen Alpine
Catawba River	Approximately 1,100 feet upstream of Watermill Glen Alpine Road (SR1147)	Approximately 1,100 feet downstream of SR 1501	Burke County
Catawba River	At Malcolm Boulevard	The confluence of Johns River	Burke County, Caldwell County, City of Morganton, Town of Rutherford College, Town of Valdese
Catawba River	North Center Street/State Highway 127	At Lake Rhodhiss Dam	Alexander County, Burke County, Caldwell County, Catawba County, City of Hickory, Town of Granite Falls, Town of Rhodhiss
Catawba River Tributary 1	The confluence with Catawba River	Approximately 0.5 mile upstream of SR 1223	Burke County
Catawba River Tributary 2	The confluence with Catawba River	Approximately 2.8 miles upstream of the confluence with Catawba River	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Celia Creek	The confluence with Husband Creek	Approximately 1.0 mile upstream of Celia Creek Road	Caldwell County
Clarks Creek	Approximately 100 feet downstream of confluence of Clarks Creek Tributary 2	Approximately 310 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Clear Creek	The confluence with Silver Creek	Approximately 500 feet upstream of US 64	Burke County
Cline Creek	Approximately 30 feet downstream of the confluence of Cline Creek Tributary 1	Approximately 150 feet downstream of Interstate 40	City of Conover
Cline Creek North	Approximately 0.4 mile upstream of Rifle Range Road	Approximately 2.0 miles upstream of the confluence of Cline Creek North Tributary 1	Catawba County
Cline Creek North Tributary 1	The confluence with Cline Creek North	Approximately 0.5 mile upstream of Rifle Range Road	Catawba County
Cline Creek Tributary 1	The confluence with Cline Creek	Approximately 450 feet upstream of Interstate 40	City of Conover
Cline Creek Tributary 2	The confluence with Cline Creek	Approximately 1,300 feet upstream of Interstate 40	City of Conover
Cold Water Creek	The confluence with Johns River	Approximately 1.7 miles upstream of the confluence with Johns River	Caldwell County
Cow Branch	The confluence with Pott Creek	Approximately 0.8 mile upstream of Grace Church Road	Catawba County
Craig Creek	The confluence with Wilson Creek	Approximately 1.9 miles upstream of the confluence with Wilson Creek	Caldwell County
Cub Creek	The confluence with Henry Fork	Approximately 200 feet downstream of SR 1737	Burke County
Dennis Creek	The confluence with Yadkin River	Approximately 0.8 mile upstream of Hines Branch Road	Caldwell County
Double Branch Tributary 1	The confluence with Double Branch	Approximately 900 feet upstream of SR 1722	Burke County
Douglas Creek	The confluence with Jacob Fork	Approximately 0.4 mile downstream of Old Rock Quarry Road	Burke County, Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Drowning Creek	Approximately 300 feet downstream of SR 1621	Approximately 1.8 miles upstream of I-40	Burke County
Drowning Creek Tributary 1	Approximately 800 feet upstream of Wilson Road	Approximately 1,700 feet upstream of Cline Park Drive	Town of Hildebran
Drowning Creek Tributary 2	Approximately 100 feet downstream of the confluence of Drowning Creek Tributary 2B	Approximately 200 feet downstream of the Railroad	Burke County
Drowning Creek Tributary 2B	The confluence with Drowning Creek Tributary 2	Approximately 150 feet downstream of the Railroad	Burke County
Elk Branch	The confluence with Jones Creek	Approximately 1,310 feet upstream of Old Sampson Road (SR 1574)	Caldwell County
Elk Shoals Creek	The confluence with Catawba River	Approximately 350 feet upstream of SR 1631	Alexander County
Elk Shoals Creek Tributary 1	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of the confluence with Elk Shoals Creek	Alexander County
Elk Shoals Creek Tributary 2	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of confluence with Elk Shoals Creek	Alexander County
Estes Mill Creek	The confluence with Wilson Creek	Approximately 1.2 miles upstream of the confluence with Wilson Creek	Caldwell County
Fiddle Creek	The confluence with Mulberry Creek	Approximately 1,620 feet upstream of the confluence with Mulberry Creek	Caldwell County
Franklin Branch	The confluence with Johns River	Approximately 1,500 feet upstream of the confluence with Franklin Branch Tributary 1	Caldwell County
Franklin Branch Tributary 1	The confluence with Franklin Branch	Approximately 1,540 feet upstream of the confluence with Franklin Branch	Caldwell County
Freemason Creek	The confluence with Catawba River	Approximately 300 feet upstream of Stamey Road	Caldwell County, Town of Sawmills

	Riverine Sources		
Sources	From	To	Affected Communities
Freemason Creek Tributary 1	The confluence with Freemason Creek	Approximately 1.5 miles upstream of the confluence with Freemason Creek	Caldwell County, Town of Sawmills
Freemason Creek Tributary 1A	The confluence with Freemason Creek Tributary 1	Approximately 1,690 feet upstream of Hickory Nut Ridge Road	Town of Sawmills
Freemason Creek Tributary 2	The confluence with Freemason Creek	Approximately 0.8 mile upstream of Horseshoe Bend Road	Town of Sawmills
Freemason Creek Tributary 2A	The confluence with Freemason Creek Tributary 2	Approximately 620 feet upstream of Lafayette Avenue	Town of Sawmills
Ginger Creek	The confluence with Middle Little River	Approximately 0.7 mile upstream of Draco Road	Caldwell County
Ginger Creek Tributary 1	The confluence with Ginger Creek	Approximately 1.3 miles upstream of Scout Road	Caldwell County
Glade Creek	The confluence with Lower Little River	Approximately 1.1 miles upstream of SR 1604	Alexander County
Glade Creek Tributary 1	The confluence with Glade Creek	Approximately 0.8 mile upstream of SR 1607	Alexander County, Town of Taylorsville
Grassy Creek	The confluence with Lower Little River	Approximately 0.4 mile upstream of SR 1344	Alexander County
Grassy Creek Tributary 1	The confluence with Grassy Creek	Approximately 0.7 mile upstream of the confluence with Grassy Creek	Alexander County
Grassy Creek Tributary 2	The confluence with Grassy Creek	Approximately 0.7 mile upstream of NC 16	Alexander County
Greasy Creek	The confluence with Lower Little River	Approximately 0.4 mile upstream of SR 1344	Alexander County
Greasy Creek Tributary 1	The confluence with Grassy Creek	Approximately 0.7 mile upstream of the confluence with Grassy Creek	Alexander County, Town of Taylorsville
Green Rock Branch	The confluence with Buffalo Creek	Approximately 1.5 miles upstream of Buffalo Cove Road (SR 1504)	Caldwell County
Gunpowder Creek	Approximately 785 feet upstream of SE Starcross Road	Approximately 600 feet upstream of SE Applegate Court	City of Lenoir
Gunpowder Creek Tributary 1	The confluence with Gunpowder Creek	Approximately 280 feet downstream of Temple Hill Church Road	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Gunpowder Creek Tributary 2	The confluence with Gunpowder Creek	Approximately 45 feet downstream of Christie Road (SR 1717)	Caldwell County
Gunpowder Creek Tributary 2A	The confluence with Gunpowder Creek Tributary 2	Approximately 1,550 feet upstream of Christie Road (SR 1717)	Caldwell County, Town of Hudson
Gunpowder Creek Tributary 3	The confluence with Gunpowder Creek	Approximately 2,340 feet upstream of the confluence with Gunpowder Creek	Town of Hudson
Gunpowder Creek Tributary 4	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of the confluence with Gunpowder Creek	Town of Hudson
Gunpowder Creek Tributary 5	The confluence with Gunpowder Creek	Approximately 1,115 feet upstream of SE Eastwood Park Circle	City of Lenoir
Gunpowder Creek Tributary 6	The confluence with Gunpowder Creek	Approximately 0.5 mile upstream of Renwick Street	City of Lenoir
Guys Branch	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of the confluence with Elk Shoals Creek	Alexander County
Haas Creek	The confluence with Pott Creek	Approximately 0.8 mile upstream of Grace Church Road	Catawba County
Hall Creek	The confluence with Silver Creek	Approximately 0.4 mile upstream of US 64	Burke County
Harper Creek	The confluence with Camp Creek and Raider Camp Creek	The confluence of South Harper Creek	Caldwell County
Hayes Mill Creek Tributary 1	The confluence with Hayes Mill Creek	Approximately 1,700 feet upstream of the confluence with Hayes Mill Creek	Town of Granite Falls, Town of Sawmills
Hayes Mill Creek Tributary 2	The confluence with Hayes Mill Creek	Approximately 1,900 feet upstream of the confluence with Hayes Mill Creek	Town of Sawmills
Henry Fork	Approximately 0.6 mile upstream of SR 1002	Approximately 0.9 mile upstream of SR 1918	Burke County
Henry Fork Tributary 3	The confluence with Henry Fork	Approximately 2,000 feet upstream of Robinson Road	Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Holdsclaw Creek	The confluence with Catawba River	Approximately 1,500 ft upstream of the confluence of Holdsclaw Creek Tributary 1	Catawba County
Holdsclaw Creek Tributary 1	The confluence with Holdsclaw Creek	Approximately 1,450 feet upstream of the confluence with Holdsclaw Creek	Catawba County
Holly Branch	Approximately 220 feet downstream of the confluence of Holly Branch Tributary 1 and Shady Branch	The confluence of Shady Branch and Holly Branch Tributary 1	Town of Maiden
Holly Branch Tributary 1	The confluence with Holly Branch	Approximately 200 feet upstream of South Main Avenue	Town of Maiden
Hop Creek	The confluence with Holly Branch	Approximately 200 feet upstream of South Main Avenue	Catawba County
Howard Creek	The confluence with Catawba River	Approximately 850 feet upstream of SR 1512	Burke County, Town of Drexel, Town of Valdese
Howard Creek Tributary 1	The confluence with Howard Creek	Approximately 350 feet upstream of Railroad	Town of Drexel
Howards Creek	The confluence with South Fork Catawba River	Approximately 500 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Hoyle Creek	The confluence with Catawba River	Approximately 1,500 feet upstream of the confluence with Micol Creek	Burke County, Town of Rutherford College, Town of Valdese
Hoyle Creek Tributary 1	The confluence with Hoyle Creek	Approximately 0.9 mile upstream of the confluence with Hoyle Creek	Burke County, Town of Rutherford College, Town of Valdese
Hoyle Creek Tributary 2	The confluence with Hoyle Creek	Approximately 0.7 mile upstream of the confluence with Hoyle Creek	Town of Rutherford College, Town of Valdese
Hunting Creek	Approximately 250 feet upstream of the confluence of Hunting Creek Tributary 3	Approximately 1,100 feet upstream of SR 2002	Burke County, City of Morganton

	Riverine Sources		
Sources	From	To	Affected Communities
Hunting Creek Tributary 3	The confluence with Hunting Creek	Approximately 0.4 mile upstream of the confluence with Hunting Creek	Burke County, City of Morganton
Husband Creek	The confluence with Lower Creek	Approximately 1,925 feet upstream of Rocky Road (SR 1143)	Caldwell County, Town of Gamewell
Husband Creek Tributary 1	The confluence with Husband Creek	Approximately 140 feet downstream of Fleming Chapel Church Road (SR 1322)	Caldwell County
Husband Creek Tributary 2	The confluence with Husband Creek	Approximately 750 feet upstream of Crooked Creek Way	Caldwell County
Indian Creek	The Lincoln/Gaston County boundary	Approximately 550 ft upstream of the Catawba/Lincoln County boundary	Catawba County
Irish Creek	The confluence with Upper Creek and Warrior Fork	Approximately 800 feet upstream of the confluence with Reedys Fork Creek	Burke County
Irish Creek Tributary 1	The confluence with Irish Creek	At SR 1240	Burke County
Isaac Creek	The confluence with Upper Little River	Approximately 0.7 mile upstream of SR 1143	Alexander County
Island Creek	The confluence with Catawba River	Approximately 0.4 mile upstream of SR 1621	Alexander County
Island Creek	The confluence with Catawba River	Approximately 0.7 mile upstream of I-40	Burke County, Town of Connelly Springs, Town of Rutherford College
Jackson Camp Creek	The confluence with Yadkin River	Approximately 1.0 mile upstream of Richland Road (SR 1372)	Caldwell County
Jacob Fork	Approximately 220 feet upstream of Providence Church Road	Approximately 990 feet upstream of the Catawba/Burke County boundary	Burke County, Catawba County
Jacob Fork	Approximately 990 feet upstream of the Catawba/Burke County boundary	Approximately 450 feet upstream of SR 1904	Burke County
Jacob Fork Tributary 1	The confluence with Jacob Fork	Approximately 1.3 miles upstream of Cooksville Road	Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Jesse Fork	The confluence with Buffalo Creek	Approximately 0.8 mile upstream Stone Mountain Road (SR 1503)	Caldwell County
Jesse Fork Tributary 1	The confluence with Jesse Fork	Approximately 330 feet upstream of Wallace Coffey Place	Caldwell County
Johns River	Approximately 1.1 miles upstream of Triple T Lane	Approximately 3.8 miles upstream of the confluence of Thunderhole Creek	Caldwell County
Johns River	The confluence with Catawba River	Approximately 1,500 feet upstream of the Burke / Caldwell County boundary	Burke County, Caldwell County, City of Morganton
Jones Creek	The confluence with Buffalo Creek	Approximately 50 feet downstream of the Watauga / Caldwell County boundary	Caldwell County
Jumping Run	The confluence with Rock Creek	Approximately 500 feet upstream of NC 127	Alexander County
Kings Creek 1	The confluence with Yadkin River	The confluence of Little Kings Creek and Blue Creek	Caldwell County
Kings Creek 2	The confluence with Blue Creek	Approximately 1.9 miles upstream of the confluence of Kings Creek 2 Tributary 1	Caldwell County
Kings Creek 2 Tributary 1	The confluence with Kings Creek 2	Approximately 1.6 miles upstream of Blue Door School Road	Caldwell County
Lambert Creek	The confluence with Lower Little River	Approximately 0.8 mile upstream of SR 1307	Alexander County
Lambert Creek Tributary 1	The confluence with Lambert Creek	Approximately 800 feet upstream of SR 1307	Alexander County
Laurel Creek	The confluence with Henry Fork	Approximately 1.2 miles upstream of Shouppé Way	Burke County
Laurel Creek	The confluence with Wilson Creek	Approximately 1.1 miles upstream of the confluence with Wilson Creek	Caldwell County
Laytown Creek	The confluence with Yadkin River	Approximately 1.8 miles upstream of Laytown Road (SR 1507)	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Linville River	Approximately 2.6 miles upstream of NC 126	Approximately 800 feet downstream of the Land Harbors Dam	Burke County
Linville River	The confluence with Catawba River	Approximately 0.7 mile downstream of NC 126	Burke County
Lippard Creek	The confluence with Sawmill Branch and Leepers Creek	Approximately 1,940 feet upstream of the Catawba/Lincoln County boundary	Catawba County
Little Creek	The confluence with Upper Little River	Approximately 1.4 miles upstream of Cove Mountain Lane	Caldwell County
Little Gunpowder Creek (near City of Lenoir)	Approximately 700 feet upstream of SW Walt Arney Road	Approximately 1,075 feet upstream of Connelly Springs Road	Town of Cahaj's Mountain
Little Gunpowder Creek (near Town of Hudson)	Approximately 0.8 mile upstream of Little Gunpowder Creek Drive (SR 1133)	Approximately 1.4 miles upstream of Little Gunpowder Creek Drive (SR 1133)	Caldwell County, Town of Cahaj's Mountain
Little Gunpowder Creek (near Town of Hudson) Tributary 1	The confluence with Little Gunpowder Creek (near Town of Hudson)	Approximately 50 feet upstream of Madison MHP Drive	Town of Hudson
Little Gunpowder Creek (near Town of Hudson) Tributary 2	The confluence with Little Gunpowder Creek (near Town of Hudson)	Approximately 0.4 mile upstream of Chickadee Trail Place	Town of Hudson
Little Kings Creek	The confluence with Kings Creek and Blue Creek	Approximately 1,620 feet upstream of Zacks Fork Road (SR 1511)	Caldwell County
Little Mulberry Creek 2	The confluence with Mulberry Creek	Approximately 0.4 mile upstream of Shallow Creek Road (SR 1530)	Caldwell County
Lost Cove Creek	The confluence with Wilson Creek	Approximately 2.1 miles upstream of the confluence with Gragg Prong Creek	Caldwell County
Lower Creek	The confluence with Catawba River	Approximately 1,290 feet downstream of the confluence with Husband Creek	Burke County, Caldwell County
Lower Creek Tributary 1	The confluence with Lower Creek	Approximately 0.7 mile upstream of SE Haigler Road	City of Lenoir
Lower Little River	The confluence with Catawba River	Approximately 0.9 mile upstream of SR 1332	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Lower Little River Tributary 1	The confluence with Lower Little River	Approximately 1.9 miles upstream of the confluence with Lower Little River	Alexander County
Lower Little River Tributary 2	The confluence with Lower Little River	Approximately 1,600 feet upstream of SR 1124	Alexander County
Lower Little River Tributary 2A	The confluence with Lower Little River Tributary 2	Approximately 1,600 feet upstream of confluence with Lower Little River Tributary 2	Alexander County
Lower Little River Tributary 3	The confluence with Lower Little River	Approximately 1.4 miles upstream of SR 1110	Alexander County
Lower Little River Tributary 4	The confluence with Lower Little River	Approximately 1,000 feet upstream of SR 1104	Alexander County, Town of Taylorsville
Lyle Creek Tributary	The confluence with Lyle Creek	Approximately 1,950 feet upstream of Community Road	Catawba County
Lyle Creek Tributary 1	The confluence with Lyle Creek	Approximately 1.0 mile upstream of Crossing Creek Drive (SR 2454)	Catawba County
Maiden Creek	Approximately 1.3 miles upstream of Providence Mill Road	Approximately 80 feet downstream of North Olivers Cross Road	Catawba County
McGalliard Creek	The confluence of Double Branch	Approximately 400 feet upstream of SR 1722	Burke County
McGalliard Creek	The confluence with Catawba River	Approximately 1.1 miles upstream of the confluence with Catawba River	Burke County, Town of Valdese
McGalliard Creek Tributary 1	The confluence with McGalliard Creek	Approximately 1,800 feet upstream of Louise Avenue NE	Burke County, Town of Valdese
McGalliard Creek Tributary 2	The confluence with McGalliard Creek	Approximately 600 feet downstream of I-40	Burke County, Town of Drexel
McGalliard Creek Tributary 2A	The confluence with McGalliard Creek Tributary 2	Approximately 800 feet upstream of Drexel Road	Town of Drexel
McGalliard Creek Tributary 2B	The confluence with McGalliard Creek Tributary 2	Approximately 200 feet downstream of SR 1721	Burke County, Town of Drexel
McLin Creek Tributary 1	The confluence with McLin Creek	Approximately 1,250 feet upstream of Frazier Drive	City of Claremont
McRory Creek	The confluence with Upper Little River	Approximately 0.6 mile upstream of McRory Creek Road (SR 1721)	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Micol Creek Tributary 1	The confluence with Micol Creek	Approximately 0.5 mile upstream of Montonya View Drive	Burke County, Town of Rutherford College, Town of Valdese
Micol Creek Tributary 1A	The confluence with Micol Creek Tributary 1	Approximately 75 feet downstream of SR 1001	Burke County, Town of Rutherford College
Micol Creek Tributary 1A1	The confluence with Micol Creek Tributary 1A	Approximately 0.4 mile upstream of the confluence with Micol Creek Tributary 1A	Burke County
Middle Little River	The most downstream crossing of the Alexander / Caldwell County boundary	Approximately 0.4 mile upstream of Brush Mountain Road (SR 1733)	Alexander County, Caldwell County
Middle Little River Tributary 2	The confluence with Middle Little River	Approximately 300 feet downstream of SR 1152	Alexander County
Middle Little River Tributary 3	The confluence with Middle Little River	Approximately 1,480 feet upstream of Taylorsville Road	Caldwell County
Middle Little River Tributary 4	The confluence with Middle Little River	Approximately 1,300 feet upstream of Duck Creek Road (SR 1730)	Caldwell County
Middle Little River Tributary 5	The confluence with Middle Little River	Approximately 0.5 mile upstream of the confluence with Middle Little River	Caldwell County
Mill Creek	The confluence with South Yadkin River	Approximately 0.4 mile upstream of the confluence with South Yadkin River	Alexander County
Mill Creek	The confluence with Upper Little River	Approximately 1.0 mile upstream of Petra Mill Road (SR 1740)	Caldwell County
Mill Creek (into Yadkin River)	The confluence with Yadkin River	Approximately 1.2 miles upstream of NC Highway 268	Caldwell County
Miller Creek	The confluence with South Yadkin River	Approximately 260 feet upstream of Sprinkle Dairy Road (SR 1475)	Alexander County
Morris Creek	The confluence with Upper Little River	Approximately 490 feet upstream of Sheriffs Road (SR 1730)	Caldwell County
Mountain Creek	The confluence with Catawba River (Lake Norman)	Approximately 1.6 miles upstream of the confluence of Mountain Creek Tributary 3	Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Mountain Creek	The confluence with Middle Little River	Approximately 200 feet upstream of SR 1150	Alexander County
Mountain Creek Tributary 2	The confluence with Mountain Creek	Approximately 1.6 miles upstream of the confluence with Mountain Creek	Catawba County
Mountain Creek Tributary 2A	The confluence with Mountain Creek Tributary 2	Approximately 1.4 miles upstream of the confluence with Mountain Creek Tributary 2	Catawba County
Mountain Creek Tributary 3	The confluence with Mountain Creek	Approximately 1.0 mile upstream of the confluence with Mountain Creek	Catawba County
Mountain Creek Tributary 3A	The confluence with Mountain Creek Tributary 3	Approximately 0.5 mile upstream of the confluence with Mountain Creek Tributary 3	Catawba County
Mountain Run	The confluence with Upper Little River	Approximately 125 feet upstream of Fox Road (SR 1726)	Caldwell County
Muddy Creek	Approximately 0.4 mile downstream of Robinson Road (SR 1146)	The confluence of Muddy Creek Tributary 2 and Muddy Creek Tributary 3	Catawba County
Muddy Creek	The confluence of Old Catawba River	The confluence of North Muddy Creek and South Muddy Creek	Burke County
Muddy Creek Tributary 1	The confluence with Muddy Creek	Approximately 0.7 mile upstream of Robinwood Road (SR 1148)	Catawba County
Muddy Creek Tributary 2	The confluence with Muddy Creek	Approximately 0.6 mile upstream of Robinwood Road (SR 1148)	Catawba County
Muddy Creek Tributary 3	The confluence with Muddy Creek	Approximately 1.3 miles upstream of the confluence with Muddy Creek	Catawba County, City of Hickory
Muddy Fork Creek	The confluence with Lower Little River	Approximately 600 feet downstream of SR 1405	Alexander County, Town of Taylorsville
Muddy Fork Creek Tributary 1	The confluence with Muddy Fork Creek	Approximately 1.6 miles upstream of Old Wilkesboro Road	Alexander County, Town of Taylorsville

	Riverine Sources		
Sources	From	To	Affected Communities
Mulberry Creek	Approximately 90 feet downstream of Collettsville Road	Approximately 0.7 mile upstream of the confluence of Amos Creek	Caldwell County
Mundy Creek	The confluence with Reed Creek	Approximately 500 feet upstream of Lineberger Road	Catawba County
Mundy Creek Tributary 1	The confluence with Mundy Creek	Approximately 1,400 feet upstream of Grassy Creek Road	Catawba County
Nolden Creek	The confluence with Catawba River	Approximately 1,900 feet upstream of Nolden Creek Road	Burke County, Town of Connelly Springs
Old Catawba River	The confluence with Catawba River	The Burke / McDowell County boundary	Burke County
Old Field Branch	The confluence with Buffalo Creek	Approximately 1.7 miles upstream of the confluence with Buffalo Creek	Caldwell County
Ooten Creek	The confluence with Yadkin River	Approximately 0.6 mile upstream of the confluence with Yadkin River	Caldwell County
Paddy Creek	The confluence with Catawba River	Approximately 2.9 miles upstream of SR 1237	Burke County
Parks Creek	The confluence with Johns River	Approximately 100 feet downstream of SR 1405	Burke County
Pearcy Creek	The confluence with Parks Creek	Approximately 1.1 miles upstream of SR 1405	Burke County
Pearcy Creek Tributary 1	The confluence with Pearcy Creek	Approximately 20 feet downstream of SR 1405	Burke County
Pilot Branch	The confluence with Upper Little River	Approximately 440 feet upstream of Burns Road (SR 1749)	Caldwell County
Pinch Gut Creek	Approximately 120 feet upstream of Saint James Church Road	Approximately 0.9 mile upstream of Saint James Church Road	Catawba County
Pinch Gut Creek Tributary 1	The confluence with Pinch Gut Creek	Approximately 0.5 mile upstream of the confluence with Pinch Gut Creek	Catawba County
Poplar Creek	The confluence with Lambert Creek	Approximately 0.5 mile upstream of SR 1305	Alexander County
Pott Creek	The confluence with South Fork Catawba River	Approximately 1.9 miles upstream of Plateau Road	Catawba County

	Riverine Sources		
Sources	From	To	Affected Communities
Preston Creek	The confluence with Yadkin River	Approximately 650 feet upstream of Kirby Mountain Road (SR 1370)	Caldwell County
Prong Creek	The confluence with Johns River	Approximately 65 feet downstream of the confluence Racket Creek and Anthony Creek	Caldwell County
Racket Creek	Approximately 65 feet downstream of the confluence with Prong Creek and Anthony Creek	Approximately 145 feet upstream of the confluence with Ballew Creek	Caldwell County
Raider Camp Creek	The confluence with Camp Creek	Approximately 1,795 feet upstream of the confluence with Camp Creek	Caldwell County
Reed Creek	The confluence with Mountain Creek	Approximately 1.1 miles upstream of Mount Pleasant Road (SR 1849)	Catawba County
Reedys Fork Creek	The confluence with Irish Creek	Approximately 0.5 mile upstream of the confluence with Irish Creek	Burke County
Rhodes Mill Creek	The confluence with Pott Creek	Approximately 1,100 feet upstream of Leatherman Road	Catawba County
Rhodes Mill Creek Tributary 1	The confluence with Rhodes Mill Creek	Approximately 0.4 mile upstream of the confluence with Rhodes Mill Creek	Catawba County
Rock Creek	The confluence with Middle Little River	The confluence of Jumping Run	Alexander County
Rock Creek	The confluence with Upper Little River	Approximately 200 feet downstream of Fowler Road (SR 1747)	Caldwell County
Rock Creek Tributary 1	The confluence with Rock Creek	Approximately 1,000 feet upstream of confluence with Rock Creek	Alexander County
Rockhouse Creek	The confluence with Buffalo Creek	Approximately 30 feet downstream of the Watauga / Caldwell County boundary	Caldwell County
Rockhouse Creek	The confluence with Lost Cove Creek	Approximately 0.4 mile upstream of Avery/Caldwell County boundary	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Rocky Creek	The Iredell/Alexander County boundary	Approximately 1.0 mile upstream of the confluence of Rocky Creek Tributary 1	Alexander County
Roses Creek	The confluence with Irish Creek	Approximately 1.7 miles upstream of SR 1262	Burke County
Roses Creek Tributary 1	The confluence with Roses Creek	Approximately 0.6 mile upstream of the confluence with Roses Creek	Burke County
Rush Branch	The confluence with Mulberry Creek	Approximately 0.9 mile upstream of the confluence with Mulberry Creek	Caldwell County
Russell Creek	The confluence with Irish Creek	Approximately 1.6 miles upstream of SR 1240	Burke County
Secrets Creek	The confluence with Howard Creek	Approximately 0.8 mile upstream of South Main Street	Town of Drexel, Town of Valdese
Shady Branch	The confluence with Holly Branch	Approximately 500 feet upstream of South 11th Avenue	Town of Maiden
Shady Branch Tributary 1	The confluence with Shady Branch	Approximately 1,800 feet upstream of South 8th Avenue	Town of Maiden
Silver Creek	Approximately 1.6 miles upstream of I-40	Approximately 1,800 feet upstream of US 64	Burke County, City of Morganton
Silver Creek	The confluence with Gunpowder Creek	Approximately 0.6 mile upstream of Falls Avenue (SR 1107)	Caldwell County, Town of Granite Falls
Silver Creek Tributary 1	The confluence with Silver Creek	Approximately 100 feet downstream of the Railroad	City of Morganton
Simpson Creek	The confluence with Roses Creek	Approximately 1.5 miles upstream of the confluence with Roses Creek	Burke County
Smokey Creek	The confluence with Catawba River	The Burke / Caldwell County boundary	Burke County
Smokey Creek Tributary 1	The confluence with Smokey Creek	Approximately 0.4 mile upstream of the confluence with Smokey Creek	Burke County

	Riverine Sources		
Sources	From	To	Affected Communities
Smyre Creek	Approximately 120 feet downstream of the confluence of Smyre Creek Tributary 1	Approximately 50 feet downstream of NC-16	Catawba County, City of Newton
Smyre Creek Tributary 1	The confluence with Smyre Creek	Approximately 1,500 feet upstream of the confluence with Smyre Creek	Catawba County, City of Newton
Snow Creek	The confluence with South Yadkin River	Approximately 260 feet upstream of Mountain View Road (SR 1614E)	Alexander County
South Fork Catawba River	Approximately 2.6 miles upstream of the confluence of Howards Creek	Approximately 125 feet downstream of NC-10	Catawba County, City of Newton
South Fork Catawba River Tributary 6	The confluence with South Fork Catawba River	Approximately 530 feet upstream of Herter Road (SR 2022)	Catawba County
South Fork Catawba River Tributary 7	The confluence with South Fork Catawba River	Approximately 0.9 mile upstream of the confluence with South Fork Catawba River	Catawba County
South Fork Catawba River Tributary 8	The confluence with South Fork Catawba River	Approximately 0.7 mile upstream of Wilfong Road (SR 2020)	Catawba County
South Fork Catawba River Tributary 9	The confluence with South Fork Catawba River	Approximately 1.1 miles upstream of US Highway 321	Catawba County
South Fork Catawba River Tributary 9A	The confluence with South Fork Catawba River Tributary 9	Approximately 1,500 feet upstream of the confluence with South Fork Catawba River Tributary 9	Catawba County
South Muddy Creek	The confluence with Muddy Creek	Approximately 0.7 mile upstream of SR 1780	Burke County
South Muddy Creek Tributary 1	The confluence with South Muddy Creek	Approximately 920 feet upstream of McDowell/Burke County boundary	Burke County
South Yadkin River	The confluence with Yadkin River	Approximately 510 feet downstream of Vashti Road (SR 1403)	Alexander County
Spring Creek	The confluence with Lower Little River	Approximately 1.7 miles upstream of SR 1121	Alexander County

	Riverine Sources		
Sources	From	To	Affected Communities
Stirewalt Creek	The confluence with Lower Little River	Just upstream of the Railroad	Alexander County, Town of Taylorsville
Stratford Creek	The confluence with Catawba River	Approximately 130 feet downstream of Lee Pearson Road (SR 1136)	Caldwell County
Stratford Creek Tributary 1	The confluence with Stratford Creek	Approximately 1,815 feet upstream of Baton School Road (SR 1139)	Caldwell County
Terrapin Creek	The confluence with Catawba River (Lake Norman)	Approximately 1.2 miles upstream of the confluence of Terrapin Creek Tributary 1	Catawba County
Terrapin Creek Tributary 1	The confluence with Terrapin Creek	Approximately 1 mile upstream of the confluence with Terrapin Creek	Catawba County
Third Creek	Approximately 1,130 feet downstream of Interstate 40	Approximately 0.5 mile upstream of Lentz Road	Alexander County
Thorps Creek	The confluence with Wilson Creek	Approximately 1,375 feet upstream of Edgemont Road	Caldwell County
Thunderhole Creek	The confluence with Johns River	Approximately 0.4 mile upstream of the confluence of New Years Creek	Caldwell County
Tims Creek	The confluence with Henry Fork	Approximately 1.3 miles upstream of SR 1788	Burke County
Town Creek	Approximately 1,400 feet upstream of St. James Church Road	Approximately 0.8 miles upstream of State Route 10	City of Newton
Tributary to Lyle Creek Tributary	The confluence with Lyle Creek Tributary	Approximately 0.7 mile upstream of the confluence with Lyle Creek Tributary	Catawba County
Upper Creek	The confluence with Irish Creek and Warrior Fork	Approximately 0.5 mile upstream of SR 1405	Burke County
Upper Little River	The confluence with Catawba River	Approximately 0.7 mile upstream of Teaberry Lane	Alexander County, Caldwell County
Upper Little River Tributary 1	The confluence with Upper Little River	Approximately 2,380 feet upstream of Charlie Little Road (SR 1741)	Caldwell County

	Riverine Sources		
Sources	From	To	Affected Communities
Wallace Creek	The confluence with South Yadkin River	Approximately 1,200 feet upstream of the confluence of Greasy Creek	Alexander County
Walnut Bottom Creek	The confluence with Johns River	Approximately 0.6 mile upstream of the confluence with Johns River	Caldwell County
Warrior Creek	The confluence with Yadkin River	Approximately 210 feet upstream of Warrior Road (SR 1346)	Caldwell County
Warrior Fork	Approximately 0.5 mile upstream of the confluence of Wilson Creek	The confluence of Irish Creek and Upper Creek	Burke County, City of Morganton
White Creek	The confluence with Duck Creek	Approximately 1.9 miles upstream of SR 1304	Alexander County
Wilson Creek	Approximately 1.1 miles upstream of Adako Road (SR 1337)	Approximately 500 feet upstream of the confluence of Cary Flat Branch	Caldwell County
Yadkin River	Approximately 90 feet upstream of Whisnant Road (SR 1517)	Approximately 2.2 miles upstream of the confluence of Ooten Creek	Caldwell County
Yadkin River	The confluence of Elk Creek	Approximately 0.5 mile upstream of the confluence of Mill Creek (into Yadkin River)	Caldwell County
Yadkin River Tributary 25	The confluence with Yadkin River	Approximately 1.3 miles upstream of NC Highway 268	Caldwell County
Zacks Fork Creek Tributary 1	The confluence with Zacks Fork Creek	Approximately 1.2 miles upstream of the confluence with Zacks Fork Creek	Caldwell County, City of Lenoir

River Flooding Hazard Analysis

There are numerous rivers and streams flowing through the planning area. When heavy or prolonged rainfall events occur, these rivers and streams are susceptible to some degree of flooding. There have been a number of past flooding events throughout the planning area, ranging widely in terms of location, magnitude, and impact. The most frequent flooding events have been localized in nature, resulting from heavy rains in a short period of time over urbanized areas that are not able to adequately handle

stormwater runoff. These events typically do not threaten lives or property and do not result in emergency or disaster declarations, therefore historical data is limited to the larger, most notable events.

Methodologies and Assumptions

The following list provides key points by hazard type that are relevant to understanding the risk assessment presented in this section:

- Pre-FIRM buildings have been selected as a subset of at-risk buildings following the assumption that structures built prior to the community joining the National Flood Insurance Program (NFIP) are likely to be at greater risk than post-FIRM buildings.
- Effective FEMA DFIRM data was used for the flood hazard areas. Flood zones used in the analysis consist of Zone AE (1-percent-annual-chance flood), Zone AE Floodway, and the 0.2-percent-annual-chance flood hazard area.
- Building footprints were received from all four participating counties. To refine the results, footprints with an area less than 500 square feet were excluded from the analysis. To determine if a building is in a hazard area, the building footprints were intersected with each of the mapped hazard areas. If a building intersects two or more hazard areas (such as the 1-percent-annual-chance flood zone and the 0.2-percent-annual-chance flood zone), it is counted as being in the hazard area of highest risk.
- Parcels were received from all four participating counties. The parcel data provided building value and year built. Building value was used to determine the value of buildings at risk. Year built was used to determine if the building was constructed prior to or after the community had joined the NFIP and had an effective FIRM and building codes enforced.
- Census blocks and Summary File 1 from the 2010 Census were used to determine population at risk. This included the total population, as well as the vulnerable elderly and children age groups. To determine population at risk, the census blocks were intersected with the hazard area. To better determine the actual number of people at risk, the intersecting area of the census block was calculated and divided by the total area of the census block to determine a ratio of area at risk. This ratio was applied to the population of the census block. For example, a census block has a population of 400 people. Five percent of the census block intersects the 1-percent-annual-chance flood hazard area. The ratio estimates that 20 people are then at risk within the 1-percent-annual-chance flood hazard area (5% of the total population for that census block).
- Limitations: There can be multiple buildings located on one parcel. However, the parcel only provides one value for building value and year built, and it is not known from the provided data if the building value is cumulative or for the primary structure on the parcel. For the analysis, building value was only counted once per parcel, regardless of the number of structures. This was done to prevent grossly over-estimating the value of buildings at risk. For example, a parcel has three buildings with a value of \$300,000. If two of those buildings intersect the 1-percent-annual-chance flood hazard area, the assumed building value at risk is \$300,000 not \$600,000. Even though only two out of three buildings are at risk, there is no way to determine the individual value of each building, so the building value for the whole parcel is counted. The value at risk is also the value of the entire building, and does not take into account flood damage based on elevation, number of floors, or

Location within the Planning Area

The below figures show the boundaries of the floodway, 1-percent-annual-chance and 0.2-percent-annual-chance floods, based on effective DFIRM data. These are the three mapped flood hazard areas used as the basis for this analysis.

Figure 4.12: River Flooding Hazard Areas

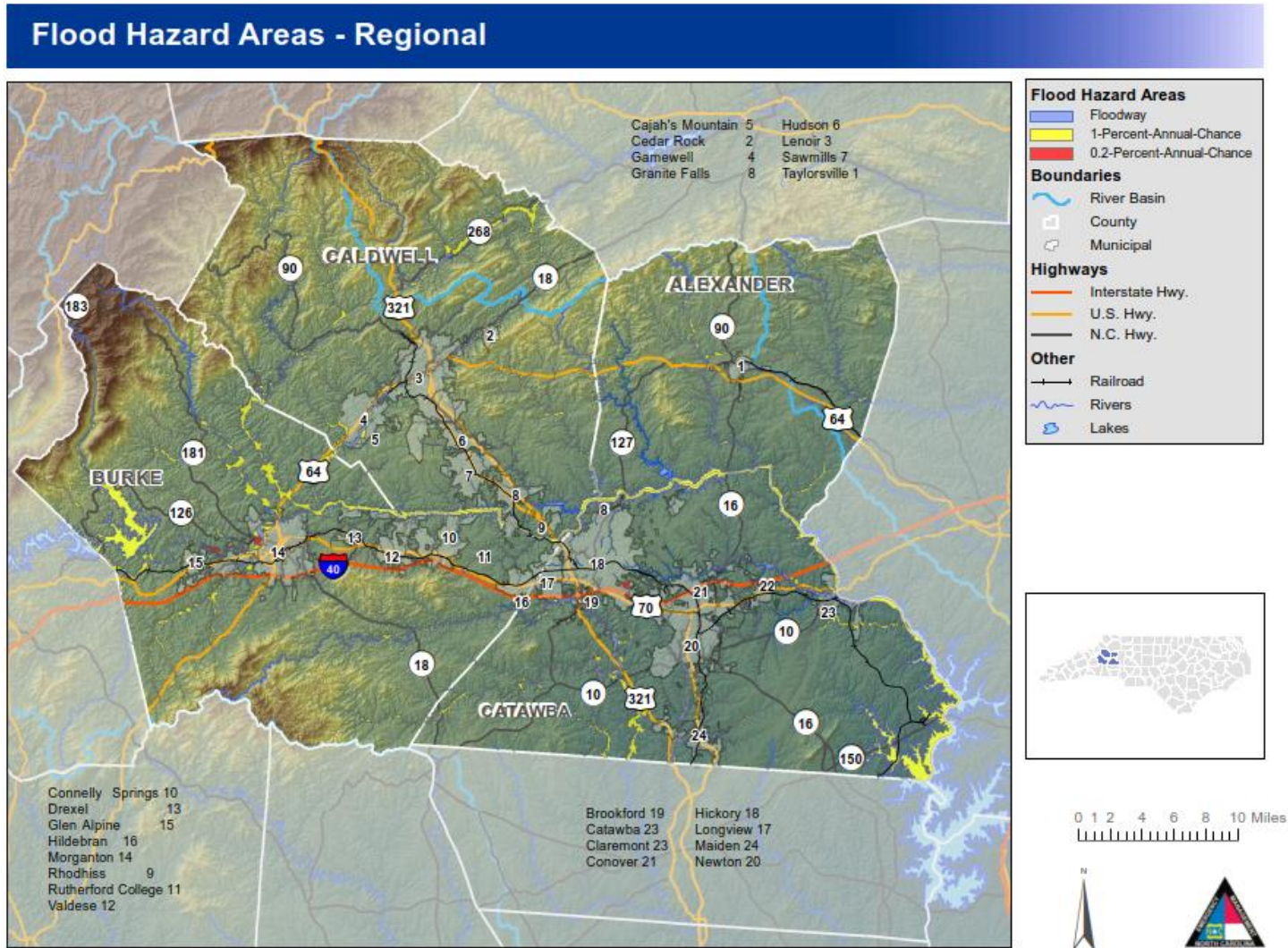


Figure 4.13: River Flooding Hazard Areas

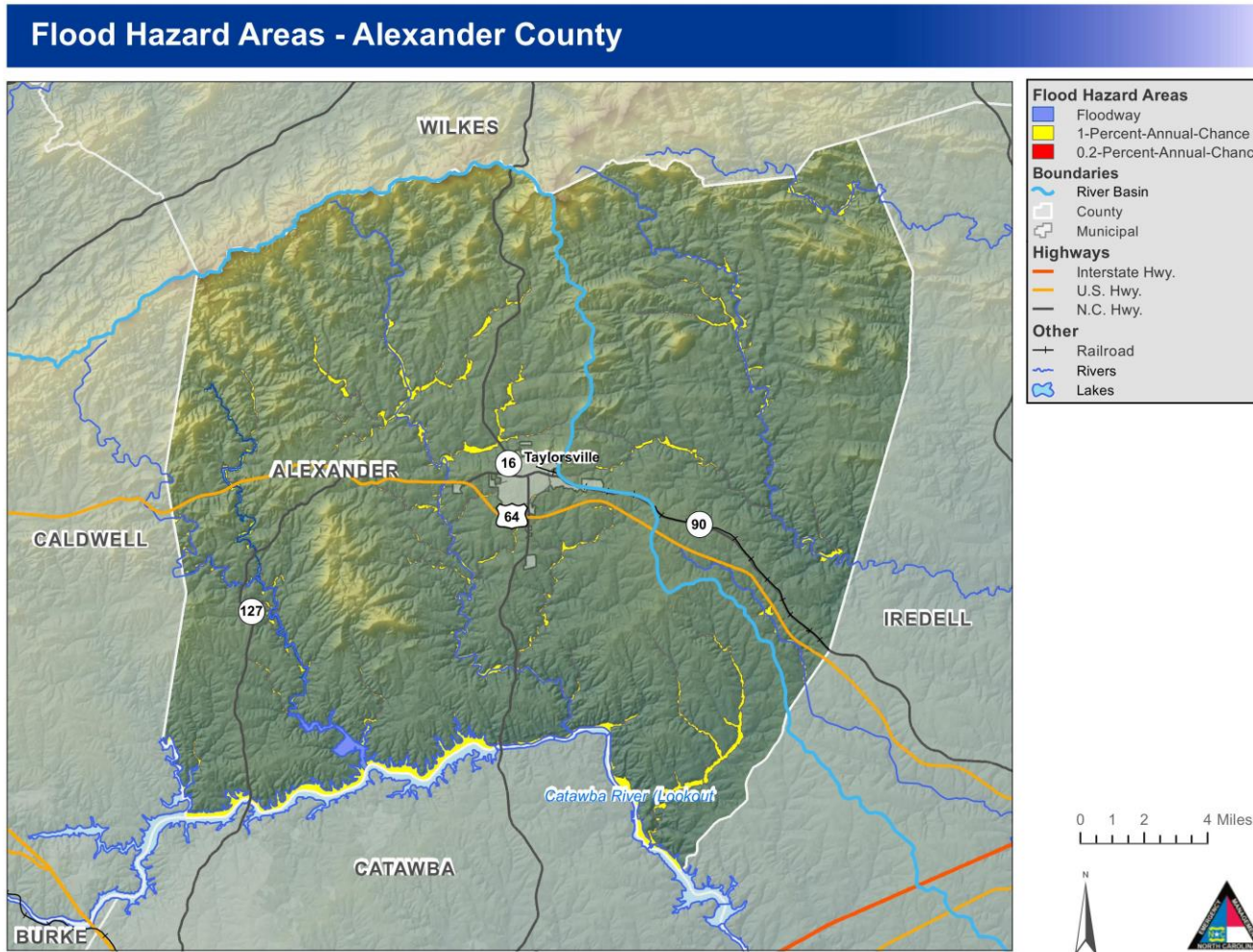


Figure 4.14: River Flooding Hazard Areas

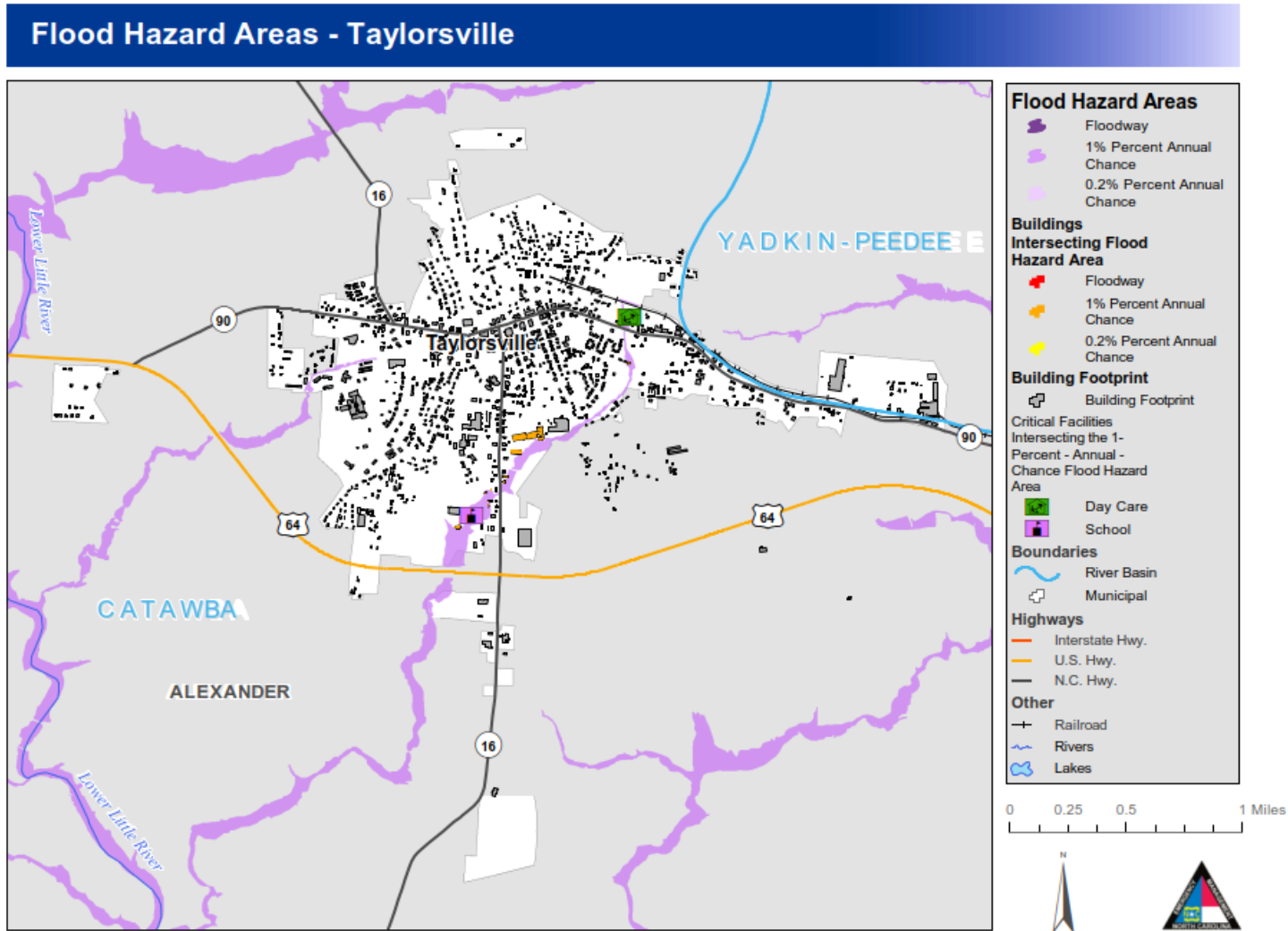


Figure 4.15: River Flooding Hazard Areas

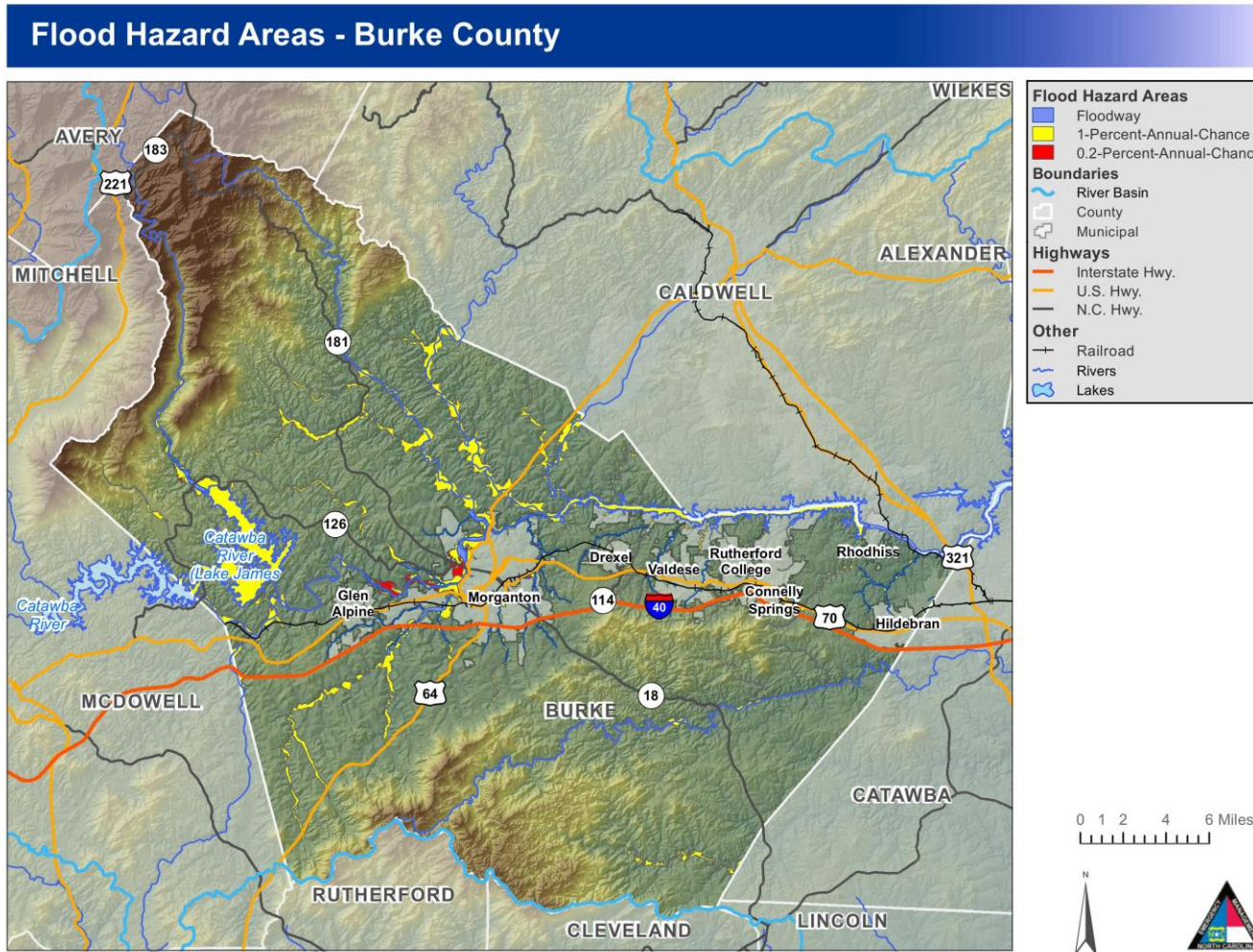


Figure 4.16: River Flooding Hazard Areas

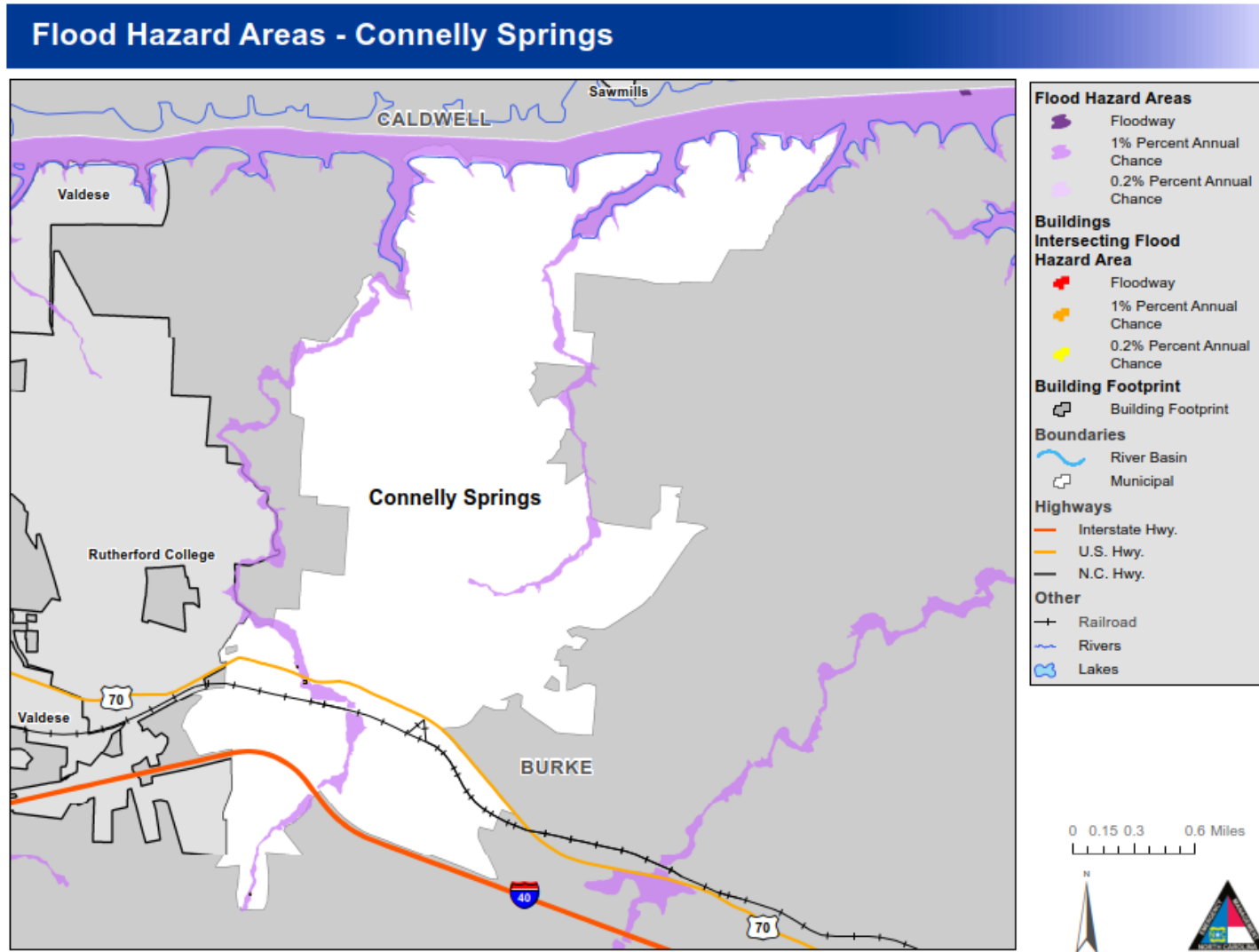


Figure 4.17: River Flooding Hazard Areas

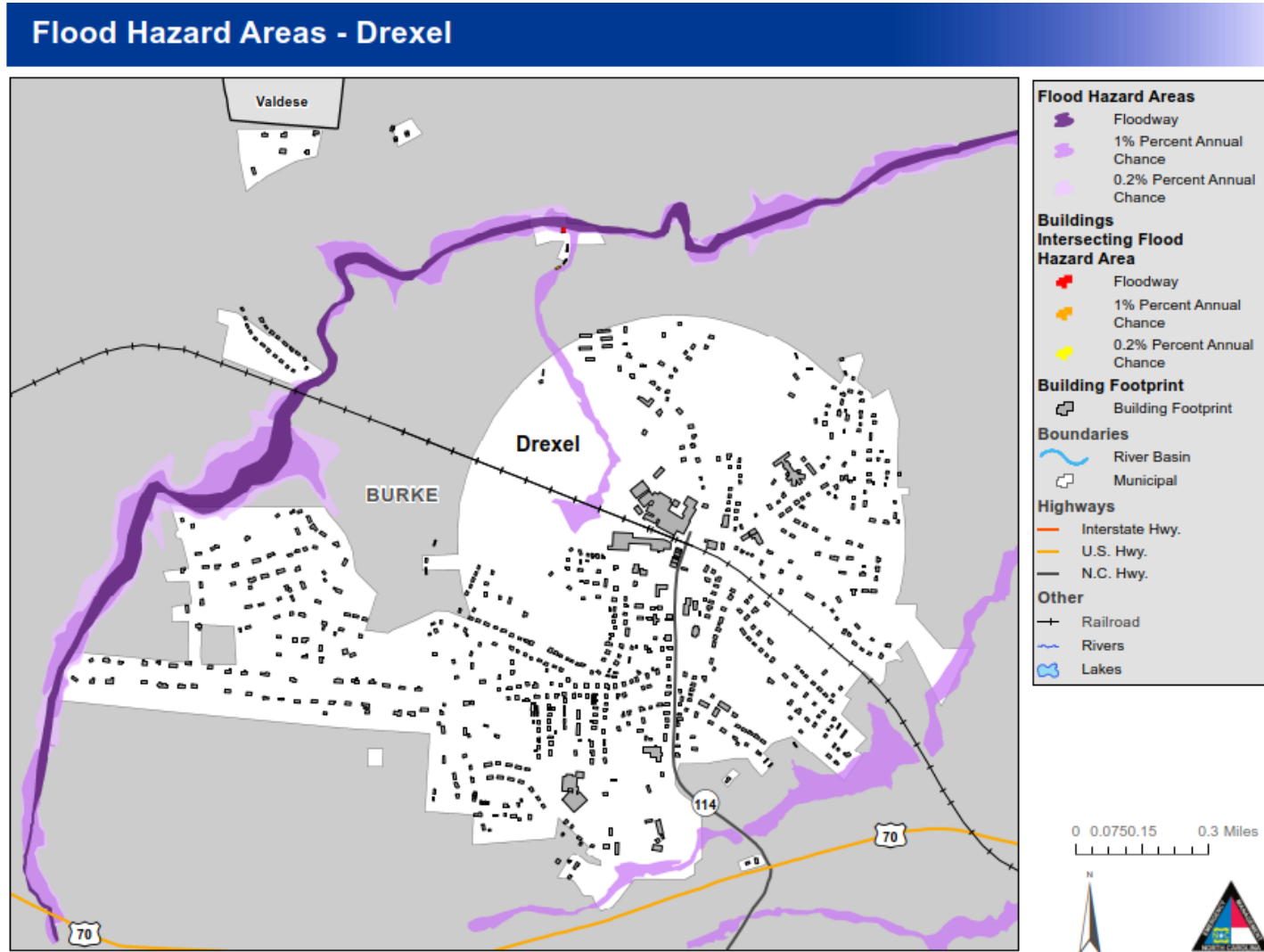


Figure 4.18: River Flooding Hazard Areas

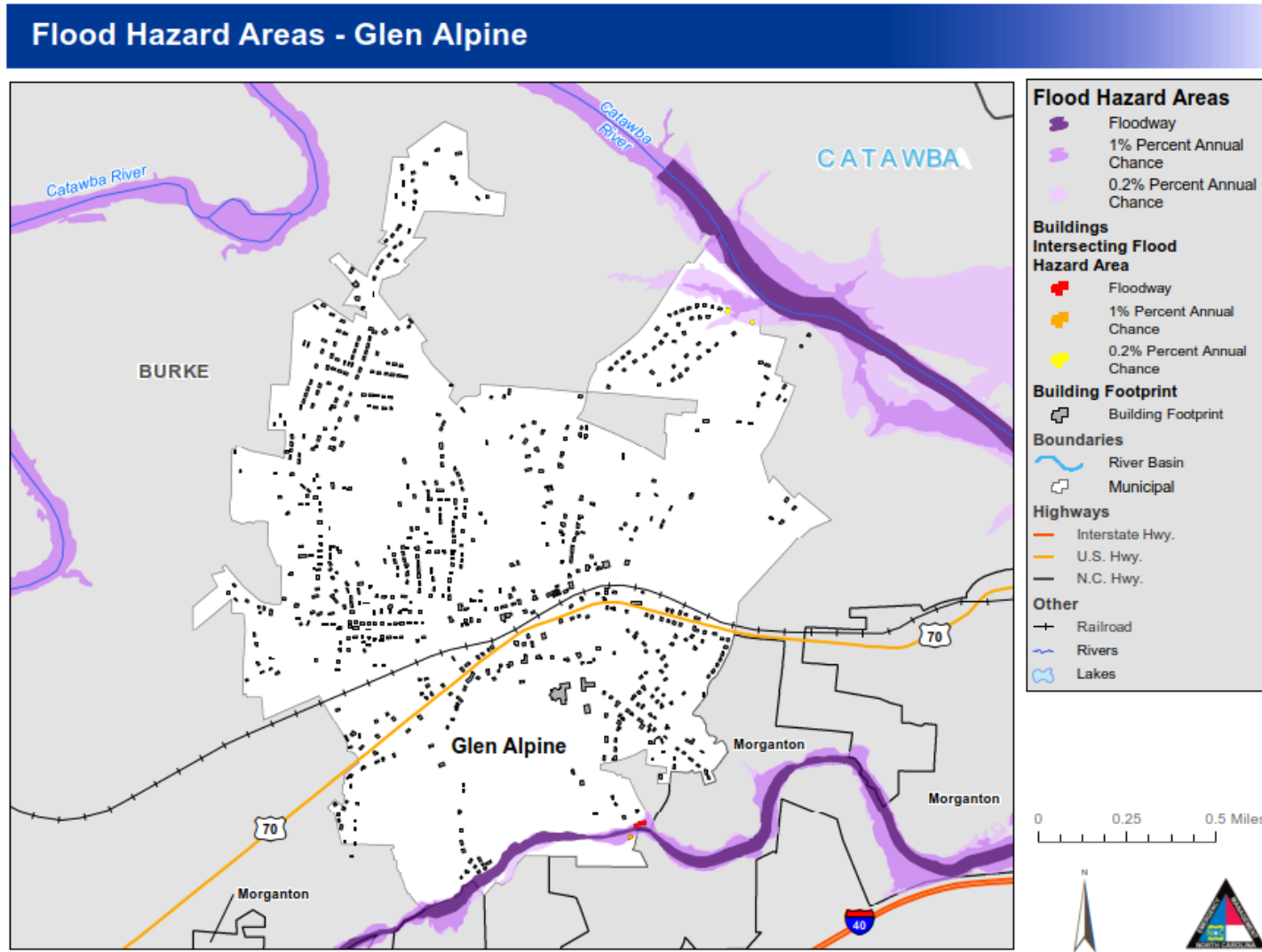


Figure 4.19: River Flooding Hazard Areas

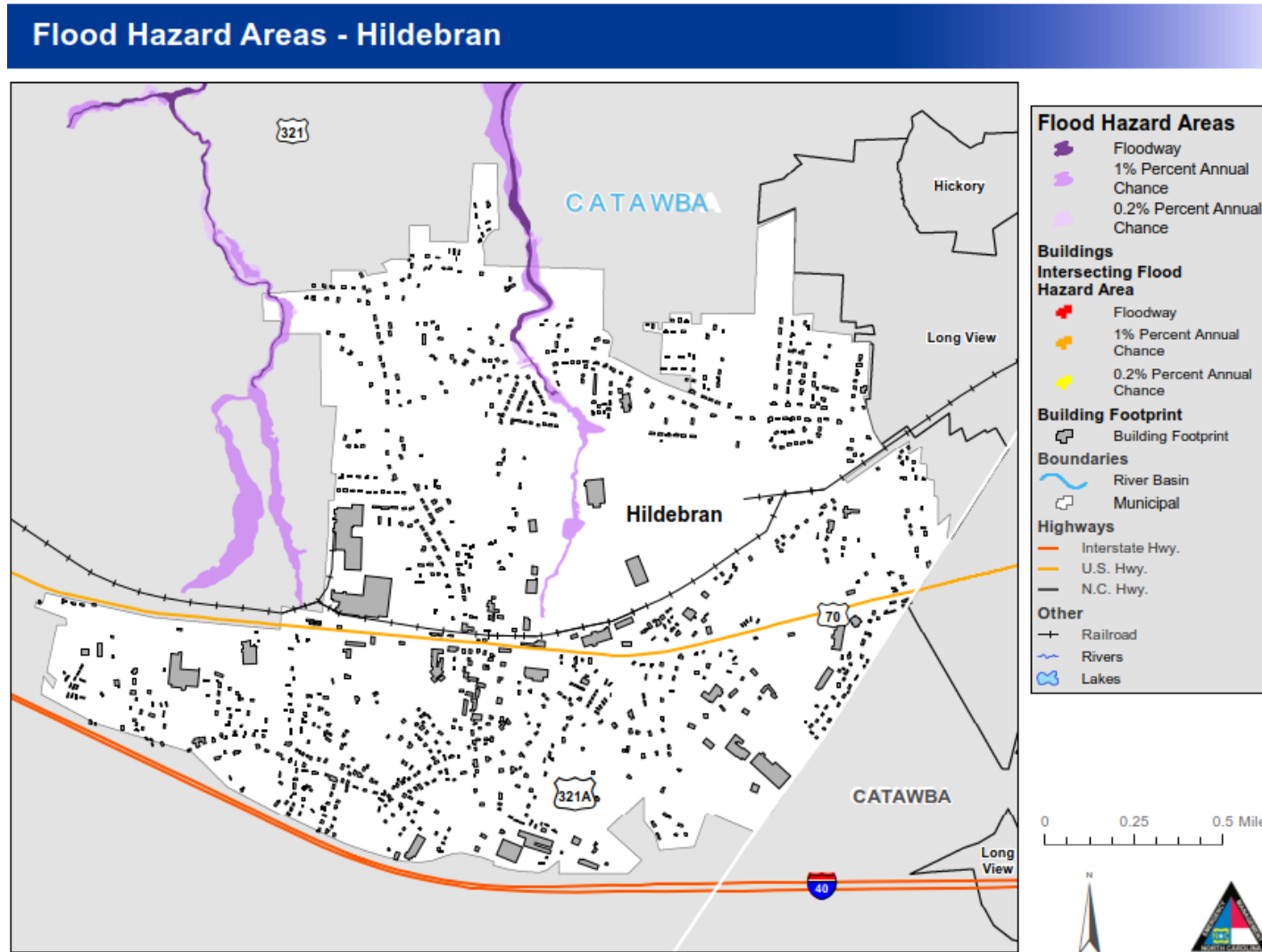


Figure 4.20: River Flooding Hazard Areas

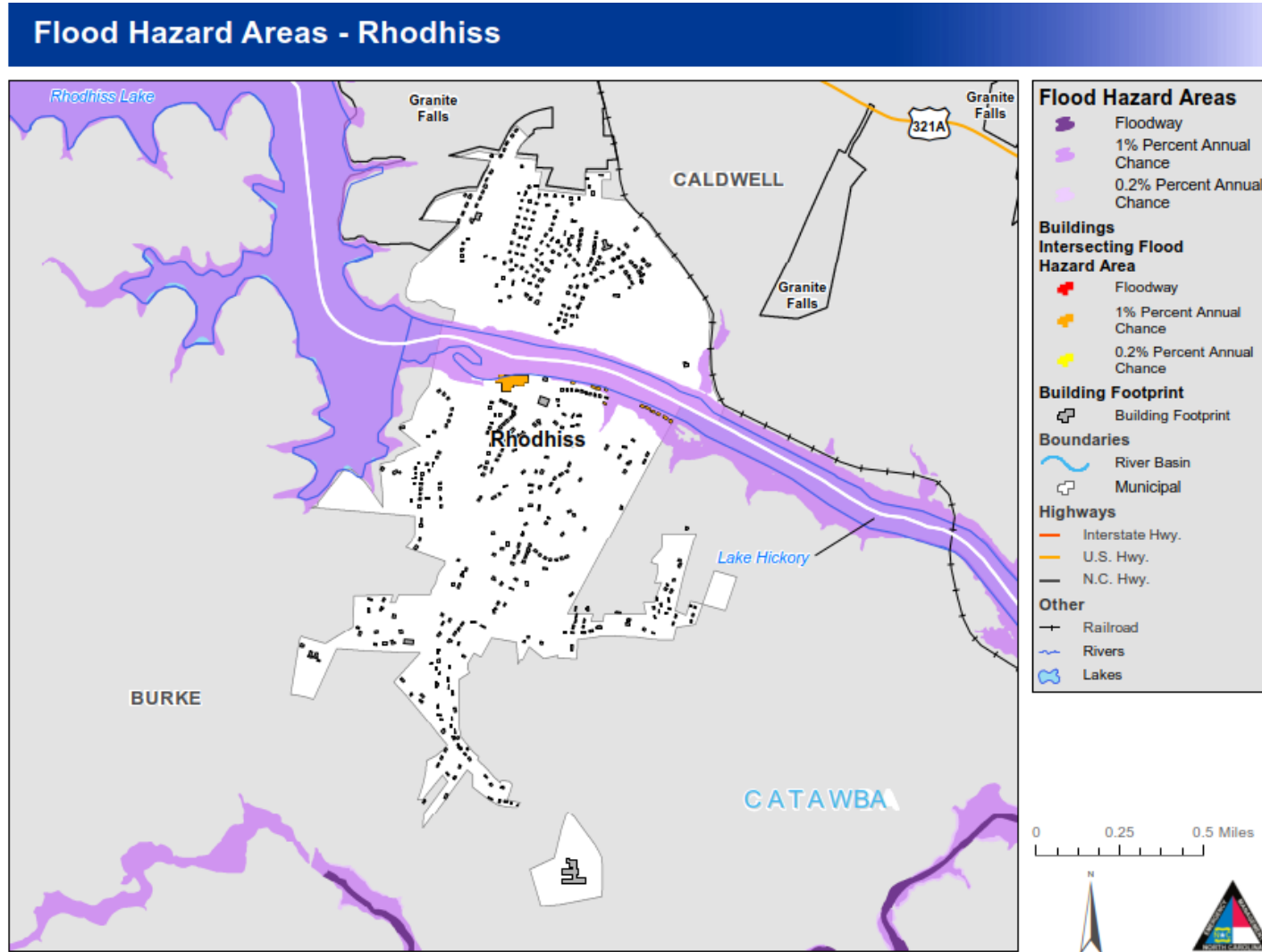


Figure 4.21: River Flooding Hazard Areas

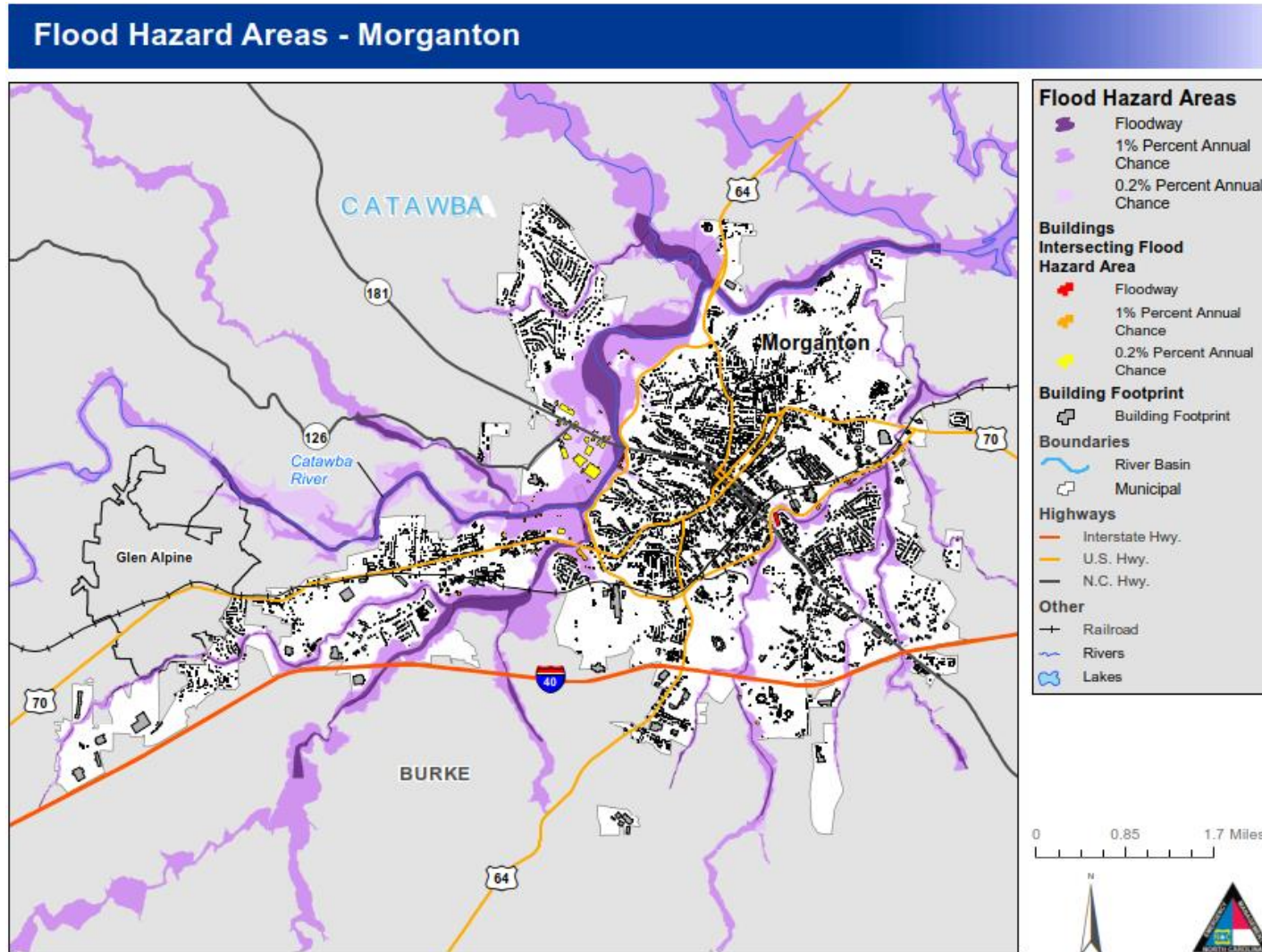


Figure 4.22: River Flooding Hazard Areas

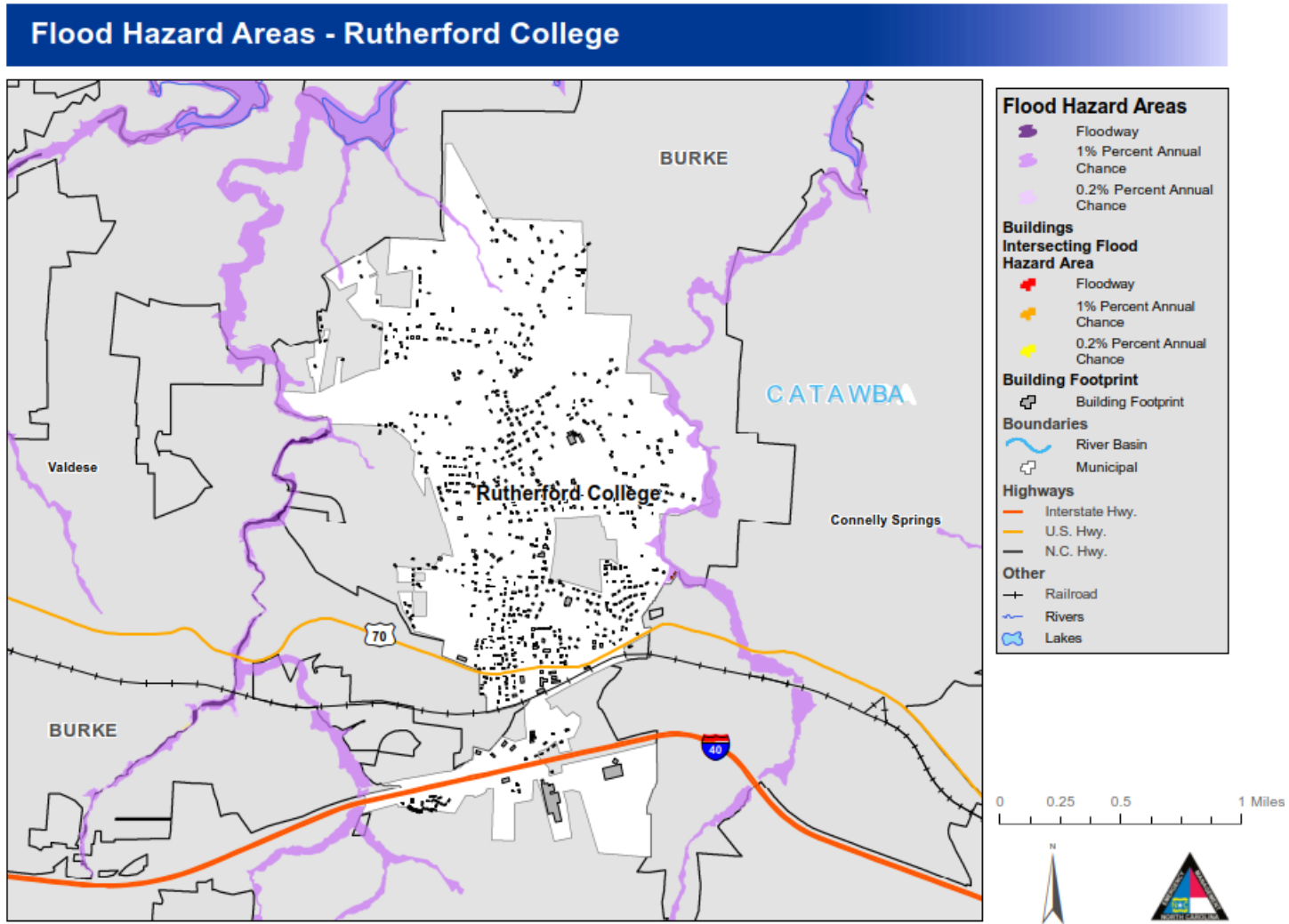


Figure 4.23: River Flooding Hazard Areas

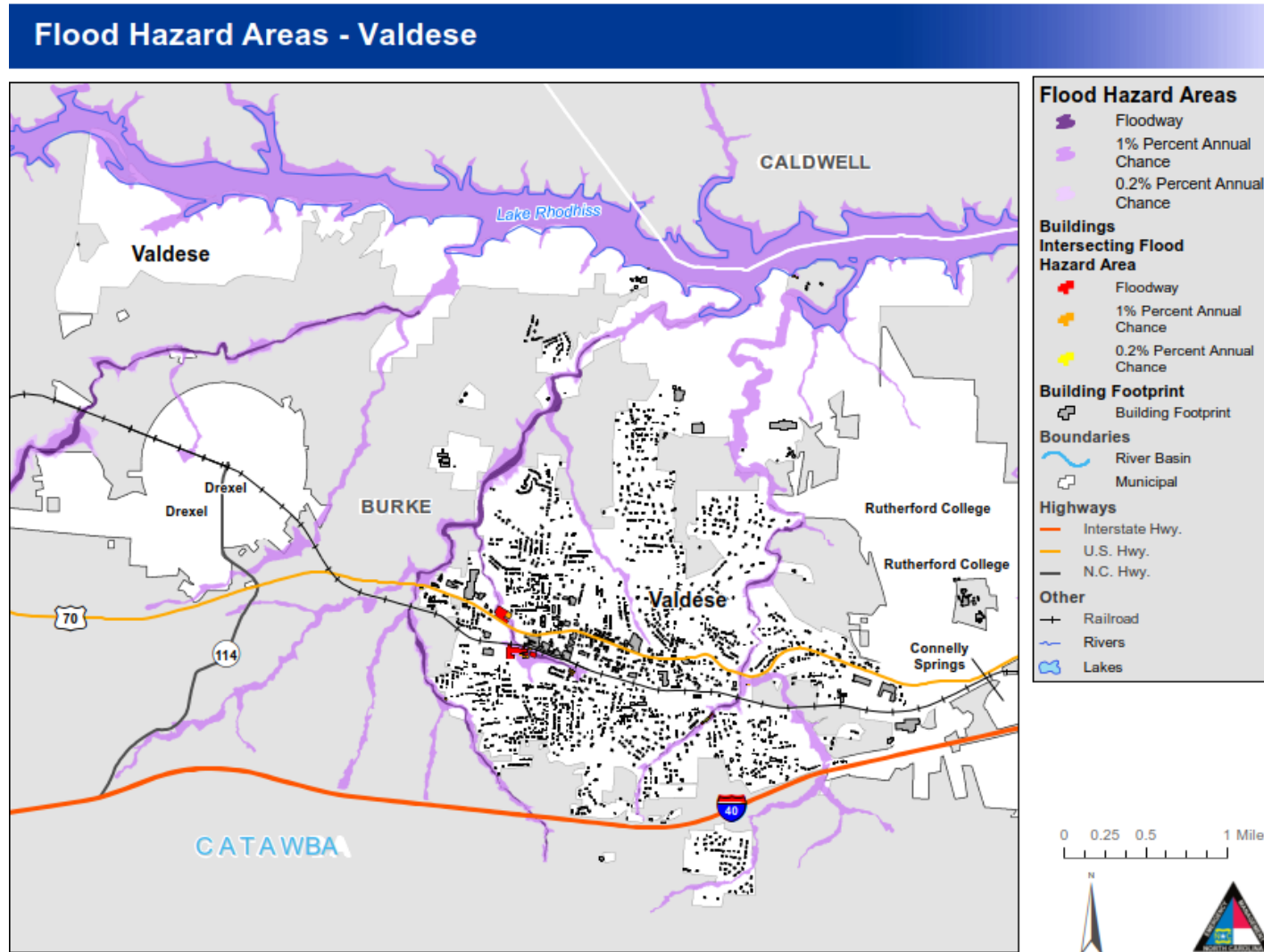


Figure 4.24: River Flooding Hazard Areas

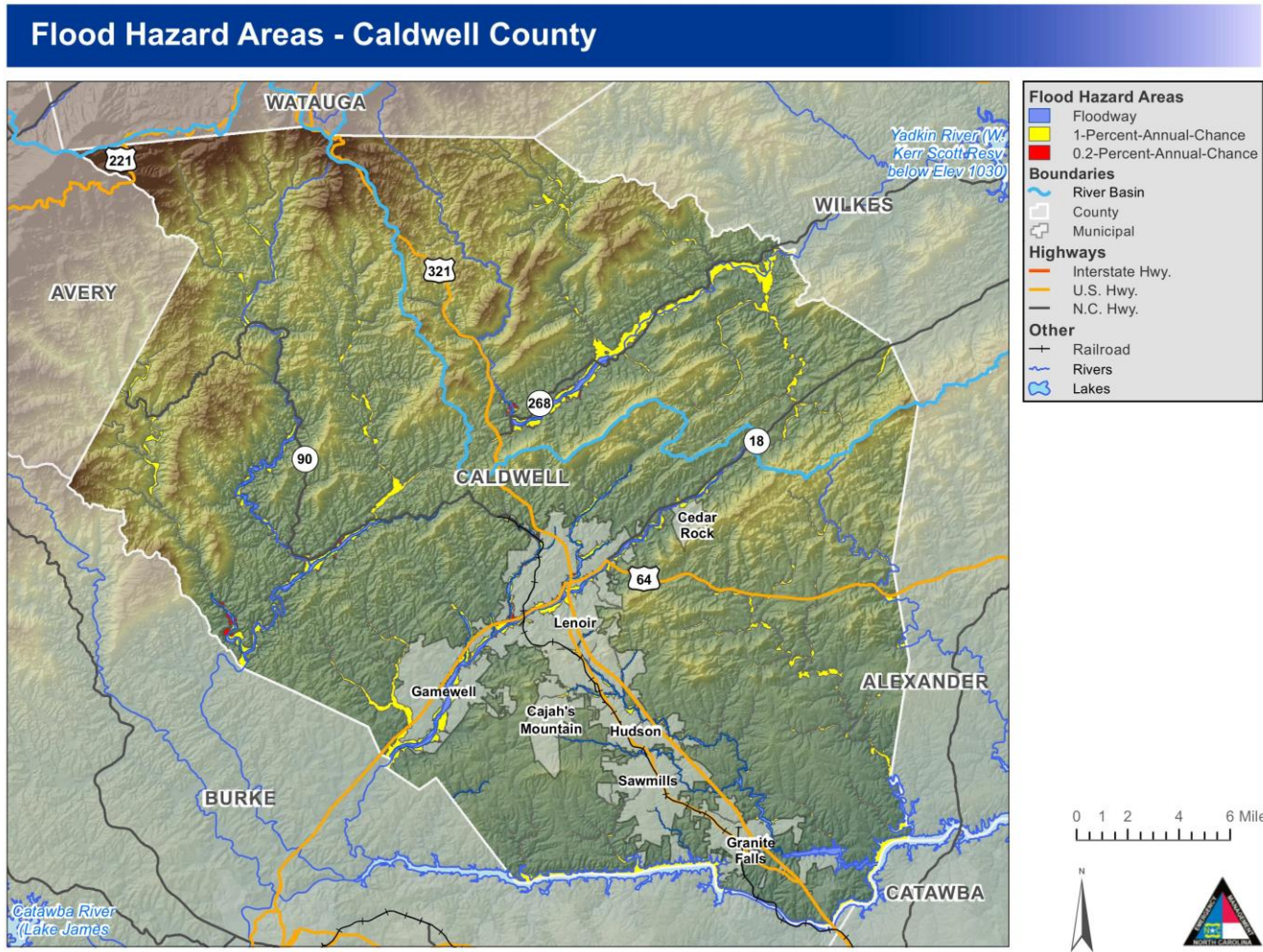


Figure 4.25: River Flooding Hazard Areas

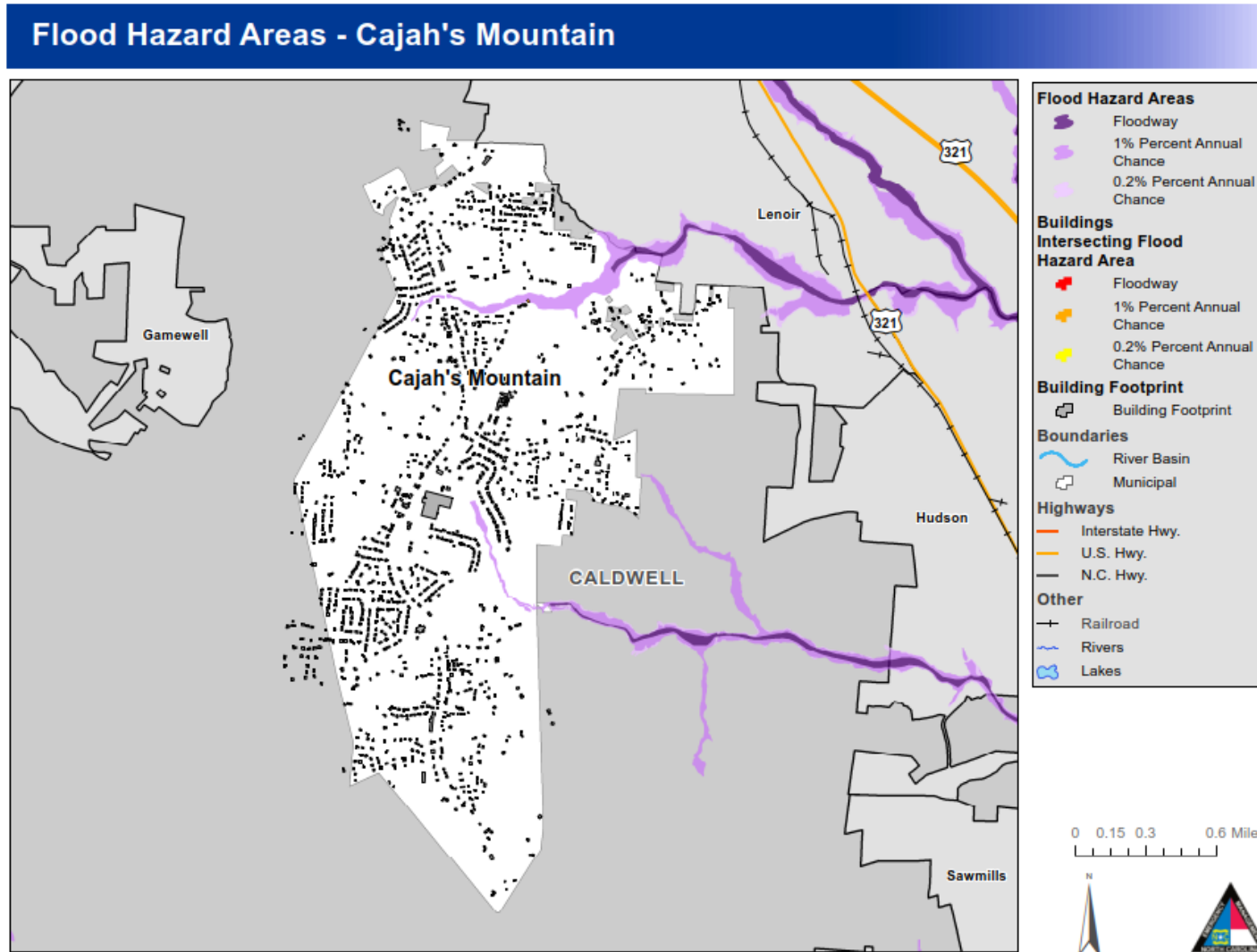


Figure 4.26: River Flooding Hazard Areas

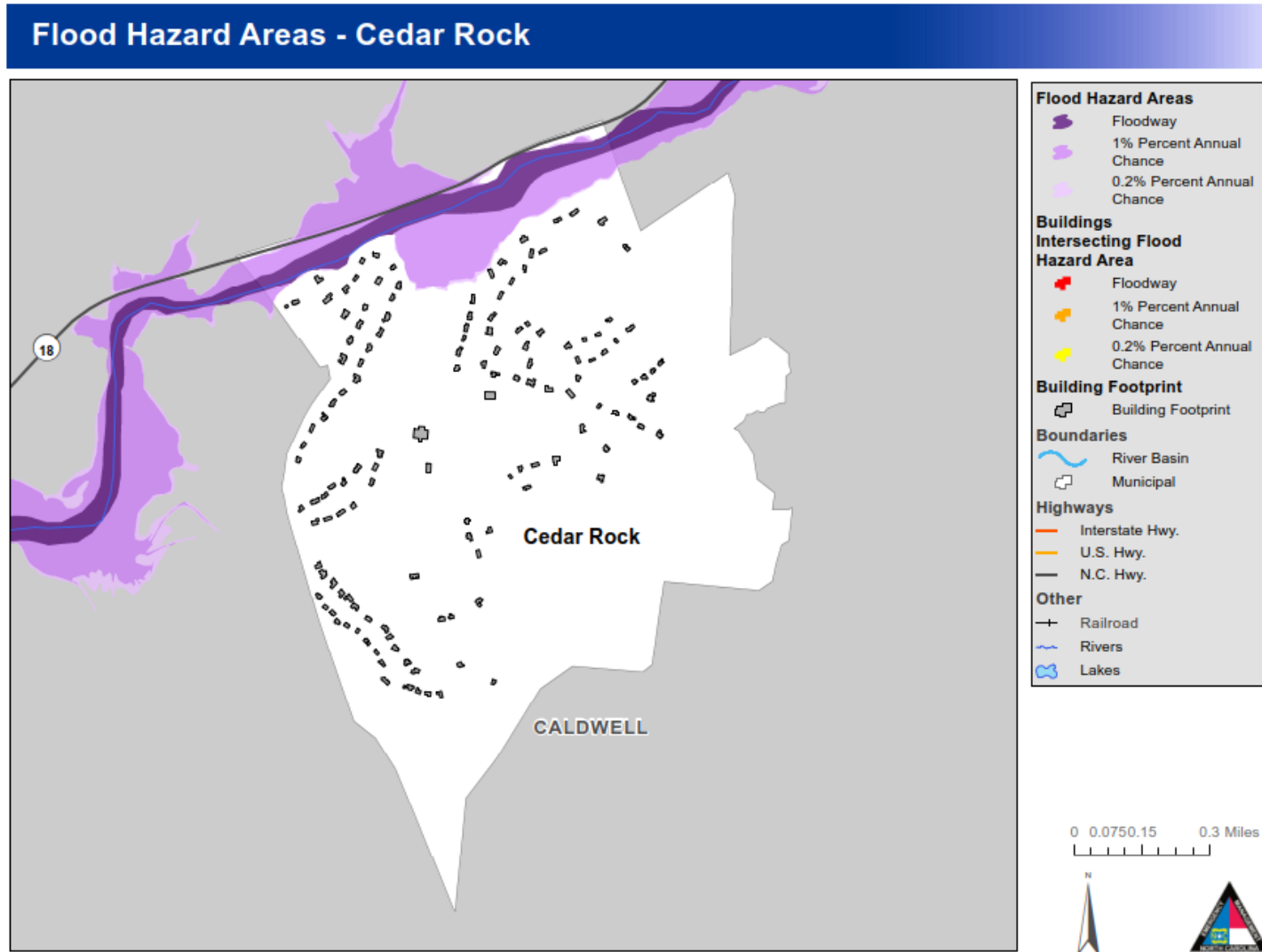


Figure 4.27: River Flooding Hazard Areas

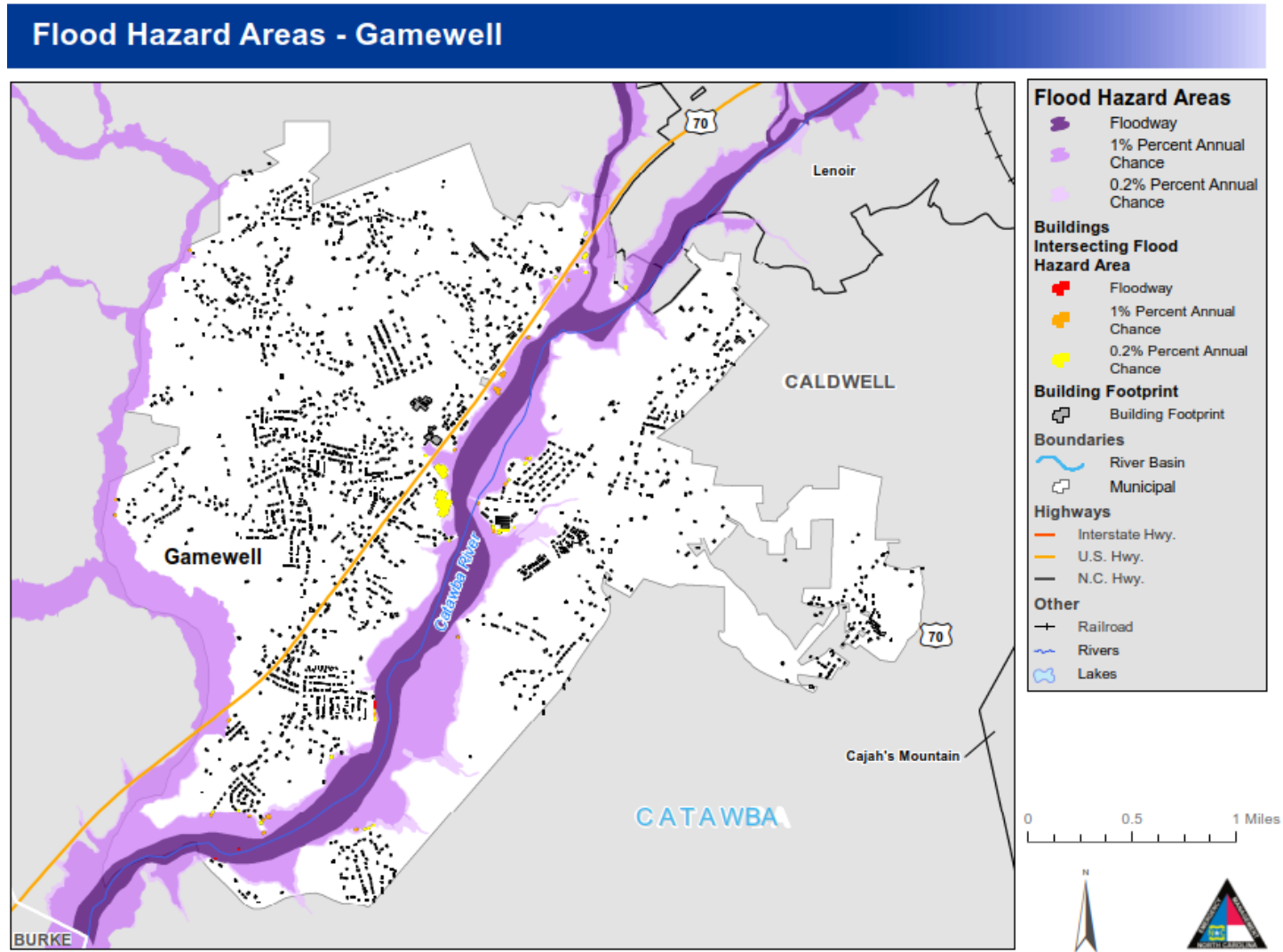


Figure 4.28: River Flooding Hazard Areas

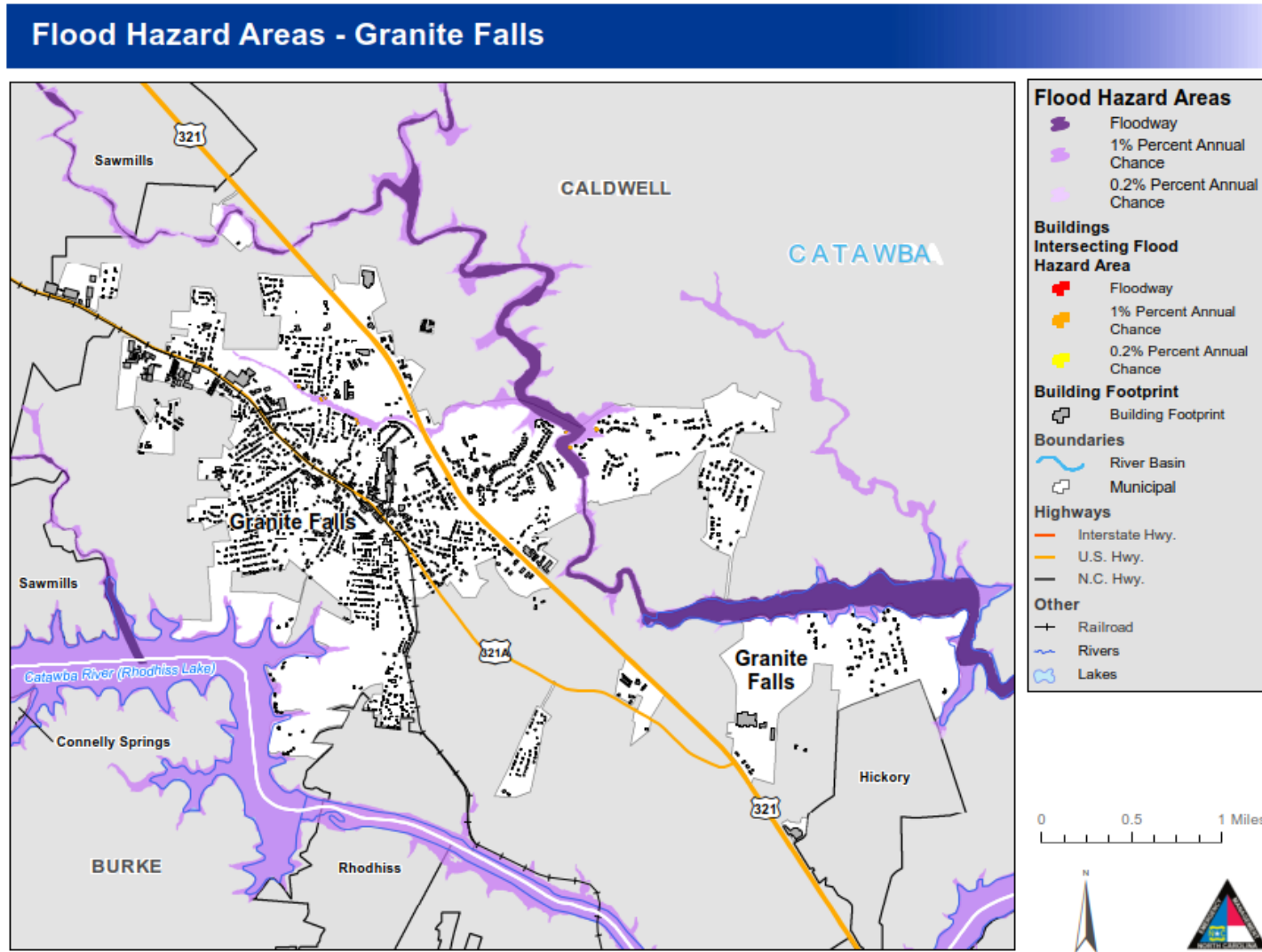


Figure 4.29: River Flooding Hazard Areas

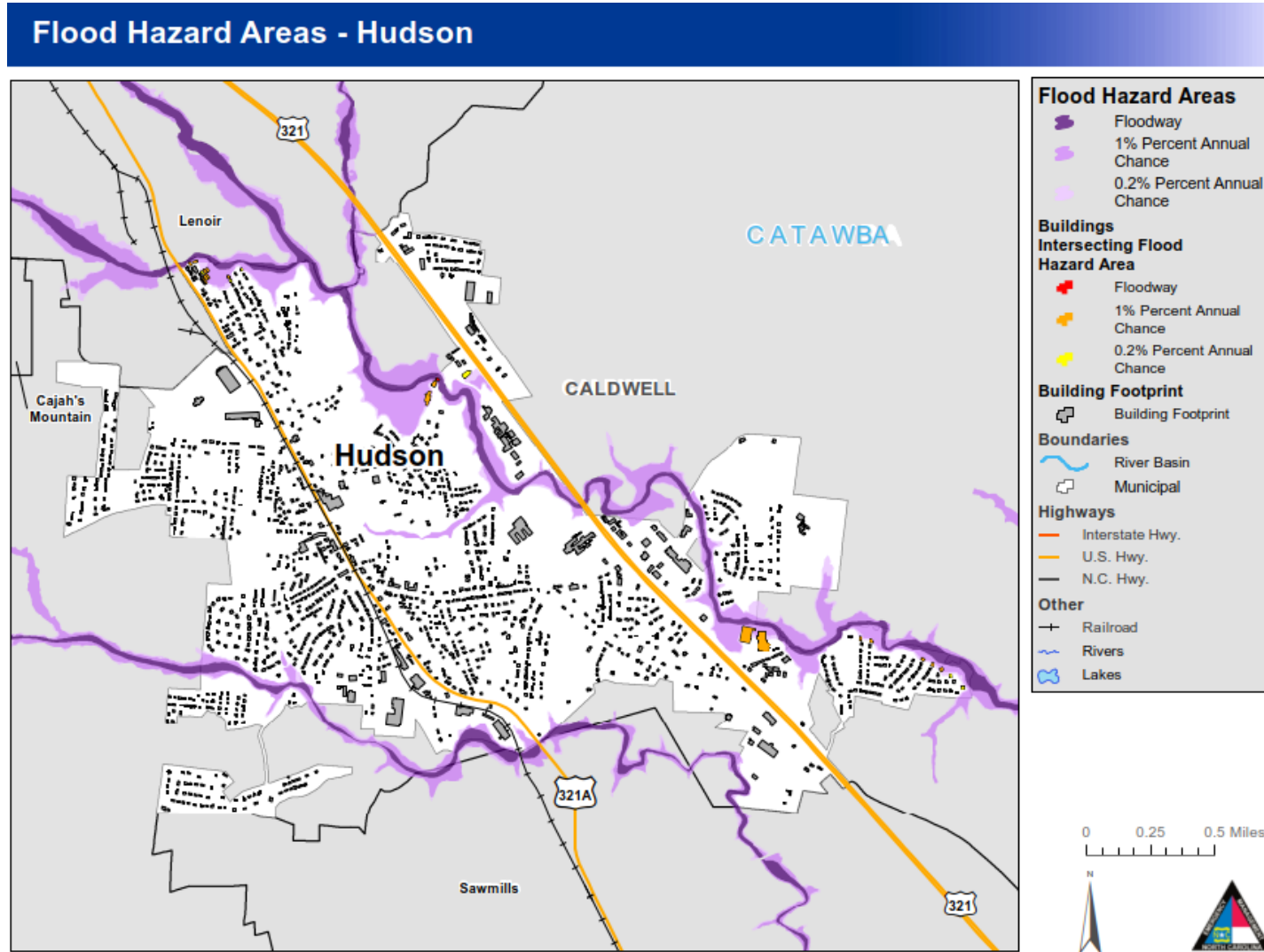


Figure 4.30: River Flooding Hazard Areas

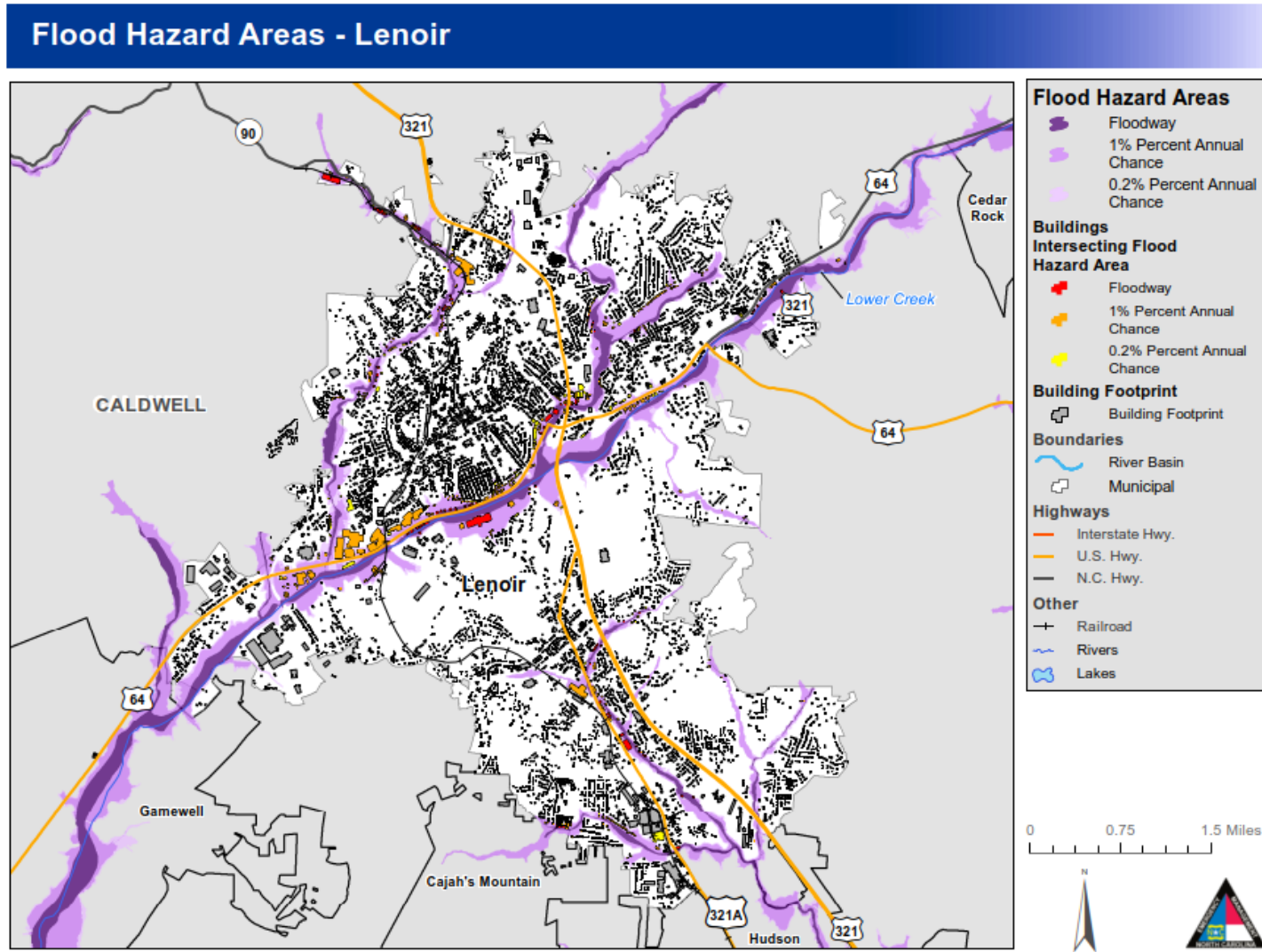


Figure 4.31: River Flooding Hazard Areas

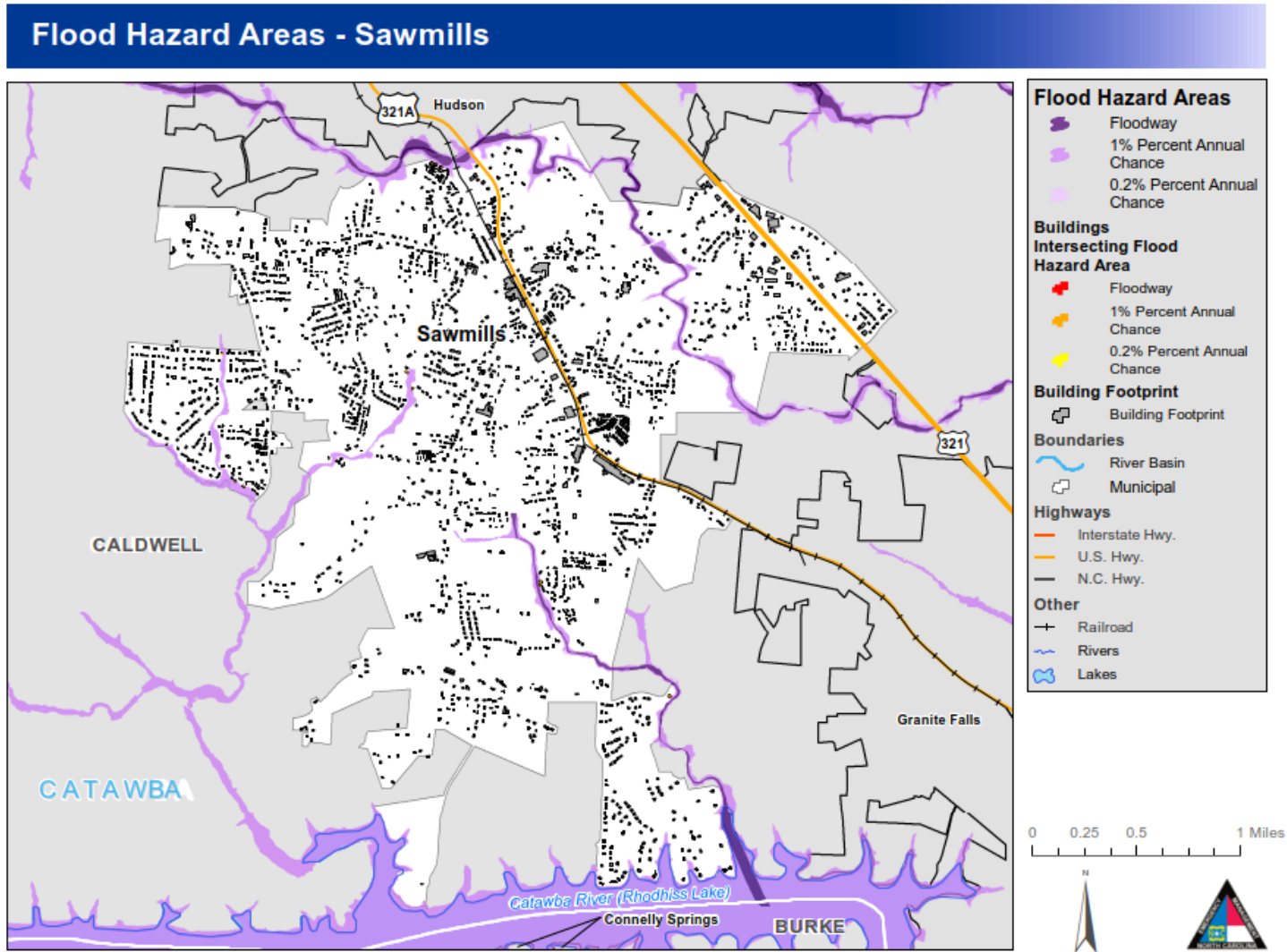


Figure 4.32: River Flooding Hazard Areas

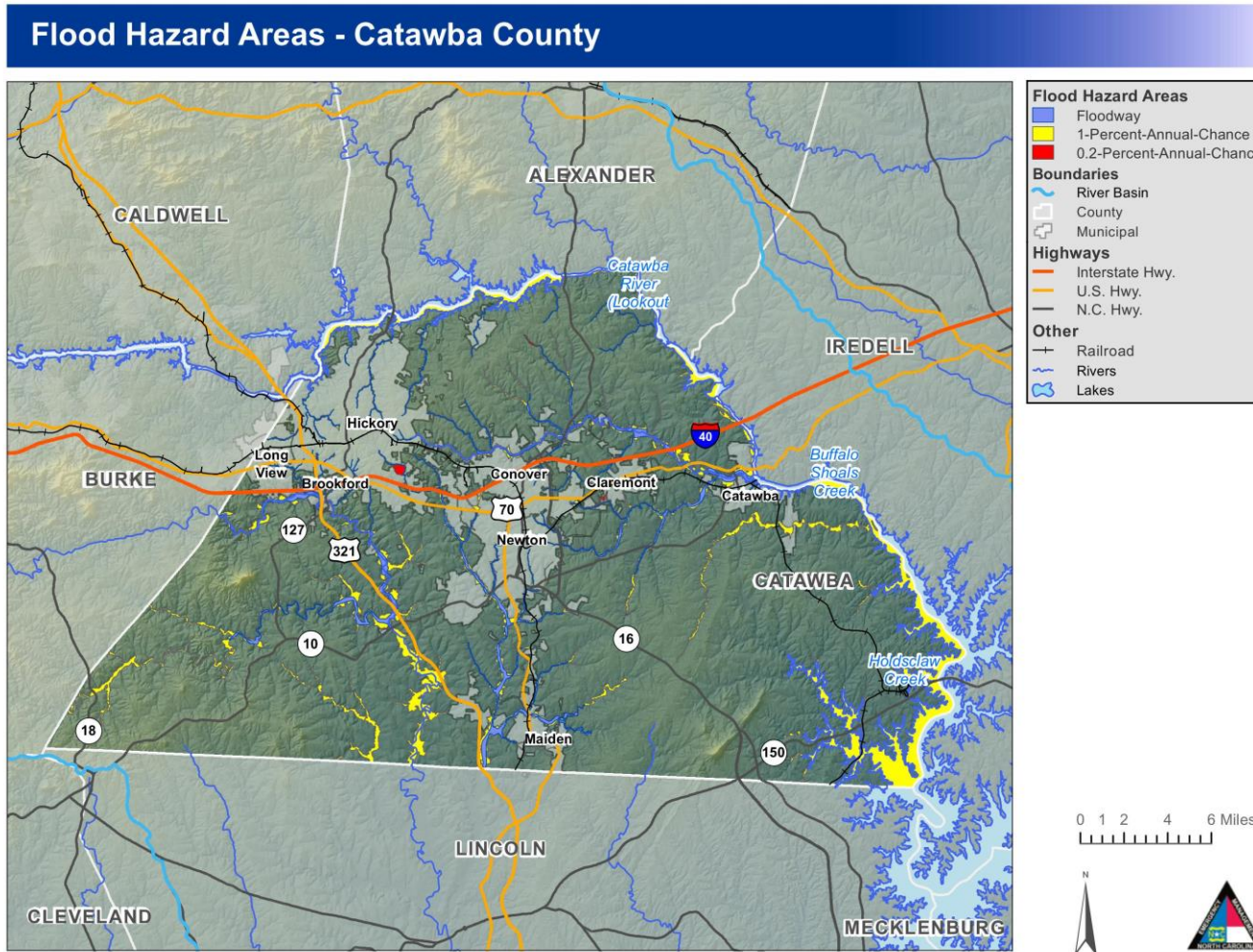


Figure 4.33: River Flooding Hazard Areas

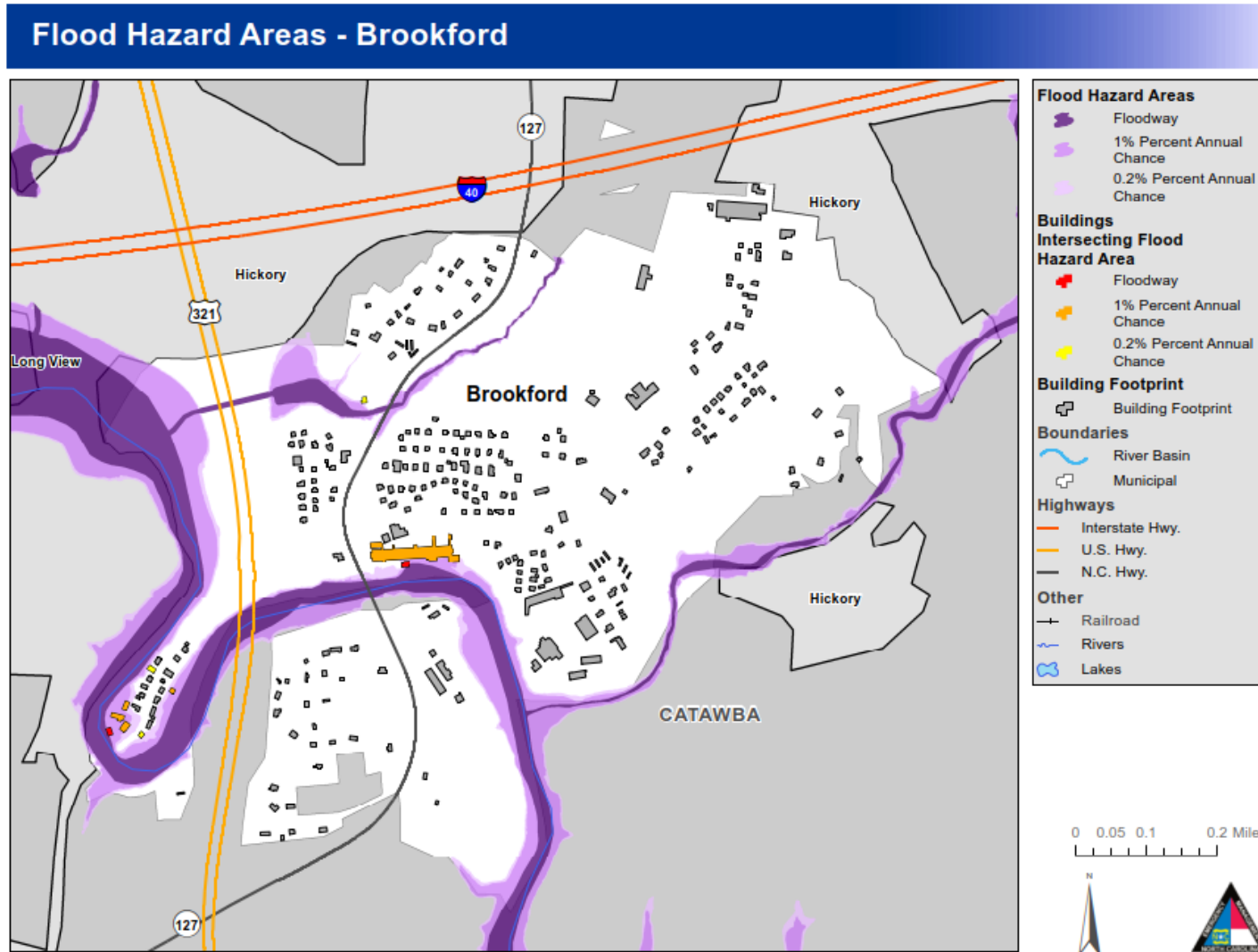


Figure 4.34: River Flooding Hazard Areas

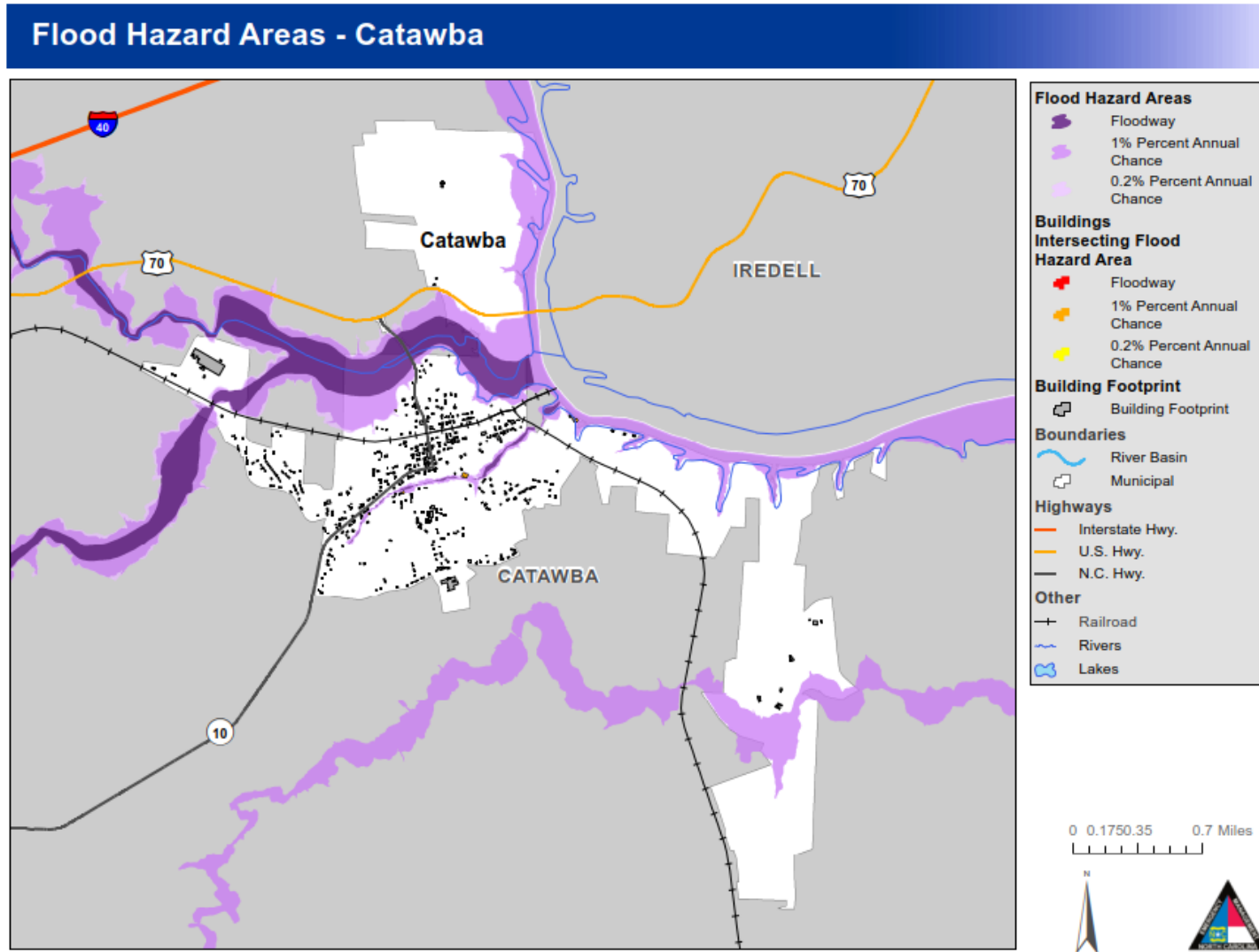


Figure 4.35: River Flooding Hazard Areas

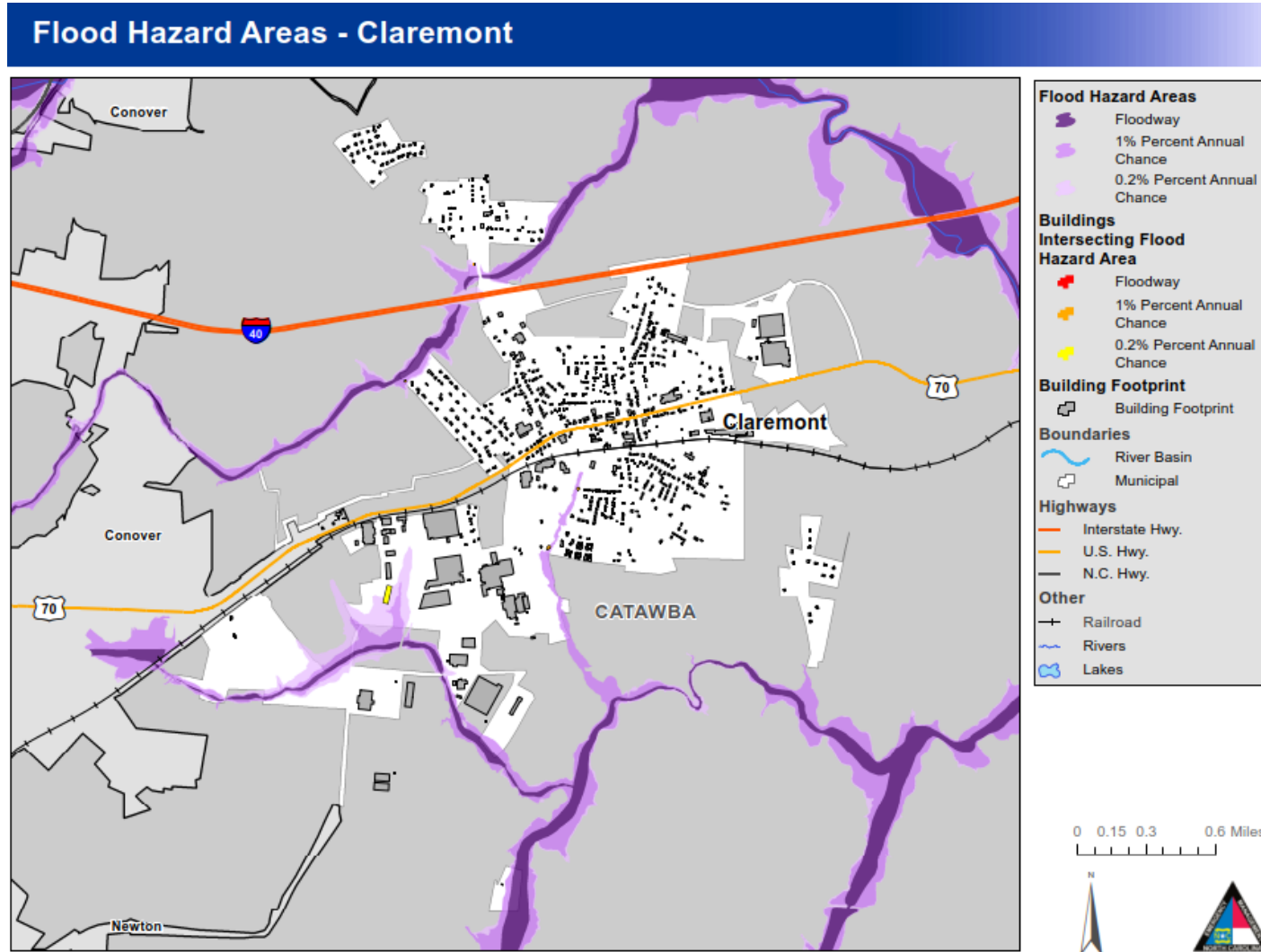


Figure 4.36: River Flooding Hazard Areas

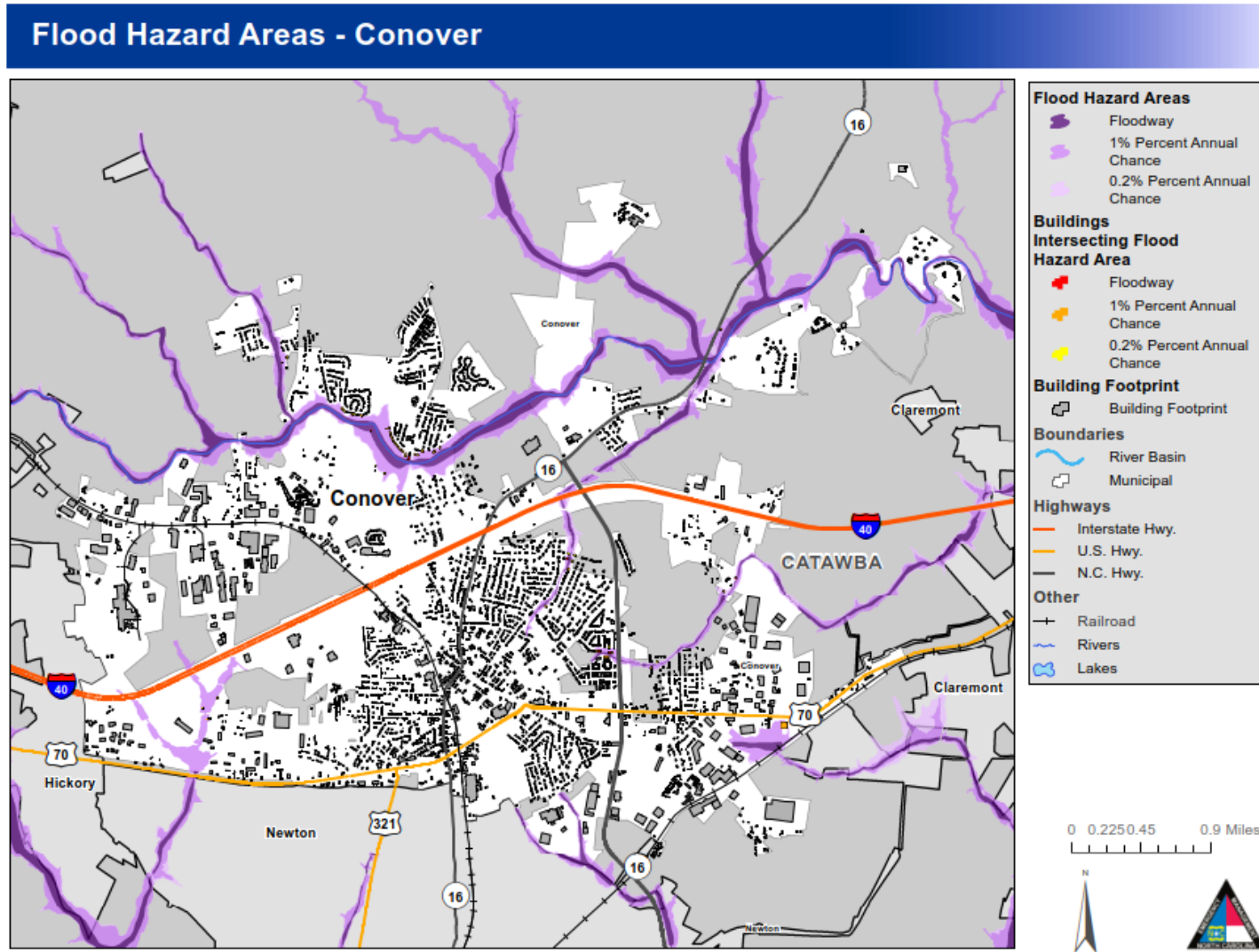


Figure 4.37: River Flooding Hazard Areas

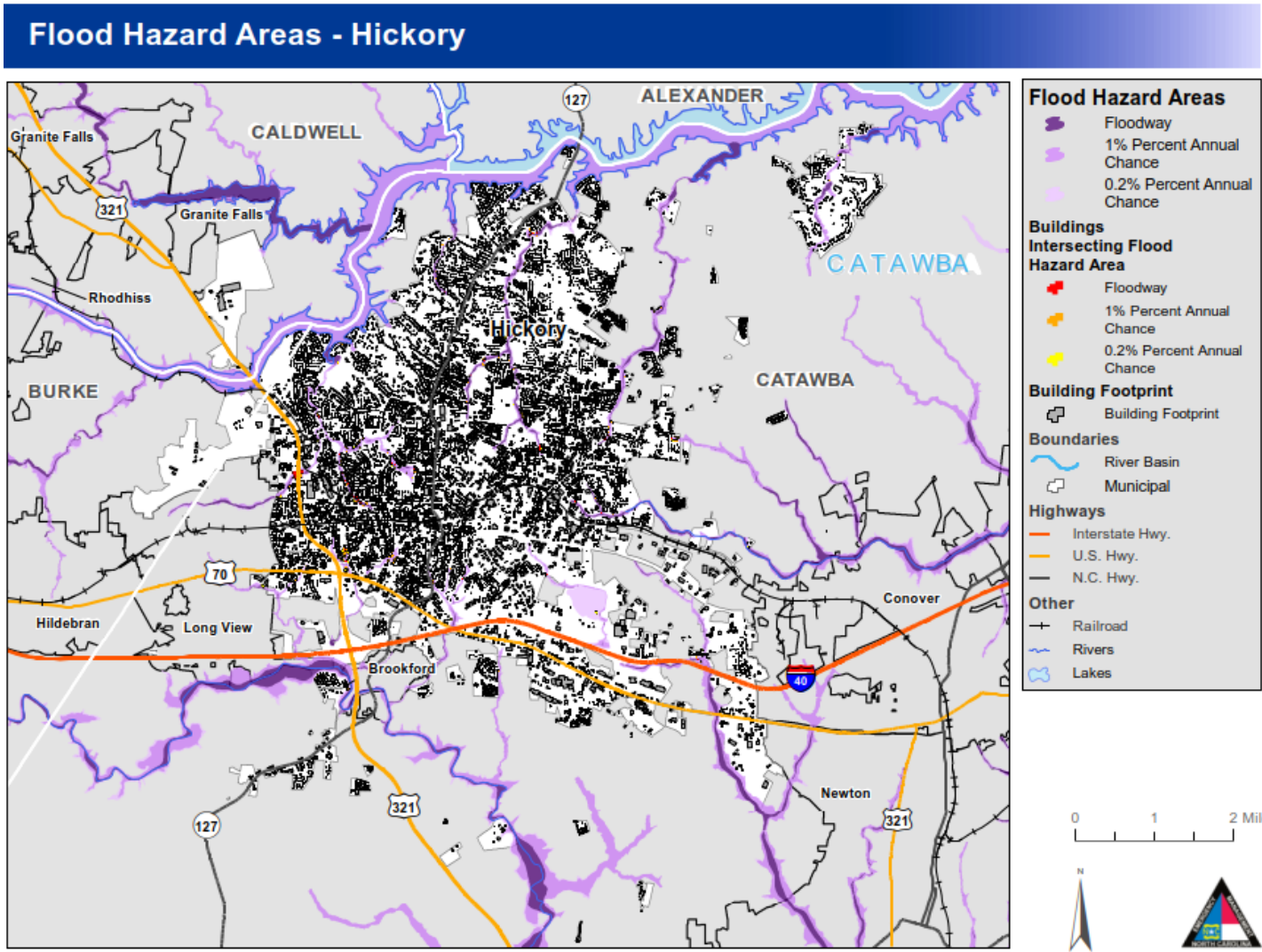


Figure 4.38: River Flooding Hazard Areas

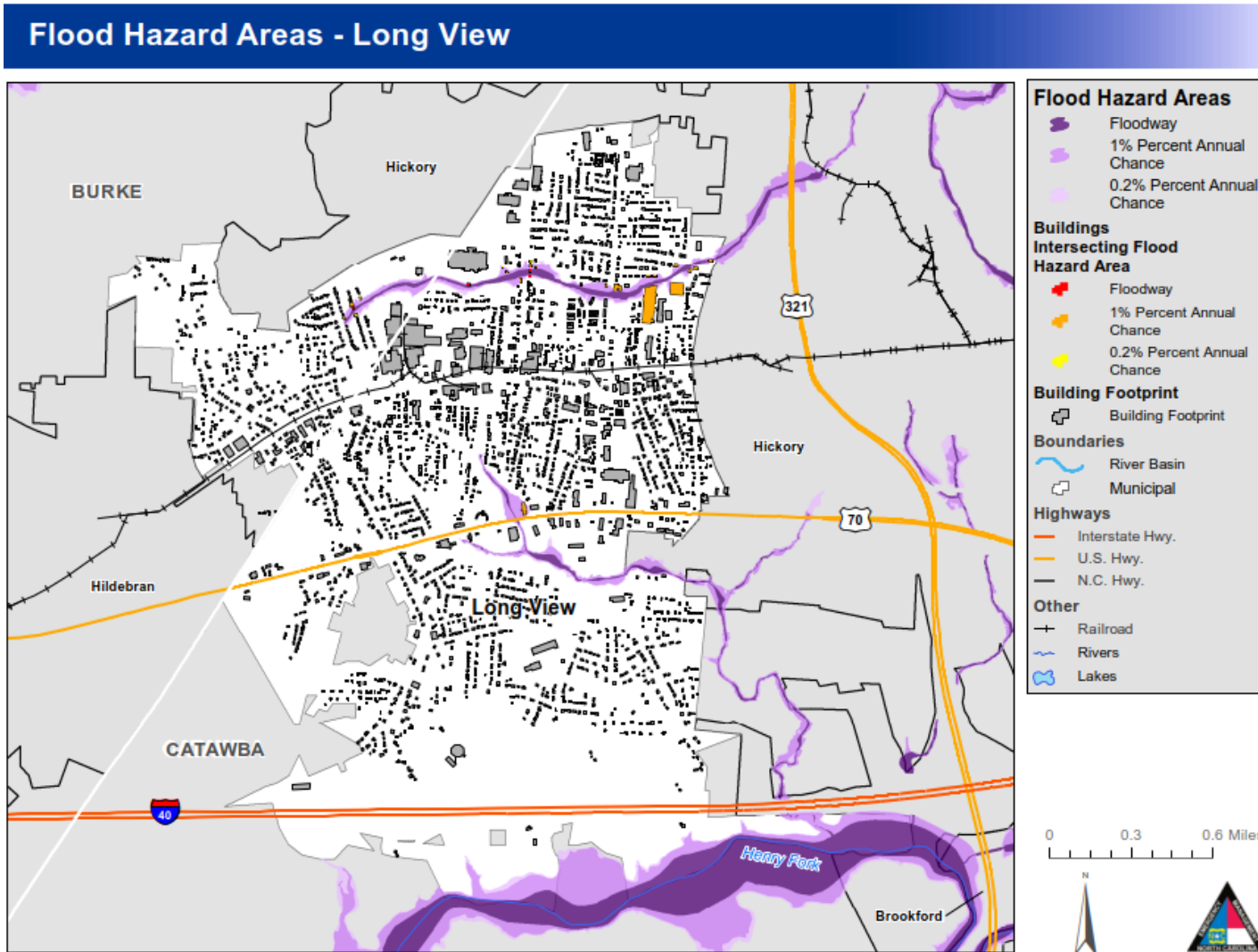


Figure 4.39: River Flooding Hazard Areas

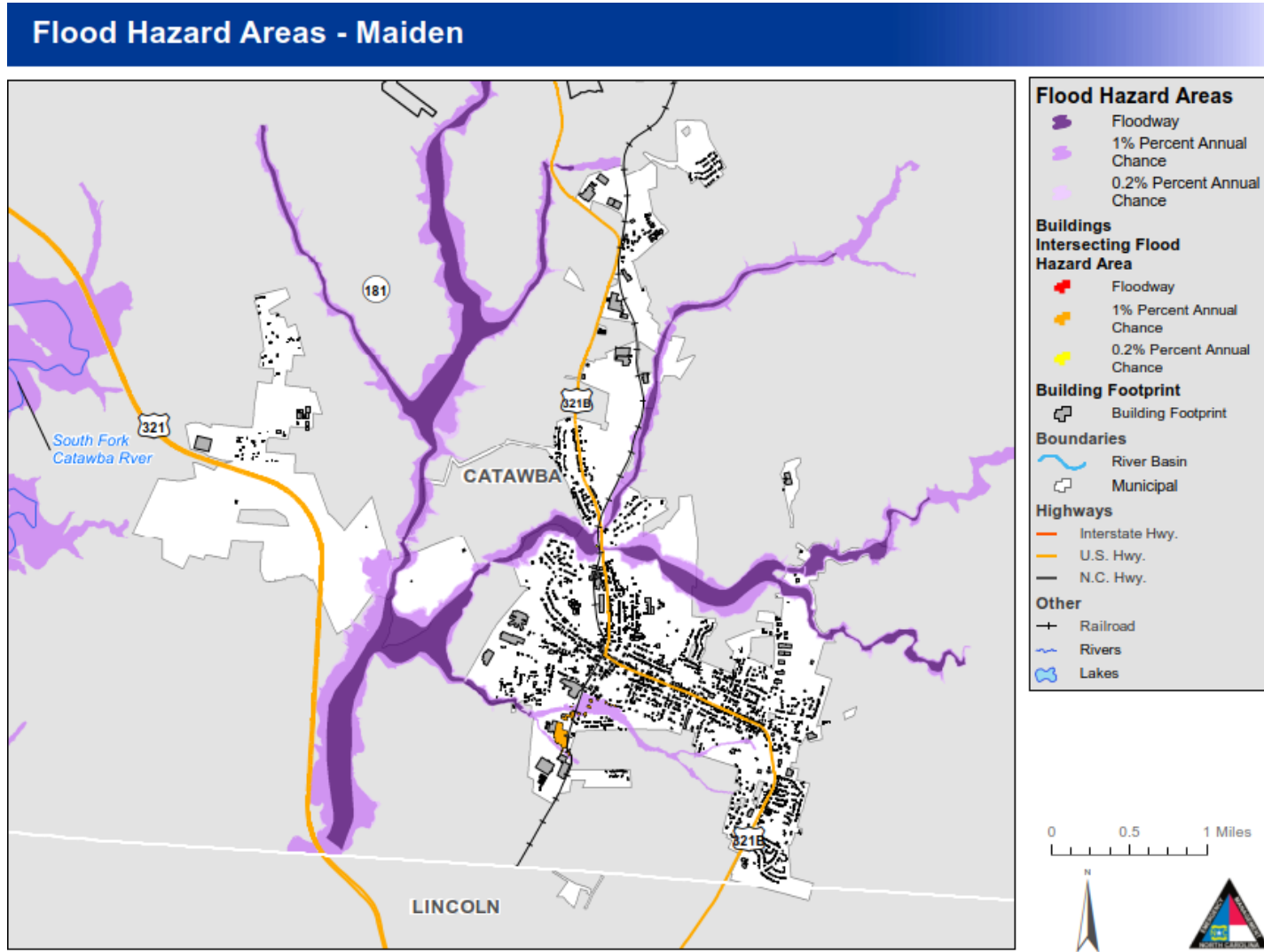
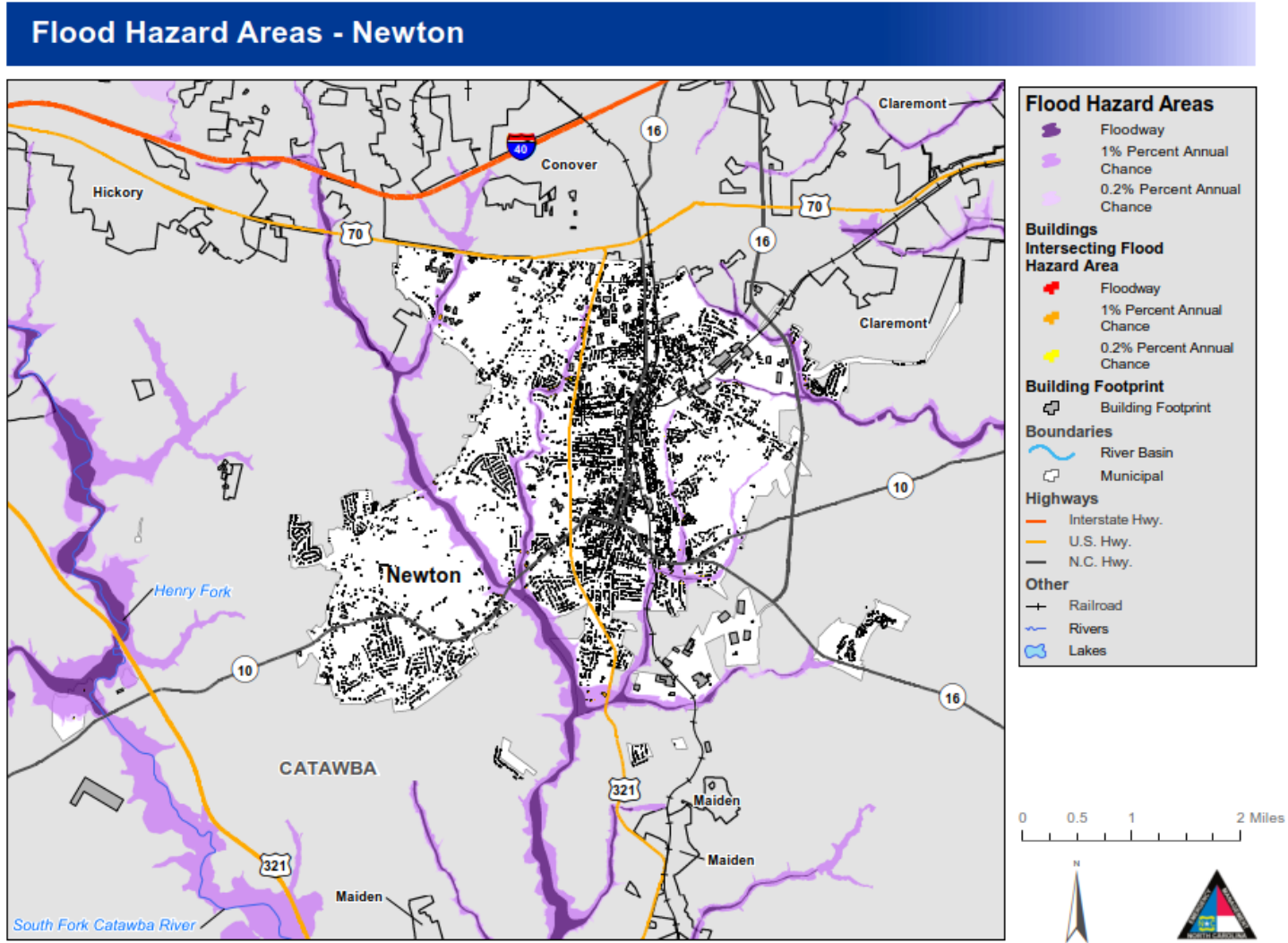


Figure 4.40: River Flooding Hazard Areas



Extent (Magnitude and Severity)

Definition:

Flood Extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. Flood depth and velocity are recorded via the USGS stream gages throughout the region.

Extent Event:

Table 4.13 provides peak river stage data according to USGS which shows the highest recorded peak river stage for all jurisdictions.⁵

Table 4.13: USGS Peak River Stage Data

Jurisdiction	Flood Extent
Alexander County	995.91 ft (19.91 ft NGVD29 Datum +976 ft, 10/16/1964, USGS)
Town of Taylorsville	18.63 ft NGVD29 (no datum conversion listed, 8/10/1970, USGS)
Burke County	1028.7 ft (26.3 ft NGVD29 Datum +1002.4 ft, 9/9/2004, USGS)
City of Morganton	No USGS Data, Highest BFE 1331.1 ft*
Town of Connelly Springs	No USGS Data, Highest BFE 1213 ft*
Town of Drexel	No USGS Data, Highest BFE 1037.9 ft*
Town of Glen Alpine	No USGS Data, Highest BFE 1103.4 ft*
Town of Hildebran	No USGS Data, Highest BFE 947 ft*
Town of Rutherford College	1028.7 ft (26.3 ft NGVD29 Datum +1002.4 ft, 9/9/2004, USGS)
Town of Valdese	No USGS Data, Highest BFE 1128.2 ft*
Caldwell County	No USGS Data, Highest BFE 1277.9 ft*
City of Lenoir	1,104.4 ft (22 ft NGVD29 Datum +1082.4 ft 8/13/1940, USGS)
Town of Cahah's Mountain	No USGS Data, Highest BFE 1259.5 ft*
Town of Gamewell	No USGS Data, Highest BFE 1160.6 ft*
Town of Granite Falls	No USGS Data, Highest BFE 1051.7 ft*
Town of Hudson	No USGS Data, Highest BFE 1161.4 ft*

⁵ Statements in Table 4.12 marked by an "*" for municipalities where BFE data was used since no USGS data was available.

Jurisdiction	Flood Extent
Town of Rhodhiss	No USGS Data, Highest BFE 1181.7 ft*
Town of Sawmills	24.14 ft NGVD29 (no datum conversion listed, 8/7/1973, USGS)
Village of Cedar Rock	No USGS Data, Highest BFE 1140.7 ft*
Catawba County	1,101.18 ft (23.18 ft NGVD29 Datum +1078 ft 8/10/1970, USGS)
City of Claremont	919.31 ft (29.2 ft NGVD29 Datum + 890.11 ft 8/13/1940, USGS)
City of Conover	No USGS Data, Highest BFE 921.3 ft*
City of Hickory	790.59 ft (44.1 ft NGVD29 Datum +746.49 ft, 7/16/1916, USGS)
City of Newton	No USGS Data, Highest BFE 936.1 ft*
Town of Brookford	No USGS Data, Highest BFE 1002.5 ft*
Town of Catawba	No USGS Data, Highest BFE 1115.8 ft*
Town of Long View	No USGS Data, Highest BFE 1119.4 ft*
Town of Maiden	No USGS Data, Highest BFE 857.5 ft*

Source: USGS

It is worth noting that this is based on available records from existing river gages and may not represent the worst flooding in the Region’s history. Similarly, a database of high water marks is not available for all areas of the Region for comparison, validation, or further reliable research on the magnitude of historical occurrences.

Historical Occurrences

The following historical occurrences ranging from 2005 to 2018 have been identified based on the National Climatic Data Center (NCDC) Storm Events database **Table 4.14**. It should be noted that only those historical occurrences listed in the NCDC database are shown here and that other, unrecorded or unreported events may have occurred within the planning area during this timeframe.

Table 4.14: Historical Occurrences of River Flooding (2005 to 2018)

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander								
Alexander County (Unincorporated Area)	10/08/05	Flood	0	0	0	\$0	0	\$0
Alexander County (Unincorporated Area)	05/26/09	Flash Flood	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	06/03/09	Flash Flood	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	01/24/10	Flash Flood	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	01/24/10	Flash Flood	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	07/11/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	7 Events		0	0	\$0	\$0	\$0	\$0
Burke								
Burke County (Unincorporated Area)	08/26/08	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	05/26/09	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	01/24/10	Flash Flood	0	0	\$0	\$0	\$0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Burke County (Unincorporated Area)	01/25/10	Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	08/15/10	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	03/06/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	04/16/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	04/16/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	04/16/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	04/16/11	Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	11/29/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	09/18/12	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	05/05/13	Flood	0	0	\$30,000	\$24,254	\$0	\$0
Burke County (Unincorporated Area)	07/04/13	Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	07/04/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	07/04/13	Flood	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	07/12/13	Flash Flood	0	0	\$60,000	\$48,827	\$0	\$0
Burke County (Unincorporated Area)	04/19/15	Flood	0	0	\$1,000	\$865	\$0	\$0
Burke County (Unincorporated Area)	12/02/15	Flood	0	0	\$500	\$442	\$0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Burke County (Unincorporated Area)	12/24/15	Flash Flood	0	0	\$1,000	\$885	\$0	\$0
Burke County (Unincorporated Area)	02/03/16	Flash Flood	0	0	\$5,000	\$4,443	\$0	\$0
Burke County (Unincorporated Area)	10/23/17	Flood	0	0	\$1,000	\$943	\$0	\$0
Burke County (Unincorporated Area)	04/15/18	Flash Flood	0	0	\$1,000	\$959	\$0	\$0
Burke County (Unincorporated Area)	05/18/18	Flood	0	0	\$5,000	\$4,808	\$0	\$0
Burke County (Unincorporated Area)	05/29/18	Flash Flood	0	0	\$3,000	\$2,888	\$0	\$0
Burke County (Unincorporated Area)	05/30/18	Flood	0	0	\$1,000	\$963	\$0	\$0
Burke County (Unincorporated Area)	09/16/18	Flash Flood	0	0	\$1,000	\$973	\$0	\$0
Burke County (Unincorporated Area)	09/17/18	Flood	0	0	\$1,000	\$973	\$0	\$0
Burke County (Unincorporated Area)	09/23/18	Flash Flood	0	0	\$2,000	\$1,946	\$0	\$0
Burke County (Unincorporated Area)	10/11/18	Flood	0	0	\$2,000	\$1,950	\$0	\$0
Burke County (Unincorporated Area)	12/21/18	Flood	0	0	\$1,000	\$981	\$0	\$0
Burke County (Unincorporated Area)	12/28/18	Flood	0	0	\$2,000	\$1,964	\$0	\$0
City of Morganton	05/19/05	Flash Flood	0	0	0	\$0	0	\$0
City of Morganton	07/19/05	Flash Flood	0	0	0	\$0	0	\$0
City of Morganton	07/27/05	Flash Flood	0	0	0	\$0	0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
City of Morganton	08/17/05	Flash Flood	0	0	0	\$0	0	\$0
City of Morganton	09/12/14	Flash Flood	0	0	\$100,000	\$84,720	\$0	\$0
City of Morganton	09/12/14	Flood	0	0	\$10,000	\$8,472	\$0	\$0
Town of Drexel	06/09/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Subtotal Burke	39 Events		0	0	\$227,500	\$192,255	\$0	\$0
Caldwell								
Caldwell County (Unincorporated Area)	07/03/05	Flash Flood	0	0	\$20,000	\$12,347	0	\$0
Caldwell County (Unincorporated Area)	08/18/05	Flash Flood	0	0	0	\$0	0	\$0
Caldwell County (Unincorporated Area)	08/26/08	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	05/16/09	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	03/06/11	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	04/16/11	Flash Flood	0	1	\$50,000	\$37,671	\$0	\$0
Caldwell County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$300,000	\$234,584	\$0	\$0
Caldwell County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$0	\$0	\$0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Caldwell County (Unincorporated Area)	07/11/12	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	08/09/12	Flash Flood	0	0	\$5,000	\$3,941	\$0	\$0
Caldwell County (Unincorporated Area)	01/30/13	Flash Flood	0	0	\$50,000	\$40,064	\$0	\$0
Caldwell County (Unincorporated Area)	05/05/13	Flood	0	0	\$30,000	\$24,254	\$0	\$0
Caldwell County (Unincorporated Area)	06/09/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	07/04/13	Flash Flood	0	0	\$300,000	\$243,966	\$0	\$0
Caldwell County (Unincorporated Area)	07/07/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	07/12/13	Flash Flood	0	0	\$50,000	\$40,689	\$0	\$0
Caldwell County (Unincorporated Area)	09/01/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	04/19/15	Flood	0	0	\$1,000	\$865	\$0	\$0
Caldwell County (Unincorporated Area)	02/03/16	Flash Flood	0	0	\$5,000	\$4,443	\$0	\$0
Caldwell County (Unincorporated Area)	05/24/17	Flash Flood	0	0	\$500	\$465	\$0	\$0
Caldwell County (Unincorporated Area)	10/23/17	Flood	0	0	\$1,000	\$943	\$0	\$0
Caldwell County (Unincorporated Area)	05/18/18	Flash Flood	0	0	\$50,000	\$48,077	\$0	\$0
Caldwell County (Unincorporated Area)	05/19/18	Flood	0	0	\$5,000	\$4,808	\$0	\$0
Caldwell County (Unincorporated Area)	05/29/18	Flash Flood	0	0	\$2,000	\$1,925	\$0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Caldwell County (Unincorporated Area)	05/29/18	Flash Flood	0	0	\$2,000	\$1,925	\$0	\$0
Caldwell County (Unincorporated Area)	05/30/18	Flood	0	0	\$500	\$481	\$0	\$0
Caldwell County (Unincorporated Area)	05/31/18	Flash Flood	0	0	\$5,000	\$4,814	\$0	\$0
Caldwell County (Unincorporated Area)	09/16/18	Flood	0	0	\$1,000	\$973	\$0	\$0
Caldwell County (Unincorporated Area)	10/11/18	Flash Flood	0	0	\$1,000	\$975	\$0	\$0
Caldwell County (Unincorporated Area)	10/11/18	Flood	0	0	\$500	\$487	\$0	\$0
City of Lenoir	06/07/05	Flash Flood	0	0	\$15,000	\$9,238	0	\$0
City of Lenoir	06/08/05	Flash Flood	0	0	0	\$0	0	\$0
City of Lenoir	06/10/09	Flash Flood	0	0	\$20,000	\$14,139	\$0	\$0
City of Lenoir	06/09/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Town of Hudson	07/27/17	Flash Flood	0	0	\$500	\$468	\$0	\$0
Village of Cedar Rock	07/02/13	Flood	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	38 Events		0	1	\$915,000	\$732,543	\$0	\$0
Catawba								
Catawba County (Unincorporated Area)	01/24/10	Flash Flood	0	0	\$0	\$0	\$0	\$0
Catawba County (Unincorporated Area)	05/14/12	Flash Flood	0	0	\$20,000	\$15,639	\$0	\$0
Catawba County (Unincorporated Area)	05/06/13	Flood	0	0	\$2,000,000	\$1,616,958	\$0	\$0

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Catawba County (Unincorporated Area)	06/05/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
Catawba County (Unincorporated Area)	07/27/13	Flash Flood	0	0	\$1,000,000	\$814,901	\$0	\$0
Catawba County (Unincorporated Area)	06/02/16	Flash Flood	0	0	\$500	\$449	\$0	\$0
City of Conover	07/27/13	Flash Flood	0	0	\$900,000	\$733,411	\$0	\$0
City of Hickory	05/19/05	Flash Flood	0	0	\$5,000	\$3,073	0	\$0
City of Hickory	07/07/05	Flash Flood	0	0	0	\$0	0	\$0
City of Hickory	07/09/13	Flash Flood	0	0	\$0	\$0	\$0	\$0
City of Hickory	07/27/13	Flash Flood	0	0	\$1,500,000	\$1,222,352	\$0	\$0
City of Hickory	07/27/13	Flash Flood	0	0	\$200,000	\$162,980	\$0	\$0
City of Hickory	07/27/13	Flash Flood	0	0	\$1,500	\$1,222	\$0	\$0
City of Hickory	07/27/13	Flood	0	0	\$100,000	\$81,490	\$0	\$0
City of Hickory	02/03/16	Flash Flood	0	0	\$2,000	\$1,777	\$0	\$0
City of Newton	08/27/08	Flash Flood	0	0	\$0	\$0	\$0	\$0
Town of Long View	07/21/12	Flash Flood	0	0	\$1,000	\$787	\$0	\$0
Town of Maiden	08/17/08	Flash Flood	0	0	\$50,000	\$34,365	\$0	\$0
Subtotal Catawba	18 Events		0	0	\$5,780,000	\$4,689,405	\$0	\$0
TOTAL PLAN	102 Events		0	1	\$6,922,500	\$5,614,203	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

According to NCDC 102 recorded instances of River Flooding conditions have affected the planning area since 2005 to 2018 causing an estimated \$6,922,500 in losses to property, \$0 in losses to agricultural crops, 0 death(s), and 1 injury(ies).

Table 4.15 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.15: Summary of Historical River Flooding Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander							
Alexander County (Unincorporated Area)	7	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	7	0	0	\$0	\$0	\$0	\$0
Burke							
Burke County (Unincorporated Area)	32	0	0	\$117,500	\$80,842	\$0	\$0
City of Morganton	6	0	0	\$110,000	\$67,606	\$0	\$0
Town of Drexel	1	0	0	\$0	\$0	\$0	\$0
Subtotal Burke	39	0	0	\$227,500	\$148,448	\$0	\$0
Caldwell							
Caldwell County (Unincorporated Area)	32	0	1	\$879,500	\$542,965	\$0	\$0
City of Lenoir	4	0	0	\$35,000	\$21,556	\$0	\$0
Town of Hudson	1	0	0	\$500	\$468	\$0	\$0

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Village of Cedar Rock	1	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	38	0	1	\$915,000	\$564,988	\$0	\$0
Catawba							
Catawba County (Unincorporated Area)	6	0	0	\$3,020,500	\$2,181,439	\$0	\$0
City of Conover	1	0	0	\$900,000	\$733,411	\$0	\$0
City of Hickory	8	0	0	\$1,808,500	\$1,111,508	\$0	\$0
City of Newton	1	0	0	\$0	\$0	\$0	\$0
Town of Long View	1	0	0	\$1,000	\$787	\$0	\$0
Town of Maiden	1	0	0	\$50,000	\$34,365	\$0	\$0
Subtotal Catawba	18	0	0	\$5,780,000	\$4,061,510	\$0	\$0
TOTAL PLAN	102	0	1	\$6,922,500	\$4,774,947	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

Table 4.16 in Section 5: *Capability Assessment* lists the number of insured losses and total claims payments for historical flood damages in each jurisdiction as recorded under the NFIP. **Table 4.16** below provides the NFIP entry date for each participating jurisdiction. As explained in subsection 4.3, the NFIP entry date for each jurisdiction was used to determine buildings that were built pre - FIRM and are therefore assumed to be at greater risk to the flood hazard.

Table 4.16: NFIP Entry Dates

Jurisdiction	NFIP Entry Date
Alexander County (Unincorporated Area)	02/01/91
Town of Taylorsville	12/18/07
Burke County (Unincorporated Area)	06/17/91
City of Morganton	02/19/87
Town of Connelly Springs	06/17/91
Town of Drexel	08/19/86
Town of Glen Alpine	06/17/91
Town of Hildebran	09/05/07
Town of Rutherford College	06/17/91
Town of Valdese	07/03/86
Caldwell County (Unincorporated Area)	08/16/88
City of Lenoir	08/16/88
Town of Cahah's Mountain	08/16/88
Town of Gamewell	08/16/88
Town of Granite Falls	08/16/88
Town of Hudson	08/16/88
Town of Rhodhiss	07/03/86
Town of Sawmills	08/16/88
Village of Cedar Rock	08/16/88
Catawba County (Unincorporated Area)	09/03/80
City of Claremont	09/05/07

Jurisdiction	NFIP Entry Date
City of Conover	09/03/80
City of Hickory	08/03/81
City of Newton	09/03/80
Town of Brookford	12/18/79
Town of Catawba	09/03/80
Town of Long View	09/03/80
Town of Maiden	09/03/80

Source: Federal Emergency Management Agency Community Status Book Report: Communities Participating in the National Flood Program, August 2018

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future River Flooding is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low - Less Than 1% Annual Probability
- Medium - Between 1% And 10% Annual Probability
- High - More Than 10% Annual Probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Medium
City of Hickory	Low
City of Lenoir	Medium
City of Morganton	Low

Jurisdiction	IRISK Probability of Future Occurrence
City of Newton	Medium
Town of Brookford	Medium
Town of Cahah's Mountain	Medium
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Medium
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Medium
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Medium
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Medium

River Flooding Hazard Vulnerability

In order to quantify potential future flood hazard vulnerability, a similar detailed GIS analysis of the study area as completed for current flood vulnerability (described above) was performed using best available GIS data including the future Community 100-year Floodplain to identify the number and value of existing structures that may be located in future flood hazards areas as expanded due to anticipated “build-out” conditions (i.e., fully developed according to zoning and future land use projections). In order to quantify potentially at-risk properties, all buildings of at least 600 square feet (eliminating those that are likely accessory structures versus habitable buildings) that intersected with delineated future floodplain areas were identified. The exposure analysis does not include any estimates for new structures that will be constructed and located in the floodplain, as it is assumed that new construction will be protected against the 100-year flood according to local development regulations that include reference to future Community 100-year Floodplain maps.

The following tables provide counts and values by jurisdiction relevant to River Flooding hazard vulnerability in the Unifour Regional HMP Area.

Table 4.17: Population Impacted by the 100-Year River Flooding

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	83	0.3%	4,995	13	0.3%	1,961	5	0.3%
Town of Taylorsville	4,180	9	0.2%	632	1	0.2%	248	1	0.4%
Subtotal Alexander	37,196	92	0.2%	5627	14	0.2%	2209	6	0.3%
Burke									
Burke County (Unincorporated Area)	49,470	443	0.9%	7,997	72	0.9%	2,762	25	0.9%
City of Hickory	456	175	38.4%	74	25	33.8%	25	11	44%
City of Morganton	22,546	106	0.5%	3,645	17	0.5%	1,259	6	0.5%
Town of Connelly Springs	1,659	4	0.2%	268	1	0.4%	93	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Drexel	5,506	45	0.8%	890	7	0.8%	307	2	0.7%
Town of Glen Alpine	1,964	6	0.3%	318	1	0.3%	110	0	0%
Town of Hildebran	1,945	0	0%	314	0	0%	109	0	0%
Town of Long View	698	24	3.4%	113	4	3.5%	39	2	5.1%
Town of Rhodhiss	640	20	3.1%	103	3	2.9%	36	1	2.8%
Town of Rutherford College	1,502	4	0.3%	243	1	0.4%	84	0	0%
Town of Valdese	4,387	16	0.4%	709	3	0.4%	245	1	0.4%
Subtotal Burke	90,773	843	0.9%	14674	134	0.9%	5069	48	0.9%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	661	1.9%	5,352	102	1.9%	1,940	37	1.9%
City of Hickory	51	175	343.1%	8	25	312.5%	3	11	366.7%
City of Lenoir	20,837	375	1.8%	3,216	58	1.8%	1,166	21	1.8%
Town of Blowing Rock	51	5	9.8%	8	1	12.5%	3	0	0%
Town of Cahah's Mountain	2,789	0	0%	430	0	0%	156	0	0%
Town of Gamewell	4,043	31	0.8%	624	5	0.8%	226	2	0.9%
Town of Granite Falls	7,104	7	0.1%	1,096	1	0.1%	397	0	0%
Town of Hudson	6,431	29	0.5%	992	5	0.5%	360	2	0.6%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Rhodhiss	385	20	5.2%	59	3	5.1%	22	1	4.5%
Town of Sawmills	6,380	19	0.3%	985	3	0.3%	357	1	0.3%
Village of Cedar Rock	294	0	0%	45	0	0%	16	0	0%
Subtotal Caldwell	83,045	1,322	1.6%	12815	203	1.6%	4646	75	1.6%
Catawba									
Catawba County (Unincorporated Area)	70,017	384	0.5%	9,835	54	0.5%	4,368	24	0.5%
City of Claremont	1,957	4	0.2%	275	0	0%	122	0	0%
City of Conover	9,669	80	0.8%	1,358	11	0.8%	603	5	0.8%
City of Hickory	48,481	175	0.4%	6,810	25	0.4%	3,024	11	0.4%
City of Newton	14,214	97	0.7%	1,997	14	0.7%	887	6	0.7%
Town of Brookford	371	3	0.8%	52	0	0%	23	0	0%
Town of Catawba	1,152	4	0.3%	162	1	0.6%	72	0	0%
Town of Long View	4,181	24	0.6%	587	4	0.7%	261	2	0.8%
Town of Maiden	4,964	20	0.4%	697	3	0.4%	310	1	0.3%
Subtotal Catawba	155,006	791	0.5%	21773	112	0.5%	9670	49	0.5%
TOTAL PLAN	366,020	3,048	0.8%	54889	463	0.8%	21594	178	0.8%

Source: GIS Analysis

Table 4.18: Buildings Impacted by the 100-Year River Flooding

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	61	0.2%	57	0.2%	\$212,436	4	0%	\$92,723	0	0%	\$0	61	0.2%	\$305,160
Town of Taylorsville	2,823	5	0.2%	5	0.2%	\$4,308	0	0%	\$0	0	0%	\$0	5	0.2%	\$4,308
Subtotal Alexander	27,486	66	0.2%	62	0.2%	\$216,744	4	0%	\$92,723	0	0%	\$0	66	0.2%	\$309,468
Burke															
Burke County (Unincorporated Area)	28,091	196	0.7%	239	0.9%	\$2,026,766	26	0.1%	\$2,517,113	1	0%	\$59,511	266	0.9%	\$4,603,390
City of Morganton	10,727	38	0.4%	43	0.4%	\$1,080,180	16	0.1%	\$650,170	1	0%	\$371,477	60	0.6%	\$2,101,827
Town of Connelly Springs	889	5	0.6%	2	0.2%	\$1,464	3	0.3%	\$18,539	0	0%	\$0	5	0.6%	\$20,003
Town of Drexel	2,949	23	0.8%	23	0.8%	\$166,892	1	0%	\$38,010	0	0%	\$0	24	0.8%	\$204,902
Town of Glen Alpine	1,086	2	0.2%	3	0.3%	\$2,859	0	0%	\$0	0	0%	\$0	3	0.3%	\$2,859
Town of Hildebran	1,069	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rutherford College	827	2	0.2%	2	0.2%	\$1,251	0	0%	\$0	0	0%	\$0	2	0.2%	\$1,251
Town of Valdese	2,132	11	0.5%	7	0.3%	\$318,119	2	0.1%	\$519,534	1	0%	\$264,166	10	0.5%	\$1,101,819
Subtotal Burke	47,770	277	0.6%	319	0.7%	\$3,597,531	48	0.1%	\$3,743,366	3	0%	\$695,154	370	0.8%	\$8,036,051
Caldwell															
Caldwell County (Unincorporated Area)	20,773	390	1.9%	376	1.8%	\$3,061,171	12	0.1%	\$1,276,729	2	0%	\$57,988	390	1.9%	\$4,395,888

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	248	2.4%	166	1.6%	\$2,743,394	82	0.8%	\$9,919,722	0	0%	\$0	248	2.4%	\$12,663,117
Town of Cahah's Mountain	1,350	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Gamewell	2,062	16	0.8%	15	0.7%	\$68,658	1	0%	\$132,859	0	0%	\$0	16	0.8%	\$201,517
Town of Granite Falls	3,394	3	0.1%	3	0.1%	\$40,781	0	0%	\$0	0	0%	\$0	3	0.1%	\$40,781
Town of Hudson	3,116	15	0.5%	13	0.4%	\$71,111	0	0%	\$0	2	0.1%	\$273,450	15	0.5%	\$344,561
Town of Rhodhiss	490	4	0.8%	9	1.8%	\$123,250	0	0%	\$0	0	0%	\$0	9	1.8%	\$123,250
Town of Sawmills	3,234	9	0.3%	9	0.3%	\$45,442	0	0%	\$0	0	0%	\$0	9	0.3%	\$45,442
Village of Cedar Rock	135	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Caldwell	44,870	685	1.5%	591	1.3%	\$6,153,807	95	0.2%	\$11,329,310	4	0%	\$331,438	690	1.5%	\$17,814,556
Catawba															
Catawba County (Unincorporated Area)	50,060	143	0.3%	258	0.5%	\$2,007,384	14	0%	\$1,085,327	1	0%	\$135,905	273	0.5%	\$3,228,616
City of Claremont	1,351	2	0.1%	2	0.1%	\$9,253	0	0%	\$0	0	0%	\$0	2	0.1%	\$9,253
City of Conover	5,089	22	0.4%	34	0.7%	\$101,432	2	0%	\$187,151	0	0%	\$0	36	0.7%	\$288,583
City of Hickory	22,507	70	0.3%	68	0.3%	\$378,327	18	0.1%	\$702,002	0	0%	\$0	86	0.4%	\$1,080,330
City of Newton	7,657	37	0.5%	46	0.6%	\$257,651	3	0%	\$115,274	0	0%	\$0	49	0.6%	\$372,925
Town of Brookford	304	3	1%	2	0.7%	\$15,591	1	0.3%	\$29,857	0	0%	\$0	3	1%	\$45,448

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Catawba	1,016	2	0.2%	3	0.3%	\$19,833	1	0.1%	\$862	0	0%	\$0	4	0.4%	\$20,695
Town of Long View	2,716	12	0.4%	12	0.4%	\$39,566	1	0%	\$43,001	1	0%	\$221,830	14	0.5%	\$304,396
Town of Maiden	3,230	13	0.4%	11	0.3%	\$15,665	5	0.2%	\$263,943	0	0%	\$0	16	0.5%	\$279,608
Subtotal Catawba	93,930	304	0.3%	436	0.5%	\$2,844,702	45	0%	\$2,427,417	2	0%	\$357,735	483	0.5%	\$5,629,854
TOTAL PLAN	214,056	1,332	0.6%	1,408	0.7%	\$12,812,784	192	0.1%	\$17,592,816	9	0%	\$1,384,327	1,609	0.8%	\$31,789,929

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.19: Critical Facilities Exposed to the River Flooding - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	3	\$41,139
Transportation Systems	100 Year	1	\$51,584
All Categories	100 Year	4	\$92,723

Source: GIS Analysis

Table 4.20: Critical Facilities Exposed to the River Flooding - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	25	\$1,967,011
Critical Manufacturing	100 Year	2	\$609,612
All Categories	100 Year	27	\$2,576,623

Source: GIS Analysis

Table 4.21: Critical Facilities Exposed to the River Flooding - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	12	\$410,434
Critical Manufacturing	100 Year	4	\$239,736
All Categories	100 Year	16	\$650,170

Source: GIS Analysis

Table 4.22: Critical Facilities Exposed to the River Flooding - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	3	\$18,539
All Categories	100 Year	3	\$18,539

Source: GIS Analysis

Table 4.23: Critical Facilities Exposed to the River Flooding - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	100 Year	1	\$38,010
All Categories	100 Year	1	\$38,010

Source: GIS Analysis

Table 4.24: Critical Facilities Exposed to the River Flooding - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1	\$264,166
Critical Manufacturing	100 Year	2	\$519,534
Energy	100 Year	1	\$21,600
All Categories	100 Year	4	\$805,300

Source: GIS Analysis

Table 4.25: Critical Facilities Exposed to the River Flooding - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	11	\$156,262
Critical Manufacturing	100 Year	3	\$1,178,456
All Categories	100 Year	14	\$1,334,718

Source: GIS Analysis

Table 4.26: Critical Facilities Exposed to the River Flooding - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	100 Year	1	\$17,140
Commercial Facilities	100 Year	74	\$3,049,539
Critical Manufacturing	100 Year	5	\$6,465,356
Healthcare and Public Health	100 Year	1	\$55,105
Transportation Systems	100 Year	1	\$332,582
All Categories	100 Year	82	\$9,919,722

Source: GIS Analysis

Table 4.27: Critical Facilities Exposed to the River Flooding - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1	\$132,859
All Categories	100 Year	1	\$132,859

Source: GIS Analysis

Table 4.28: Critical Facilities Exposed to the River Flooding - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1	\$64,333
Government Facilities	100 Year	1	\$209,117
All Categories	100 Year	2	\$273,450

Source: GIS Analysis

Table 4.29: Critical Facilities Exposed to the River Flooding - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	6	\$934,293
Critical Manufacturing	100 Year	7	\$239,076
Energy	100 Year	1	\$30,000,000
Transportation Systems	100 Year	2	\$47,864
All Categories	100 Year	16	\$31,221,233

Source: GIS Analysis

Table 4.30: Critical Facilities Exposed to the River Flooding - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	100 Year	2	\$187,151
All Categories	100 Year	2	\$187,151

Source: GIS Analysis

Table 4.31: Critical Facilities Exposed to the River Flooding - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	15	\$602,886
Critical Manufacturing	100 Year	3	\$99,117
All Categories	100 Year	18	\$702,003

Source: GIS Analysis

Table 4.32: Critical Facilities Exposed to the River Flooding - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	2	\$83,107
Critical Manufacturing	100 Year	1	\$32,167
All Categories	100 Year	3	\$115,274

Source: GIS Analysis

Table 4.33: Critical Facilities Exposed to the River Flooding - Town of Brookford

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1	\$29,857
All Categories	100 Year	1	\$29,857

Source: GIS Analysis

Table 4.34: Critical Facilities Exposed to the River Flooding - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	100 Year	1	\$862
All Categories	100 Year	1	\$862

Source: GIS Analysis

Table 4.35: Critical Facilities Exposed to the River Flooding - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	2	\$264,831
All Categories	100 Year	2	\$264,831

Source: GIS Analysis

Table 4.36: Critical Facilities Exposed to the River Flooding - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	3	\$183,769
Critical Manufacturing	100 Year	2	\$80,173
All Categories	100 Year	5	\$263,942

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, **Table 4.37** is sorted by sector and then by event.

Table 4.37: Critical Facilities Exposed to the River Flooding (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	100 Year	72	\$5,575,896
Chemical	100 Year	2	\$150,028,735
Commercial Facilities	100 Year	6,569	\$514,078,196
Communications	100 Year	8	\$333,477
Critical Manufacturing	100 Year	753	\$78,314,587
Defense Industrial Base	100 Year	4	\$623,176
Emergency Services	100 Year	47	\$1,873,838
Energy	100 Year	72	\$330,418,199
Food and Agriculture	100 Year	1,302	\$10,064,054
Government Facilities	100 Year	488	\$34,734,237
Healthcare and Public Health	100 Year	149	\$10,363,492
Nuclear Reactors, Materials and Waste	100 Year	1	\$60,907
Transportation Systems	100 Year	463	\$48,611,349
Water	100 Year	81	\$721,585,207
All Categories	100 Year	10,011	\$1,906,665,350

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.38: High Potential Loss Properties Exposed to the River Flooding - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	100 Year	1	\$1,280,423
Industrial	100 Year	1	\$570,744
All Categories	100 Year	2	\$1,851,167

Source: GIS Analysis

Table 4.39: High Potential Loss Properties Exposed to the River Flooding - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	100 Year	2	\$215,197
Industrial	100 Year	1	\$29,340
Residential	100 Year	1	\$722,719
All Categories	100 Year	4	\$967,256

Source: GIS Analysis

Table 4.40: High Potential Loss Properties Exposed to the River Flooding - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	100 Year	1	\$648,789
Utilities	100 Year	1	\$30,000,000
All Categories	100 Year	2	\$30,648,789

Source: GIS Analysis

Table 4.49 provides a summary count by jurisdiction of Repetitive Loss (RL) properties identified by FEMA through the NFIP.

Table 4.41: Numbers of Repetitive Loss (RL) Properties by Jurisdiction

Jurisdiction	Total Number of Properties	Total Number of Losses	Total Amount of Claims Payments
Alexander			
Alexander County (Unincorporated Area)	0	0	0
Town of Taylorsville	0	0	0
Subtotal Alexander	0	0	0
Burke			
Burke County (Unincorporated Area)	0	0	0
City of Morganton	0	0	0
Town of Connelly Springs	0	0	0
Town of Drexel	0	0	0
Town of Glen Alpine	0	0	0
Town of Hildebran	0	0	0
Town of Rutherford College	0	0	0
Town of Valdese	0	0	0
Subtotal Burke	0	0	0
Caldwell			
Caldwell County (Unincorporated Area)	1	3	\$60,721
City of Lenoir	0	0	0
Town of Cahaj's Mountain	0	0	0
Town of Gamewell	0	0	0
Town of Granite Falls	0	0	0
Town of Hudson	0	0	0
Town of Rhodhiss	0	0	0
Town of Sawmills	0	0	0
Village of Cedar Rock	0	0	0
Subtotal Caldwell	1	3	\$60,721
Catawba			

Jurisdiction	Total Number of Properties	Total Number of Losses	Total Amount of Claims Payments
Catawba County (Unincorporated Area)	5	11	\$126,858
City of Claremont	0	0	0
City of Conover	0	0	0
City of Hickory	0	0	0
City of Newton	0	0	0
Town of Brookford	0	0	0
Town of Catawba	0	0	0
Town of Long View	0	0	0
Town of Maiden	0	0	0
Subtotal Catawba	5	11	\$126,858
PLAN TOTAL	6	14	\$187,579

Source: North Carolina Emergency Management and or potential user entered data.

4.5.2 Levee Failure

Levee failure is the collapse, breach, or other failure of a levee structure or system resulting in flooding. Levee failure can result from natural events, human-induced events, or a combination of the two. The most common cause of levee failure is prolonged rainfall that produces flooding. Failures due to other natural events such as hurricanes, earthquakes, or landslides are significant because there is generally little or no advance warning.

Location within the Planning Area

There are numerous levees and floodwalls within the planning area. When hurricanes and tropical storms occur, these areas are susceptible to some degree of flooding. There have been a number of past flooding events throughout the planning area, ranging widely in terms of location, magnitude, and impact. Levees are not currently mapped in this area; will update mitigation strategy and actions to include levee locations and mapping in future plan updates.

Extent (Magnitude and Severity)

Hazard Classification	Description	Quantitative Guidelines
Low	1) Interruption of road service, low volume roads 2) Economic damage	1) Less than 25 vehicles per day 2) Less than \$30,000
Intermediate	1) Damage to highways, interruption of service 2) Economic damage	1) 25 to less than 250 vehicles per day 2) \$30,000 to less than \$200,000
High	1) Probable loss of human life due to breached roadway or bridge on or below the dam 2) Economic damage	1) Probable loss of 1 or more human lives 2) More than \$200,000

Historical Occurrences

There are no records of historical levee failure occurrences in or affecting the planning area.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Levee Failure is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low - Less Than 1% Annual Probability
- Medium - Between 1% And 10% Annual Probability
- High - More Than 10% Annual Probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low

Jurisdiction	IRISK Probability of Future Occurrence
City of Newton	Low
Town of Brookford	Low
Town of Cahah's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Levee Failure Hazard Vulnerability

The effects of a levee failure are exacerbated when the failure occurs abruptly or with little warning and if it results in deep, fast-moving water through highly developed areas. The worst-case scenario for a levee failure in Unifour Region would be the complete failure of the levee systems. If this occurred during a flood with a 1 percent annual chance of occurrence, the failure would lead to effects consistent with those described in Section 4.5.1 (Riverine Flooding) There is a fundamental limitation in the data available for vulnerability assessment for the levee failure hazard in the planning area. Any mitigation actions developed for this hazard therefore should be based on addressing data limitations, education and awareness programs, and/or any jurisdiction-specific concerns that may be addressable through an appropriate mitigation project.

The following tables provide counts and values by jurisdiction relevant to Levee Failure hazard vulnerability in the Unifour Regional HMP Area.

Table 4.42: Population Impacted by the 100 Year Levee Failure

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	0	0%	4,995	0	0%	1,961	0	0%
Town of Taylorsville	4,180	0	0%	632	0	0%	248	0	0%
Subtotal Alexander	37,196	0	0%	5627	0	0%	2209	0	0%
Burke									
Burke County (Unincorporated Area)	49,470	0	0%	7,997	0	0%	2,762	0	0%
City of Hickory	456	0	0%	74	0	0%	25	0	0%
City of Morganton	22,546	0	0%	3,645	0	0%	1,259	0	0%
Town of Connelly Springs	1,659	0	0%	268	0	0%	93	0	0%
Town of Drexel	5,506	0	0%	890	0	0%	307	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Glen Alpine	1,964	0	0%	318	0	0%	110	0	0%
Town of Hildebran	1,945	0	0%	314	0	0%	109	0	0%
Town of Long View	698	0	0%	113	0	0%	39	0	0%
Town of Rhodhiss	640	0	0%	103	0	0%	36	0	0%
Town of Rutherford College	1,502	0	0%	243	0	0%	84	0	0%
Town of Valdese	4,387	0	0%	709	0	0%	245	0	0%
Subtotal Burke	90,773	0	0%	14674	0	0%	5069	0	0%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	0	0%	5,352	0	0%	1,940	0	0%
City of Hickory	51	0	0%	8	0	0%	3	0	0%
City of Lenoir	20,837	0	0%	3,216	0	0%	1,166	0	0%
Town of Blowing Rock	51	0	0%	8	0	0%	3	0	0%
Town of Cahah's Mountain	2,789	0	0%	430	0	0%	156	0	0%
Town of Gamewell	4,043	0	0%	624	0	0%	226	0	0%
Town of Granite Falls	7,104	0	0%	1,096	0	0%	397	0	0%
Town of Hudson	6,431	0	0%	992	0	0%	360	0	0%
Town of Rhodhiss	385	0	0%	59	0	0%	22	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Sawmills	6,380	0	0%	985	0	0%	357	0	0%
Village of Cedar Rock	294	0	0%	45	0	0%	16	0	0%
Subtotal Caldwell	83,045	0	0%	12815	0	0%	4646	0	0%
Catawba									
Catawba County (Unincorporated Area)	70,017	0	0%	9,835	0	0%	4,368	0	0%
City of Claremont	1,957	0	0%	275	0	0%	122	0	0%
City of Conover	9,669	0	0%	1,358	0	0%	603	0	0%
City of Hickory	48,481	0	0%	6,810	0	0%	3,024	0	0%
City of Newton	14,214	0	0%	1,997	0	0%	887	0	0%
Town of Brookford	371	0	0%	52	0	0%	23	0	0%
Town of Catawba	1,152	0	0%	162	0	0%	72	0	0%
Town of Long View	4,181	0	0%	587	0	0%	261	0	0%
Town of Maiden	4,964	0	0%	697	0	0%	310	0	0%
Subtotal Catawba	155,006	0	0%	21773	0	0%	9670	0	0%
TOTAL PLAN	366,020	0	0%	54889	0	0%	21594	0	0%

Source: GIS Analysis

Table 4.43: Buildings Impacted by the 100 Year Levee Failure

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk			
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	
Alexander																
Alexander County (Unincorporated Area)	24,663	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Taylorsville	2,823	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Subtotal Alexander	27,486	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Burke																
Burke County (Unincorporated Area)	28,091	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
City of Morganton	10,727	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Connelly Springs	889	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Drexel	2,949	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Glen Alpine	1,086	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Hildebran	1,069	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Rutherford College	827	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Valdese	2,132	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Subtotal Burke	47,770	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Caldwell																
Caldwell County (Unincorporated Area)	20,773	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Cahah's Mountain	1,350	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Gamewell	2,062	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Granite Falls	3,394	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hudson	3,116	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rhodhiss	490	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Sawmills	3,234	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Village of Cedar Rock	135	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Caldwell	44,870	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Catawba															
Catawba County (Unincorporated Area)	50,060	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Claremont	1,351	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Conover	5,089	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Hickory	22,507	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Newton	7,657	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Brookford	304	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Catawba	1,016	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Long View	2,716	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Maiden	3,230	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Catawba	93,930	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
TOTAL PLAN	214,056	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Source: GIS Analysis

4.5.3 Wildfire

A wildfire is any fire occurring in a wildland area (i.e., grassland, forest, brush land) except for fire under prescription. Wildfires are part of the natural management of the Earth's ecosystems, but may also be caused by natural or human factors. Over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning.

There are three classes of wildland fires: surface fire, ground fire, and crown fire. A surface fire is the most common of these three classes and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildland fires are usually signaled by dense smoke that fills the area for miles around.

State and local governments can impose fire safety regulations on home sites and developments to help curb wildfire. Land treatment measures such as fire access roads, water storage, helipads, safety zones, buffers, firebreaks, fuel breaks, and fuel management can be designed as part of an overall fire defense system to aid in fire control. Fuel management, prescribed burning, and cooperative land management planning can also be encouraged to reduce fire hazards.

Fire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural disasters (hurricanes, tornadoes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings. Forest damage from hurricanes and tornadoes may block interior access roads and fire breaks, pull down overhead power lines, or damage pavement and underground utilities.

Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high fire hazard areas. The increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods.

Unfortunately, wildland residents and visitors are rarely educated or prepared for the inferno that can sweep through the brush and timber and destroy property in minutes.

Wildfire Hazard Analysis

Methodologies and Assumptions

The following list provides key points by hazard type that are relevant to understanding the risk assessment presented in this section:

- Wildfire hazard areas were determined using the Wildland Fire Susceptibility Index (WFSI). These include: 1) Areas with a WFSI value of 0.01 – 0.05 were considered to be at moderate risk. 2) Areas with a WFSI value greater than 0.05 were considered to be at high risk. 3) Areas with a WFSI value less than 0.01 were considered to not be at risk.

- The WFSI data used for the wildfire risk analysis is a value between 0 and 1. It was developed consistent with the mathematical calculation process for determining the probability of an acre burning. The WFSI integrates the probability of an acre igniting and the expected final fire size based on the rate of spread in four weather percentile categories into a single measure of wildland fire susceptibility. Due to some necessary assumptions, mainly fuel homogeneity, it is not the true probability. But since all areas of the state have this value determined consistently, it allows for comparison and ordination of areas of the state as to the likelihood of an acre burning.
- Building footprints were received from all four participating counties. To refine the results, footprints with an area less than 500 square feet were excluded from the analysis. To determine if a building is in a hazard area, the building footprints were intersected with each of the hazard areas. If a building intersects two or more hazard areas, it is considered to be in the hazard area of highest risk.
- Parcels were received from all four participating counties. This data provided building value and year built. Building value was used to determine the value of buildings at risk.
- Census blocks and Summary File 1 from the 2010 Census were used to determine population at risk. This included the total population, as well as the vulnerable elderly and children age groups. To determine population at risk, the census blocks were intersected with the hazard area. To better determine the actual number of people at risk, the intersecting area of the census block was calculated and divided by the total area of the census block to determine a ratio of area at risk. This ratio was applied to the population of the census block. For example, a census block has a population of 400 people. Five percent of the census block intersects a high wildfire hazard area. The ratio estimates that 20 people are at risk within that hazard area (5% of the total population for that census block).
- There can be multiple buildings on one parcel. However, the parcel only provides one value for building value and year built, and it is not known from the provided data if the building value is cumulative or for the primary structure on the parcel. For the analysis, building value was only counted once per parcel, regardless of the number of structures. This was done to prevent grossly over-estimating the value of buildings at risk. For example, a parcel has three buildings with a value of \$300,000. If two of those buildings intersect the high-risk area, the assumed building value at risk is \$300,000 not \$600,000. Even though only two out of three buildings are at risk, there is no way to determine the individual value of each building, so the building value for the whole parcel is counted. The value at risk is also the value of the entire building, and does not take into account the value of contents.

Location within the Planning Area

In an effort to identify specific potential wildfire hazard areas within the planning area, a GIS-based data layer called the Wildland Fire Susceptibility Index (WFSI) was obtained from the North Carolina Division of Forest Resources (NCDFR). The WFSI is a component layer derived from the Southern Wildfire Risk Assessment (SWRA), a multi-year project to assess and quantify wildfire risk for the 13 Southern states. The WFSI is a value between 0 and 1. It was developed consistent with the mathematical calculation process for determining the probability of an acre burning. The WFSI integrates the probability of an acre igniting and the expected final fire size based on the rate of spread in four weather percentile categories into a single measure of wildland fire susceptibility. Due to some necessary assumptions, mainly fuel homogeneity, it is not the true probability. But since all areas of the planning

area have this value determined consistently, it allows for comparison and ordination of areas as to the likelihood of an acre burning.

The below figures illustrate the level of wildfire potential for the planning area based on the WFSI data provided by NCDNR. Areas with a WFSI value of 0.01–0.05 were considered to be at moderate risk to the wildfire hazard. Areas with a WFSI value greater than 0.05 were considered to be at high risk to the wildfire hazard. Areas with a WFSI value less than 0.01 were considered to not be at risk to the wildfire hazard.

Figure 4.41: Wildfire Hazard Areas

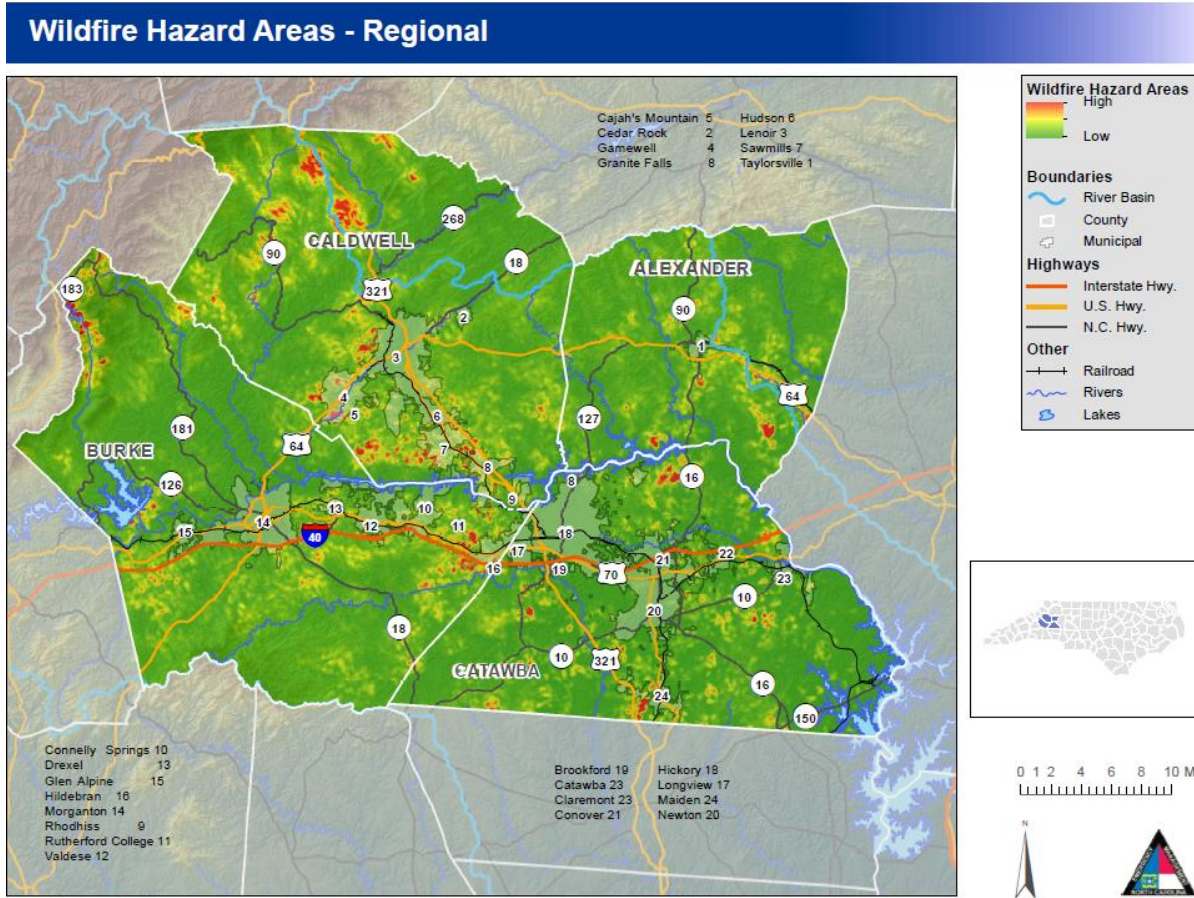


Figure 4.42: Wildfire Hazard Areas

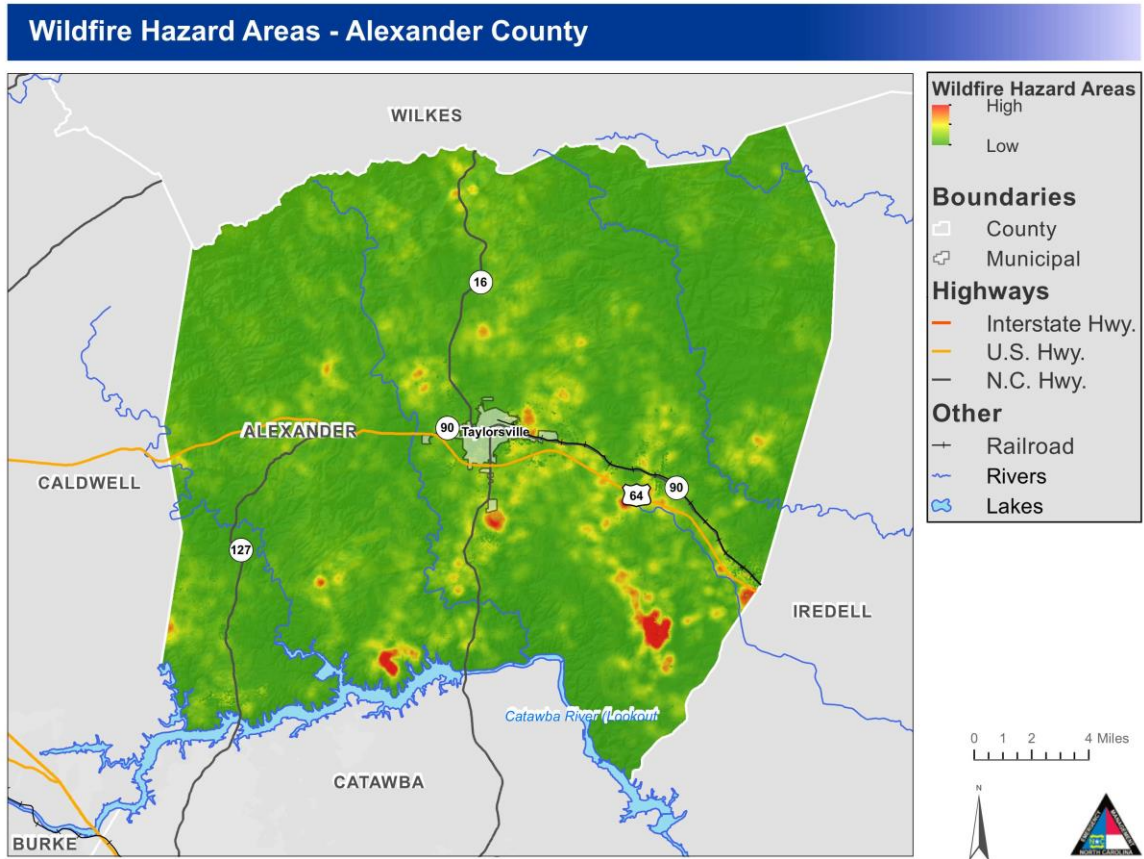


Figure 4.43: Wildfire Hazard Areas

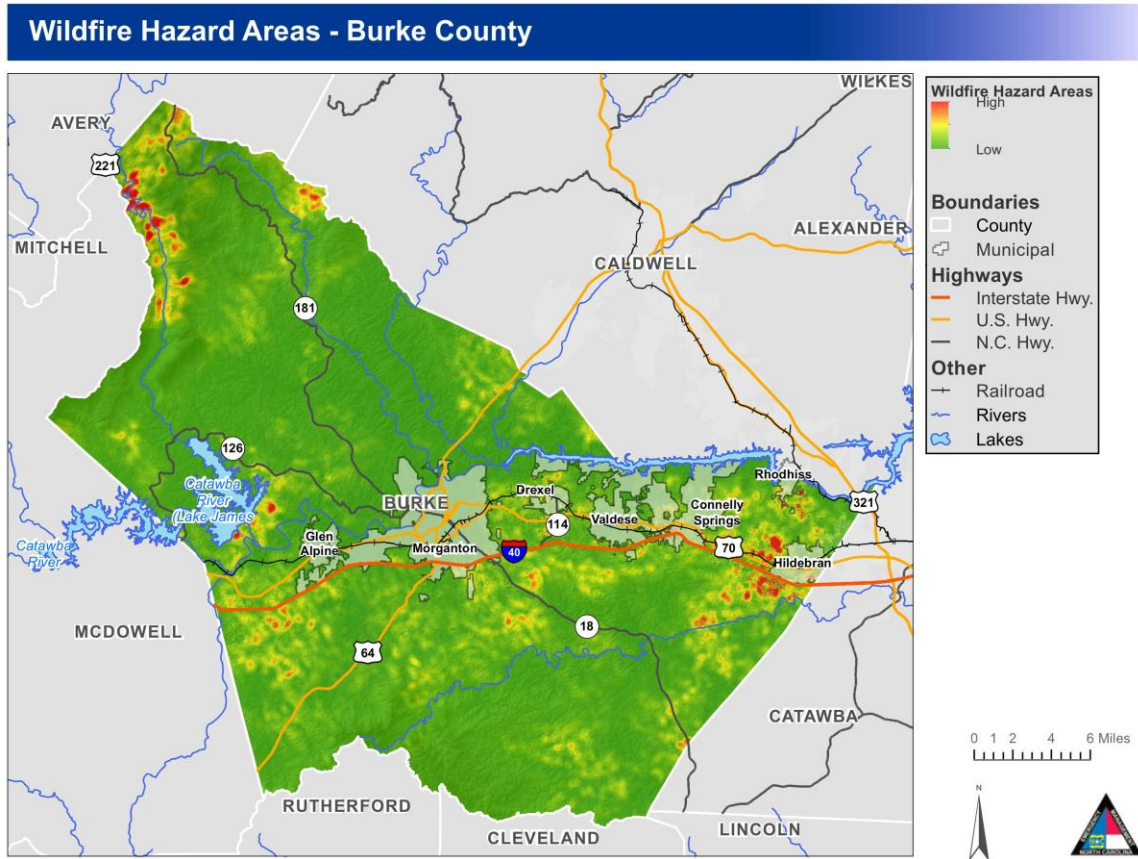


Figure 4.44: Wildfire Hazard Areas

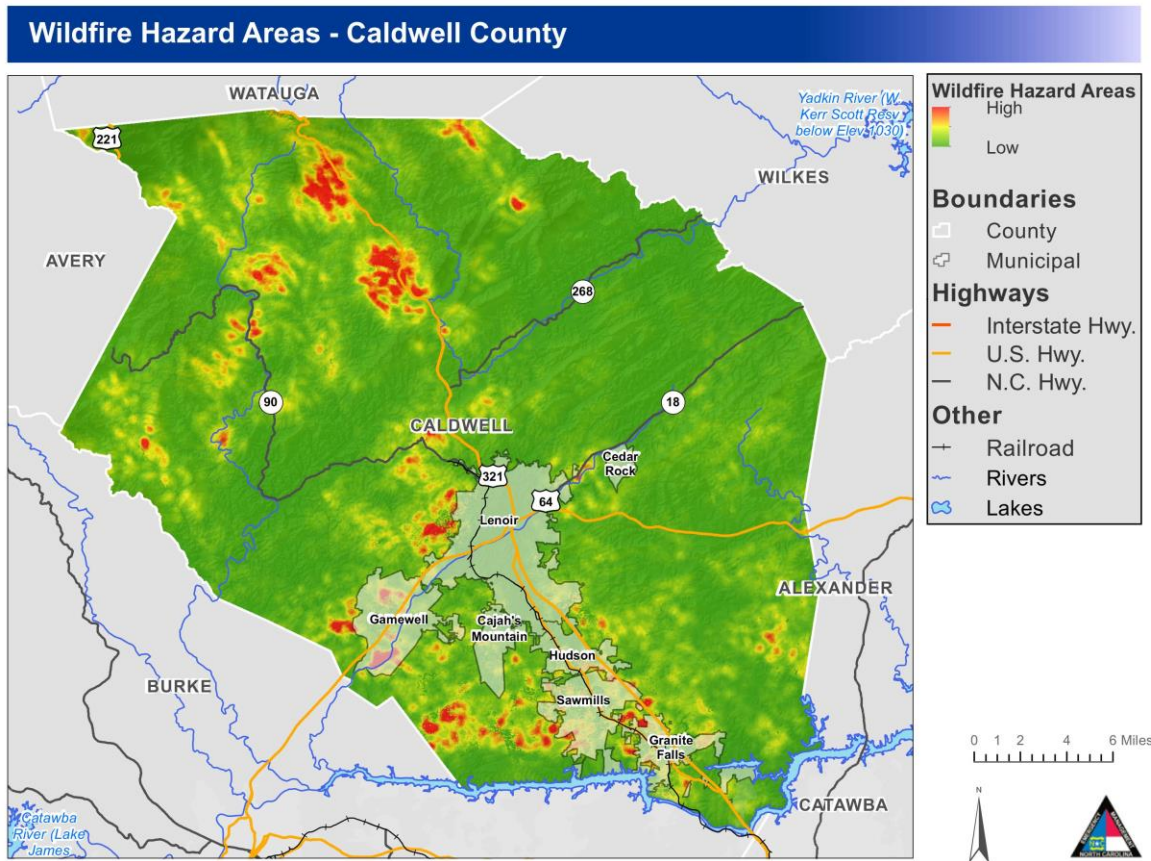
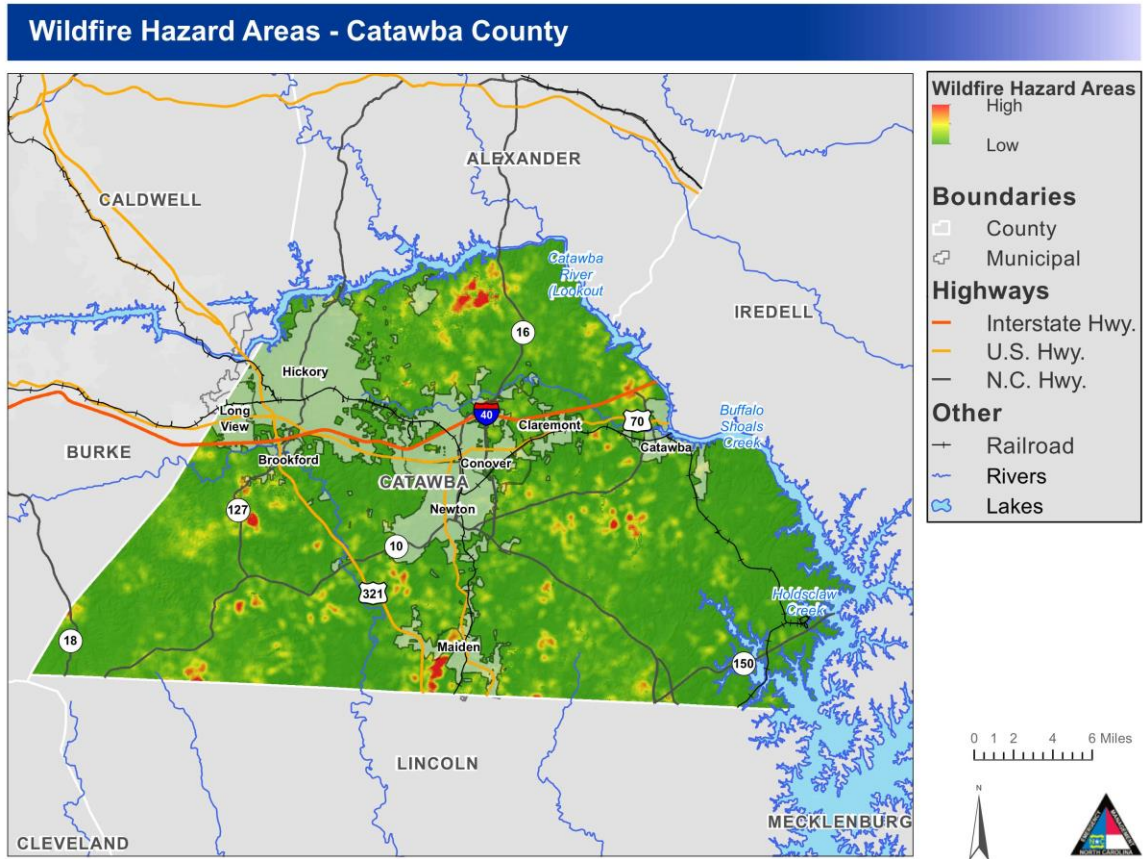


Figure 4.45: Wildfire Hazard Areas



Extent (Magnitude and Severity)

Definition:

The average size of wildfires in the Unifour Region is typically small.

Extent Event:

Wildfire data was provided by the North Carolina Division of Forest Resources and is reported annually by county

Historical Occurrences

According to statistics provided by NCDFR, the 5-year average number of fires for the Unifour area was 1,197. The 5-year average number of acres burned was 1,082.4. Based on these statistics, it can be estimated that the Unifour Region experiences an average of 239 wildfire events per year. The leading cause of fires in Alexander County is debris burning (49%). The leading cause in Burke County is “miscellaneous” (e.g., downed power lines, an electric fence, stove ashes, or structure fires) (27%). The leading cause in Caldwell County is miscellaneous as well (36%). The leading cause in Catawba County is debris burning (55%). Other causes of fires in the planning area include children and incendiary. There are no known records of any deaths, injuries, or significant property damage attributed to a wildfire event in the planning area. The table below shows a breakdown of averages by participating county area.

County	5-Year Average Number of Fires	5-Year Average Number of Acres Burned
Alexander	163	133.5
Burke	286	221.2
Caldwell	472	614.8
Catawba	276	112.9
TOTAL UNIFOUR	1,197	1,082.4

Source: North Carolina Division of Forest Resources.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Wildfire is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low - Less Than 1% Annual Probability
- Medium - Between 1% And 10% Annual Probability
- High - More Than 10% Annual Probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cahah's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Low
Town of Granite Falls	Medium
Town of Hildebran	Medium
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Medium
Town of Rhodhiss	Low
Town of Rutherford College	Medium
Town of Sawmills	Low

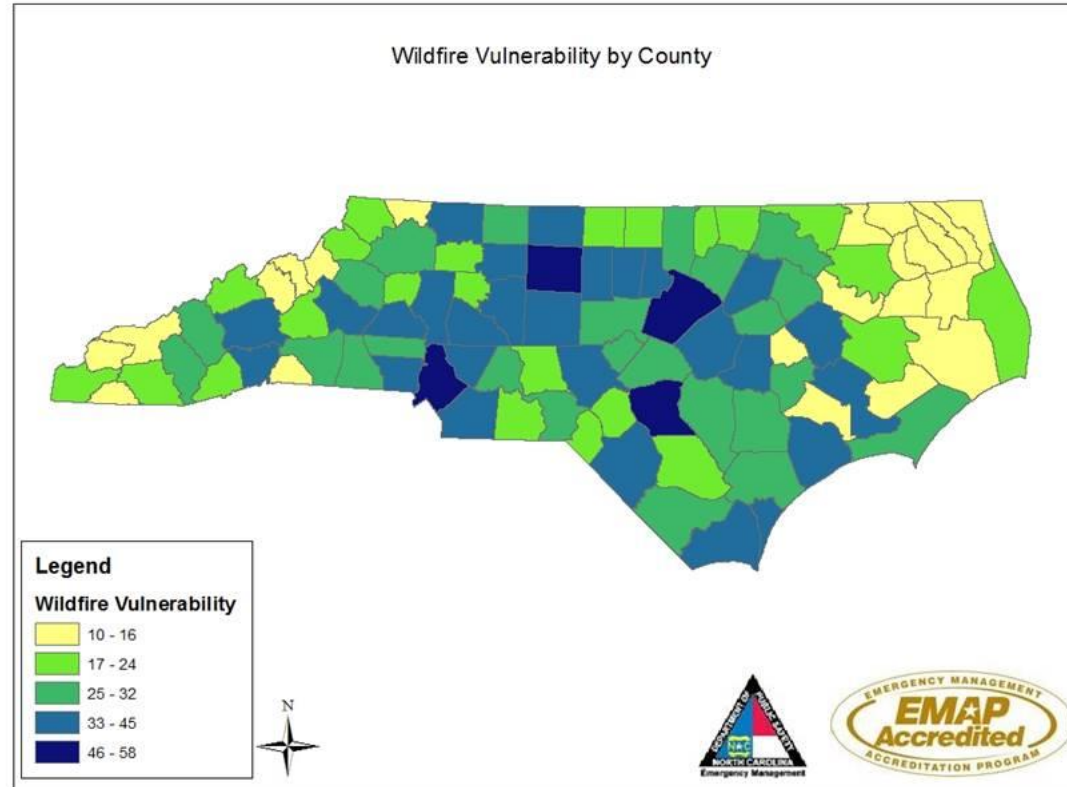
Jurisdiction	IRISK Probability of Future Occurrence
Town of Taylorsville	Medium
Town of Valdese	Low
Village of Cedar Rock	Low

Wildfire Hazard Vulnerability

Wildfires can cause significant damage to property and threatens the lives of people who are unable to evacuate wildfire-prone areas. Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high wildfire hazard areas. Further, the increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods. Unfortunately, wildland residents and visitors are rarely educated or prepared for wildfire events that can sweep through the brush and timber and destroy property within minutes.

Wildfires can result in severe economic losses. Businesses that depend on timber, such as paper mills and lumber companies, experience losses that are often passed along to consumers through higher prices, and sometimes jobs are lost. The high cost of responding to and recovering from wildfires can deplete state resources and increase insurance rates. The economic impact of wildfires can also be felt in the tourism industry if roads and tourist attractions are closed due to health and safety concerns, such as reduced air quality by means of wildfire smoke and ash. The areas of the state with the largest wildfire hazard occurrence that are also within the most exposed regions. Many areas in the eastern and western part of the state have high risk for wildfire since there are large forested areas in these regions. However, some counties in the central part of the state also have higher risk. Still, a county's exposure score plays a major role and counties with high exposure and high wildfire risk score highest. **Figure 4.46** shows wildfire hazard vulnerability scores by county for the state of North Carolina.

Figure 4.46: Wildfire Vulnerability



Source: North Carolina State Hazard Mitigation Plan

A vulnerability score was determined for each of the hazard categories on a county by county basis by adding a county's score for a particular hazard risk category to its total exposure score as depicted in the table below. Each county was assigned a quantitative hazard risk score for each hazard category based on a 1-5 scale. This score was determined by using natural (Jenks) breaks in the overall data for the state. Therefore, the exposure score for each county is relative to each of the other counties in the state. Similarly, the exposure of each county was determined for each hazard by utilizing natural breaks and assigning a score based on a 1-10 scale. The scores for each exposure category were added together to give us a total exposure score. This total exposure score was then added to each respective risk score to produce a score for vulnerability based on each of the hazard risk categories.

The Wildland Urban Interface (WUI) Risk Index Layer is a rating of the potential impact of a wildfire on people and their homes. The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the Wildland Urban Interface and rural areas is key information for defining potential wildfire impacts to people and homes. The WUI Risk Index for Unifour is displayed in the table below, respectively. The WUI Risk Rating is derived using a Response Function modeling approach which involves assigning a net change in the value to a resource or asset based on susceptibility to fire at different intensity levels, such as flame length. The range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9 while areas with low housing density and low flame lengths are rated -1. To calculate the WUI Risk Rating, the WUI housing density data was combined with Flame Length data and response functions were defined to represent potential impacts. The response functions were defined by a team of experts based on values defined by the SWRA Update Project technical team. By combining flame length with the WUI housing density data, you can determine where the greatest potential impact to homes and people is likely to occur.

Table 4.44: Insert title

Jurisdiction	WUI Risk Index Assessment (-9 Major to -1 Minor)	Vulnerability (Wildfire Risk Low to High)
Alexander County	Minor to Major Impact; -1 to -8	Low to Moderate
Taylorsville	Moderate to Major Impact; -5 to -8	Low to Moderate
Burke County	Minor to Major Impact; -1 to -8	Low to Moderate
Connelly Springs	Minor to Moderate Impact; -2 to -5	Low to Moderate
Drexel	Moderate to Major Impact; -5 to -8	Very Low to Moderate
Glen Alpine	Minor to Major Impact; -1 to -8	Low to Moderate
Hildebran	Moderate Impact -5	Very Low to Low
Rhodhiss	Moderate to Major Impact; -5 to -8	Very Low to Moderate
Morganton	Moderate to Major Impact; -4 to -8	Very Low to Moderate
Rutherford College	Moderate to Major Impact -4 to -7	Very Low to Moderate

Jurisdiction	WUI Risk Index Assessment (-9 Major to -1 Minor)	Vulnerability (Wildfire Risk Low to High)
Valdese	Minor to Major Impact; -2 to -7	Very Low to Low
Caldwell County	Minor to Major Impact; -1 to -8	Low to Moderate
Cajah's Mountain	Moderate to Major Impact; -5 to -7	Very Low to Moderate
Cedar Rock	Minor to Moderate Impact; -1 to -5	Low
Gamewell	Moderate to Major Impact; -5 to -8	Low to High
Granite Falls	Moderate to Major Impact; -5 to -8	Low to Moderate
Hudson	Moderate to Major Impact; -5 to -8	Low to Moderate
Sawmills	Moderate to Major Impact; -5 to -7	Low to Moderate
Catawba County	Minor to Major Impact; -1 to -8	Low to High
Brookford	Moderate to Major Impact; -5 to -7	Low to Moderate
Catawba	Moderate to Major Impact; -5 to -8	Low to Moderate
Claremont	Moderate to Major Impact; -4 to -8	Low to Moderate
Conover	Moderate to Major Impact; -4 to -8	Low to Moderate
Hickory	Moderate to Major Impact; -5 to -8	Low to Moderate
Longview	Moderate to Major Impact; -5 to -7	Low to Moderate
Maiden	Moderate to Major Impact; -5 to -8	Low to Moderate
Newton	Moderate to Major Impact; -5 to -8	Low to Moderate

Source: North Carolina State Hazard Mitigation Plan

The following tables provide counts and values by jurisdiction relevant to Wildfire hazard vulnerability in the Unifour Regional HMP Area.

Table 4.45: Population Impacted by the Wildfire Hazard

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	18,307	55.4%	4,995	2,770	55.5%	1,961	1,087	55.4%
Town of Taylorsville	4,180	2,259	54%	632	342	54.1%	248	134	54%
Subtotal Alexander	37,196	20,566	55.3%	5627	3112	55.3%	2209	1221	55.3%
Burke									
Burke County (Unincorporated Area)	49,470	34,085	68.9%	7,997	5,510	68.9%	2,762	1,903	68.9%
City of Hickory	456	8,144	1786%	74	1,146	1548.6%	25	507	2028%
City of Morganton	22,546	5,450	24.2%	3,645	881	24.2%	1,259	304	24.1%
Town of Connelly Springs	1,659	1,435	86.5%	268	232	86.6%	93	80	86%
Town of Drexel	5,506	3,813	69.3%	890	616	69.2%	307	213	69.4%
Town of Glen Alpine	1,964	385	19.6%	318	62	19.5%	110	22	20%
Town of Hildebran	1,945	1,519	78.1%	314	245	78%	109	85	78%
Town of Long View	698	626	89.7%	113	90	79.6%	39	39	100%
Town of Rhodhiss	640	778	121.6%	103	123	119.4%	36	44	122.2%
Town of Rutherford College	1,502	955	63.6%	243	154	63.4%	84	53	63.1%
Town of Valdese	4,387	1,862	42.4%	709	301	42.5%	245	104	42.4%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Subtotal Burke	90,773	59,052	65.1%	14674	9360	63.8%	5069	3354	66.2%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	22,027	63.5%	5,352	3,399	63.5%	1,940	1,232	63.5%
City of Hickory	51	8,144	15968.6%	8	1,146	14325%	3	507	16900%
City of Lenoir	20,837	8,212	39.4%	3,216	1,267	39.4%	1,166	460	39.5%
Town of Blowing Rock	51	771	1511.8%	8	96	1200%	3	30	1000%
Town of Cahaj's Mountain	2,789	1,870	67%	430	288	67%	156	105	67.3%
Town of Gamewell	4,043	3,701	91.5%	624	571	91.5%	226	207	91.6%
Town of Granite Falls	7,104	5,978	84.1%	1,096	922	84.1%	397	334	84.1%
Town of Hudson	6,431	4,717	73.3%	992	728	73.4%	360	264	73.3%
Town of Rhodhiss	385	778	202.1%	59	123	208.5%	22	44	200%
Town of Sawmills	6,380	5,055	79.2%	985	780	79.2%	357	283	79.3%
Village of Cedar Rock	294	150	51%	45	23	51.1%	16	8	50%
Subtotal Caldwell	83,045	61,403	73.9%	12815	9343	72.9%	4646	3474	74.8%
Catawba									
Catawba County (Unincorporated Area)	70,017	34,492	49.3%	9,835	4,845	49.3%	4,368	2,152	49.3%
City of Claremont	1,957	410	21%	275	58	21.1%	122	26	21.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Conover	9,669	2,203	22.8%	1,358	309	22.8%	603	137	22.7%
City of Hickory	48,481	8,144	16.8%	6,810	1,146	16.8%	3,024	507	16.8%
City of Newton	14,214	2,409	16.9%	1,997	338	16.9%	887	150	16.9%
Town of Brookford	371	29	7.8%	52	4	7.7%	23	2	8.7%
Town of Catawba	1,152	518	45%	162	73	45.1%	72	32	44.4%
Town of Long View	4,181	626	15%	587	90	15.3%	261	39	14.9%
Town of Maiden	4,964	2,172	43.8%	697	305	43.8%	310	135	43.5%
Subtotal Catawba	155,006	51,003	32.9%	21773	7168	32.9%	9670	3180	32.9%
TOTAL PLAN	366,020	192,024	52.5%	54889	28983	52.8%	21594	11229	52%

Source: GIS Analysis

Table 4.46: Buildings Impacted by the Wildfire Hazard

Jurisdiction	All Buildings			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	13,748	55.7%	12,542	50.9%	\$1,375,376,302	1,079	4.4%	\$1,222,602,562	121	0.5%	\$247,849,496	13,742	55.7%	\$2,845,828,360
Town of Taylorsville	2,823	1,495	53%	1,316	46.6%	\$171,723,956	132	4.7%	\$166,581,545	45	1.6%	\$54,751,422	1,493	52.9%	\$393,056,923

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Subtotal Alexander	27,486	15,243	55.5%	13,858	50.4%	\$1,547,100,258	1,211	4.4%	\$1,389,184,107	166	0.6%	\$302,600,918	15,235	55.4%	\$3,238,885,283			
Burke																		
Burke County (Unincorporated Area)	28,091	14,657	52.2%	18,432	65.6%	\$2,216,890,544	734	2.6%	\$975,432,631	162	0.6%	\$282,012,911	19,328	68.8%	\$3,474,336,086			
City of Morganton	10,727	1,969	18.4%	2,228	20.8%	\$348,594,699	212	2%	\$547,463,664	71	0.7%	\$240,269,644	2,511	23.4%	\$1,136,328,007			
Town of Connelly Springs	889	650	73.1%	729	82%	\$93,118,369	35	3.9%	\$26,858,488	7	0.8%	\$21,637,277	771	86.7%	\$141,614,134			
Town of Drexel	2,949	1,630	55.3%	1,956	66.3%	\$284,495,472	68	2.3%	\$96,779,237	16	0.5%	\$37,017,978	2,040	69.2%	\$418,292,686			
Town of Glen Alpine	1,086	179	16.5%	202	18.6%	\$21,778,120	8	0.7%	\$5,887,040	2	0.2%	\$4,449,235	212	19.5%	\$32,114,395			
Town of Hildebran	1,069	820	76.7%	726	67.9%	\$129,569,956	95	8.9%	\$283,899,976	14	1.3%	\$86,518,259	835	78.1%	\$499,988,190			
Town of Rutherford College	827	442	53.4%	479	57.9%	\$77,366,136	35	4.2%	\$51,037,205	12	1.5%	\$28,960,241	526	63.6%	\$157,363,581			
Town of Valdese	2,132	669	31.4%	810	38%	\$157,010,336	71	3.3%	\$182,152,144	16	0.8%	\$52,350,889	897	42.1%	\$391,513,368			
Subtotal Burke	47,770	21,016	44%	25,562	53.5%	\$3,328,823,632	1,258	2.6%	\$2,169,510,385	300	0.6%	\$753,216,434	27,120	56.8%	\$6,251,550,447			
Caldwell																		
Caldwell County (Unincorporated Area)	20,773	13,158	63.3%	12,527	60.3%	\$1,722,313,400	533	2.6%	\$605,542,807	98	0.5%	\$228,672,554	13,158	63.3%	\$2,556,528,761			
City of Lenoir	10,316	3,945	38.2%	3,627	35.2%	\$591,974,525	256	2.5%	\$512,771,023	58	0.6%	\$99,573,681	3,941	38.2%	\$1,204,319,229			
Town of Cahah's Mountain	1,350	912	67.6%	841	62.3%	\$154,325,860	65	4.8%	\$70,882,517	6	0.4%	\$9,992,882	912	67.6%	\$235,201,260			
Town of Gamewell	2,062	1,891	91.7%	1,804	87.5%	\$243,753,390	75	3.6%	\$96,819,765	12	0.6%	\$65,626,924	1,891	91.7%	\$406,200,078			

Jurisdiction	All Buildings			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Granite Falls	3,394	2,810	82.8%	2,576	75.9%	\$527,137,825	182	5.4%	\$365,320,715	47	1.4%	\$105,655,791	2,805	82.6%	\$998,114,331
Town of Hudson	3,116	2,279	73.1%	2,089	67%	\$329,271,088	170	5.5%	\$277,108,664	20	0.6%	\$71,638,067	2,279	73.1%	\$678,017,819
Town of Rhodhiss	490	288	58.8%	353	72%	\$47,298,822	13	2.7%	\$5,516,631	4	0.8%	\$11,386,904	370	75.5%	\$64,202,357
Town of Sawmills	3,234	2,562	79.2%	2,412	74.6%	\$360,618,637	138	4.3%	\$256,394,033	12	0.4%	\$33,154,809	2,562	79.2%	\$650,167,478
Village of Cedar Rock	135	69	51.1%	67	49.6%	\$24,399,355	1	0.7%	\$398,452	1	0.7%	\$1,325,086	69	51.1%	\$26,122,892
Subtotal Caldwell	44,870	27,914	62.2%	26,296	58.6%	\$4,001,092,902	1,433	3.2%	\$2,190,754,607	258	0.6%	\$627,026,698	27,987	62.4%	\$6,818,874,205
Catawba															
Catawba County (Unincorporated Area)	50,060	12,007	24%	23,174	46.3%	\$2,582,382,492	1,343	2.7%	\$1,181,138,300	181	0.4%	\$518,177,348	24,698	49.3%	\$4,281,698,141
City of Claremont	1,351	268	19.8%	230	17%	\$30,909,969	33	2.4%	\$69,714,054	5	0.4%	\$12,954,399	268	19.8%	\$113,578,423
City of Conover	5,089	564	11.1%	942	18.5%	\$119,970,849	196	3.9%	\$428,757,538	5	0.1%	\$6,457,774	1,143	22.5%	\$555,186,160
City of Hickory	22,507	1,672	7.4%	3,167	14.1%	\$677,201,078	167	0.7%	\$337,320,436	23	0.1%	\$76,380,179	3,357	14.9%	\$1,090,901,693
City of Newton	7,657	753	9.8%	1,135	14.8%	\$156,570,212	106	1.4%	\$432,560,556	8	0.1%	\$53,449,181	1,249	16.3%	\$642,579,949
Town of Brookford	304	15	4.9%	21	6.9%	\$3,462,061	0	0%	\$0	0	0%	\$0	21	6.9%	\$3,462,061
Town of Catawba	1,016	306	30.1%	405	39.9%	\$44,038,065	42	4.1%	\$38,491,810	1	0.1%	\$584,382	448	44.1%	\$83,114,257
Town of Long View	2,716	227	8.4%	307	11.3%	\$55,131,042	25	0.9%	\$46,335,422	2	0.1%	\$27,143,330	334	12.3%	\$128,609,794
Town of Maiden	3,230	955	29.6%	1,218	37.7%	\$150,988,475	211	6.5%	\$325,194,293	11	0.3%	\$16,937,185	1,440	44.6%	\$493,119,953

Jurisdiction	All Buildings		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk			
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Subtotal Catawba	93,930	16,767	17.9%	30,599	32.6%	\$3,820,654,243	2,123	2.3%	\$2,859,512,409	236	0.3%	\$712,083,778	32,958	35.1%	\$7,392,250,431
TOTAL PLAN	214,056	80,940	37.8%	96,315	45%	\$12,697,671,035	6,025	2.8%	\$8,608,961,508	960	0.4%	\$2,394,927,828	103,300	48.3%	\$23,701,560,366

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.47: Critical Facilities Exposed to the Wildfire - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	12	\$9,090,345
Commercial Facilities	Wildfire Hazard	414	\$612,584,318
Critical Manufacturing	Wildfire Hazard	227	\$348,247,794
Emergency Services	Wildfire Hazard	2	\$6,118,898
Energy	Wildfire Hazard	7	\$60,155,157
Food and Agriculture	Wildfire Hazard	351	\$98,079,899
Government Facilities	Wildfire Hazard	38	\$132,298,126
Healthcare and Public Health	Wildfire Hazard	25	\$23,483,826
Transportation Systems	Wildfire Hazard	128	\$234,457,171
All Categories	Wildfire Hazard	1,204	\$1,524,515,534

Source: GIS Analysis

Table 4.48: Critical Facilities Exposed to the Wildfire - Town of Taylorsville

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	5	\$3,202,728
Commercial Facilities	Wildfire Hazard	89	\$86,925,593
Critical Manufacturing	Wildfire Hazard	30	\$42,450,289
Emergency Services	Wildfire Hazard	3	\$1,796,011
Energy	Wildfire Hazard	2	\$49,957,250
Food and Agriculture	Wildfire Hazard	5	\$1,529,146
Government Facilities	Wildfire Hazard	20	\$32,124,118
Healthcare and Public Health	Wildfire Hazard	10	\$30,395,520
Transportation Systems	Wildfire Hazard	10	\$18,963,649

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	Wildfire Hazard	174	\$267,344,304

Source: GIS Analysis

Table 4.49: Critical Facilities Exposed to the Wildfire - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	4	\$1,555,039
Commercial Facilities	Wildfire Hazard	393	\$556,222,873
Critical Manufacturing	Wildfire Hazard	226	\$220,462,297
Emergency Services	Wildfire Hazard	7	\$7,970,793
Energy	Wildfire Hazard	5	\$140,000,000
Food and Agriculture	Wildfire Hazard	34	\$10,322,791
Government Facilities	Wildfire Hazard	59	\$128,426,183
Healthcare and Public Health	Wildfire Hazard	18	\$48,339,749
Transportation Systems	Wildfire Hazard	135	\$264,490,673
All Categories	Wildfire Hazard	881	\$1,377,790,398

Source: GIS Analysis

Table 4.50: Critical Facilities Exposed to the Wildfire - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	6	\$3,985,241
Commercial Facilities	Wildfire Hazard	107	\$169,160,286
Critical Manufacturing	Wildfire Hazard	62	\$160,657,329
Emergency Services	Wildfire Hazard	2	\$1,019,666
Energy	Wildfire Hazard	3	\$20,000,000
Food and Agriculture	Wildfire Hazard	2	\$258,294
Government Facilities	Wildfire Hazard	22	\$144,001,695
Healthcare and Public Health	Wildfire Hazard	18	\$73,014,554

Sector	Event	Number of Buildings At Risk	Estimated Damages
Nuclear Reactors, Materials and Waste	Wildfire Hazard	1	\$3,032,106
Transportation Systems	Wildfire Hazard	36	\$154,088,635
All Categories	Wildfire Hazard	259	\$729,217,806

Source: GIS Analysis

Table 4.51: Critical Facilities Exposed to the Wildfire - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	27	\$29,670,764
Critical Manufacturing	Wildfire Hazard	12	\$13,379,229
Government Facilities	Wildfire Hazard	1	\$184,598
Transportation Systems	Wildfire Hazard	2	\$5,261,174
All Categories	Wildfire Hazard	42	\$48,495,765

Source: GIS Analysis

Table 4.52: Critical Facilities Exposed to the Wildfire - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	43	\$64,414,180
Critical Manufacturing	Wildfire Hazard	11	\$7,846,122
Emergency Services	Wildfire Hazard	2	\$3,440,812
Energy	Wildfire Hazard	1	\$227,603
Government Facilities	Wildfire Hazard	6	\$22,876,144
Healthcare and Public Health	Wildfire Hazard	7	\$13,252,033
Transportation Systems	Wildfire Hazard	13	\$21,538,721
All Categories	Wildfire Hazard	83	\$133,595,615

Source: GIS Analysis

Table 4.53: Critical Facilities Exposed to the Wildfire - Town of Glen Alpine

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	5	\$3,900,693
Critical Manufacturing	Wildfire Hazard	2	\$540,543
Government Facilities	Wildfire Hazard	1	\$3,878,068
Healthcare and Public Health	Wildfire Hazard	1	\$1,618,234
Transportation Systems	Wildfire Hazard	1	\$398,738
All Categories	Wildfire Hazard	10	\$10,336,276

Source: GIS Analysis

Table 4.54: Critical Facilities Exposed to the Wildfire - Town of Hildebran

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	49	\$149,377,359
Critical Manufacturing	Wildfire Hazard	39	\$177,369,858
Emergency Services	Wildfire Hazard	1	\$2,501,696
Energy	Wildfire Hazard	2	\$20,000,000
Government Facilities	Wildfire Hazard	4	\$23,921,413
Healthcare and Public Health	Wildfire Hazard	6	\$5,618,689
Transportation Systems	Wildfire Hazard	9	\$9,180,018
All Categories	Wildfire Hazard	110	\$387,969,033

Source: GIS Analysis

Table 4.55: Critical Facilities Exposed to the Wildfire - Town of Rutherford College

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1	\$652,539
Commercial Facilities	Wildfire Hazard	18	\$15,239,596
Critical Manufacturing	Wildfire Hazard	9	\$25,846,495
Government Facilities	Wildfire Hazard	6	\$19,761,426

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	Wildfire Hazard	8	\$9,041,755
Transportation Systems	Wildfire Hazard	2	\$3,275,616
All Categories	Wildfire Hazard	44	\$73,817,427

Source: GIS Analysis

Table 4.56: Critical Facilities Exposed to the Wildfire - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1	\$2,145,490
Commercial Facilities	Wildfire Hazard	33	\$21,209,030
Critical Manufacturing	Wildfire Hazard	19	\$92,679,210
Energy	Wildfire Hazard	2	\$34,348,494
Government Facilities	Wildfire Hazard	6	\$46,981,405
Healthcare and Public Health	Wildfire Hazard	11	\$41,569,874
Transportation Systems	Wildfire Hazard	12	\$29,019,241
All Categories	Wildfire Hazard	84	\$267,952,744

Source: GIS Analysis

Table 4.57: Critical Facilities Exposed to the Wildfire - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1	\$1,025,186
Commercial Facilities	Wildfire Hazard	303	\$358,930,822
Critical Manufacturing	Wildfire Hazard	163	\$167,166,985
Food and Agriculture	Wildfire Hazard	27	\$7,374,612
Government Facilities	Wildfire Hazard	32	\$144,885,037
Healthcare and Public Health	Wildfire Hazard	10	\$13,598,368
Transportation Systems	Wildfire Hazard	94	\$140,210,269
All Categories	Wildfire Hazard	630	\$833,191,279

Source: GIS Analysis

Table 4.58: Critical Facilities Exposed to the Wildfire - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	6	\$5,439,238
Commercial Facilities	Wildfire Hazard	173	\$214,309,595
Critical Manufacturing	Wildfire Hazard	64	\$178,615,345
Food and Agriculture	Wildfire Hazard	1	\$811,841
Government Facilities	Wildfire Hazard	18	\$59,885,620
Healthcare and Public Health	Wildfire Hazard	10	\$9,210,390
Transportation Systems	Wildfire Hazard	36	\$139,802,821
Water	Wildfire Hazard	4	\$50,735,448
All Categories	Wildfire Hazard	312	\$658,810,298

Source: GIS Analysis

Table 4.59: Critical Facilities Exposed to the Wildfire - Town of Cahaj's Mountain

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	2	\$594,640
Commercial Facilities	Wildfire Hazard	32	\$34,254,580
Critical Manufacturing	Wildfire Hazard	20	\$11,182,965
Healthcare and Public Health	Wildfire Hazard	5	\$9,188,088
Transportation Systems	Wildfire Hazard	11	\$23,339,388
All Categories	Wildfire Hazard	70	\$78,559,661

Source: GIS Analysis

Table 4.60: Critical Facilities Exposed to the Wildfire - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	43	\$51,735,600
Critical Manufacturing	Wildfire Hazard	24	\$30,164,067

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	Wildfire Hazard	5	\$56,961,326
Healthcare and Public Health	Wildfire Hazard	4	\$6,228,832
Transportation Systems	Wildfire Hazard	11	\$17,356,863
All Categories	Wildfire Hazard	87	\$162,446,688

Source: GIS Analysis

Table 4.61: Critical Facilities Exposed to the Wildfire - Town of Granite Falls

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1	\$538,071
Commercial Facilities	Wildfire Hazard	117	\$231,962,348
Critical Manufacturing	Wildfire Hazard	52	\$75,778,503
Government Facilities	Wildfire Hazard	14	\$65,675,565
Healthcare and Public Health	Wildfire Hazard	7	\$8,764,859
Transportation Systems	Wildfire Hazard	33	\$83,433,584
Water	Wildfire Hazard	5	\$49,422,362
All Categories	Wildfire Hazard	229	\$515,575,292

Source: GIS Analysis

Table 4.62: Critical Facilities Exposed to the Wildfire - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	2	\$2,577,808
Commercial Facilities	Wildfire Hazard	87	\$120,744,704
Critical Manufacturing	Wildfire Hazard	53	\$90,665,787
Government Facilities	Wildfire Hazard	10	\$53,531,602
Healthcare and Public Health	Wildfire Hazard	9	\$15,799,409
Transportation Systems	Wildfire Hazard	29	\$65,427,422
All Categories	Wildfire Hazard	190	\$348,746,732

Source: GIS Analysis

Table 4.63: Critical Facilities Exposed to the Wildfire - Town of Rhodhiss

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	7	\$4,322,408
Critical Manufacturing	Wildfire Hazard	6	\$1,432,798
Government Facilities	Wildfire Hazard	2	\$10,238,693
Transportation Systems	Wildfire Hazard	2	\$909,636
All Categories	Wildfire Hazard	17	\$16,903,535

Source: GIS Analysis

Table 4.64: Critical Facilities Exposed to the Wildfire - Town of Sawmills

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	78	\$151,043,173
Critical Manufacturing	Wildfire Hazard	39	\$77,062,003
Food and Agriculture	Wildfire Hazard	4	\$498,607
Government Facilities	Wildfire Hazard	3	\$18,527,385
Healthcare and Public Health	Wildfire Hazard	3	\$3,618,007
Transportation Systems	Wildfire Hazard	23	\$38,799,666
All Categories	Wildfire Hazard	150	\$289,548,841

Source: GIS Analysis

Table 4.65: Critical Facilities Exposed to the Wildfire - Village of Cedar Rock

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	1	\$398,452
Government Facilities	Wildfire Hazard	1	\$1,325,086
All Categories	Wildfire Hazard	2	\$1,723,538

Source: GIS Analysis

Table 4.66: Critical Facilities Exposed to the Wildfire - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	6	\$4,028,075
Commercial Facilities	Wildfire Hazard	855	\$647,355,741
Critical Manufacturing	Wildfire Hazard	332	\$243,389,454
Emergency Services	Wildfire Hazard	7	\$18,846,935
Energy	Wildfire Hazard	7	\$37,114,011
Food and Agriculture	Wildfire Hazard	64	\$21,274,506
Government Facilities	Wildfire Hazard	66	\$413,223,033
Healthcare and Public Health	Wildfire Hazard	10	\$5,472,085
Transportation Systems	Wildfire Hazard	168	\$334,207,917
All Categories	Wildfire Hazard	1,515	\$1,724,911,757

Source: GIS Analysis

Table 4.67: Critical Facilities Exposed to the Wildfire - City of Claremont

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	12	\$12,653,466
Critical Manufacturing	Wildfire Hazard	19	\$36,049,378
Food and Agriculture	Wildfire Hazard	1	\$20,589,114
Government Facilities	Wildfire Hazard	2	\$11,639,094
Transportation Systems	Wildfire Hazard	1	\$422,096
All Categories	Wildfire Hazard	35	\$81,353,148

Source: GIS Analysis

Table 4.68: Critical Facilities Exposed to the Wildfire - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1	\$118,898
Commercial Facilities	Wildfire Hazard	113	\$204,574,828

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	Wildfire Hazard	70	\$168,014,382
Government Facilities	Wildfire Hazard	4	\$5,158,249
Transportation Systems	Wildfire Hazard	13	\$57,348,953
All Categories	Wildfire Hazard	201	\$435,215,310

Source: GIS Analysis

Table 4.69: Critical Facilities Exposed to the Wildfire - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	122	\$251,314,662
Critical Manufacturing	Wildfire Hazard	43	\$83,003,561
Emergency Services	Wildfire Hazard	1	\$1,831,340
Energy	Wildfire Hazard	3	\$23,047,849
Government Facilities	Wildfire Hazard	9	\$62,836,163
Transportation Systems	Wildfire Hazard	11	\$12,029,319
All Categories	Wildfire Hazard	189	\$434,062,894

Source: GIS Analysis

Table 4.70: Critical Facilities Exposed to the Wildfire - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	73	\$319,723,951
Critical Manufacturing	Wildfire Hazard	24	\$75,791,721
Emergency Services	Wildfire Hazard	2	\$1,661,289
Government Facilities	Wildfire Hazard	5	\$51,628,564
Healthcare and Public Health	Wildfire Hazard	1	\$32,577,724
Transportation Systems	Wildfire Hazard	9	\$4,626,488
All Categories	Wildfire Hazard	114	\$486,009,737

Source: GIS Analysis

Table 4.71: Critical Facilities Exposed to the Wildfire - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	24	\$29,556,901
Critical Manufacturing	Wildfire Hazard	12	\$6,014,915
Government Facilities	Wildfire Hazard	1	\$584,382
Transportation Systems	Wildfire Hazard	6	\$2,919,993
All Categories	Wildfire Hazard	43	\$39,076,191

Source: GIS Analysis

Table 4.72: Critical Facilities Exposed to the Wildfire - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	14	\$21,669,121
Critical Manufacturing	Wildfire Hazard	10	\$22,950,362
Government Facilities	Wildfire Hazard	1	\$26,679,023
Transportation Systems	Wildfire Hazard	2	\$2,180,245
All Categories	Wildfire Hazard	27	\$73,478,751

Source: GIS Analysis

Table 4.73: Critical Facilities Exposed to the Wildfire - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	Wildfire Hazard	143	\$117,794,735
Critical Manufacturing	Wildfire Hazard	66	\$207,692,322
Energy	Wildfire Hazard	2	\$60,000,000
Government Facilities	Wildfire Hazard	6	\$13,139,442
Transportation Systems	Wildfire Hazard	7	\$3,504,980
All Categories	Wildfire Hazard	224	\$402,131,479

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event.

Table 4.74: Critical Facilities Exposed to the Wildfire (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	Wildfire Hazard	1,118	\$1,277,474,451
Chemical	Wildfire Hazard	42	\$358,071,323
Commercial Facilities	Wildfire Hazard	51,659	\$48,740,130,249
Communications	Wildfire Hazard	68	\$136,764,022
Critical Manufacturing	Wildfire Hazard	14,483	\$19,441,380,419
Defense Industrial Base	Wildfire Hazard	25	\$324,889,893
Emergency Services	Wildfire Hazard	587	\$780,155,751
Energy	Wildfire Hazard	461	\$15,056,451,053
Food and Agriculture	Wildfire Hazard	49,220	\$5,326,299,901
Government Facilities	Wildfire Hazard	9,963	\$19,297,146,967
Healthcare and Public Health	Wildfire Hazard	3,062	\$5,679,990,421
Information Technology	Wildfire Hazard	1	\$530,450
National Monuments and Icons	Wildfire Hazard	1	\$471,030
Nuclear Reactors, Materials and Waste	Wildfire Hazard	18	\$22,210,225
Other	Wildfire Hazard	10	\$30,408,115
Postal and Shipping	Wildfire Hazard	35	\$18,896,556
Transportation Systems	Wildfire Hazard	8,283	\$10,056,254,482
Water	Wildfire Hazard	395	\$8,040,172,776
All Categories	Wildfire Hazard	139,431	\$134,587,698,084

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.75: High Potential Loss Properties Exposed to the Wildfire - Alexander County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	117	\$434,361,867
Government	Wildfire Hazard	13	\$124,718,826
Industrial	Wildfire Hazard	40	\$194,879,971
Religious	Wildfire Hazard	20	\$54,155,582
Residential	Wildfire Hazard	11	\$38,096,625
Utilities	Wildfire Hazard	6	\$60,000,000
All Categories	Wildfire Hazard	207	\$906,212,871

Source: GIS Analysis

Table 4.76: High Potential Loss Properties Exposed to the Wildfire - Town of Taylorsville

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	26	\$89,371,654
Government	Wildfire Hazard	4	\$27,527,578
Industrial	Wildfire Hazard	8	\$37,731,204
Religious	Wildfire Hazard	4	\$9,231,316
Residential	Wildfire Hazard	7	\$18,776,669
Utilities	Wildfire Hazard	2	\$49,957,250
All Categories	Wildfire Hazard	51	\$232,595,671

Source: GIS Analysis

Table 4.77: High Potential Loss Properties Exposed to the Wildfire - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	40	\$145,335,825
Government	Wildfire Hazard	9	\$78,836,232
Industrial	Wildfire Hazard	9	\$27,640,839

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	Wildfire Hazard	4	\$17,563,717
Residential	Wildfire Hazard	12	\$52,464,232
Utilities	Wildfire Hazard	5	\$140,000,000
All Categories	Wildfire Hazard	79	\$461,840,845

Source: GIS Analysis

Table 4.78: High Potential Loss Properties Exposed to the Wildfire - City of Morganton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	22	\$218,104,216
Government	Wildfire Hazard	8	\$137,571,730
Industrial	Wildfire Hazard	6	\$93,082,925
Religious	Wildfire Hazard	2	\$5,696,493
Residential	Wildfire Hazard	26	\$87,158,315
Utilities	Wildfire Hazard	3	\$20,000,000
All Categories	Wildfire Hazard	67	\$561,613,679

Source: GIS Analysis

Table 4.79: High Potential Loss Properties Exposed to the Wildfire - Town of Connelly Springs

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	Wildfire Hazard	1	\$11,892,343
All Categories	Wildfire Hazard	1	\$11,892,343

Source: GIS Analysis

Table 4.80: High Potential Loss Properties Exposed to the Wildfire - Town of Drexel

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	5	\$37,059,937
Government	Wildfire Hazard	1	\$10,152,530
Residential	Wildfire Hazard	1	\$1,236,304

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	Wildfire Hazard	7	\$48,448,771

Source: GIS Analysis

Table 4.81: High Potential Loss Properties Exposed to the Wildfire - Town of Hildebran

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	2	\$10,506,030
Government	Wildfire Hazard	2	\$14,832,034
Industrial	Wildfire Hazard	6	\$47,650,511
Utilities	Wildfire Hazard	2	\$20,000,000
All Categories	Wildfire Hazard	12	\$92,988,575

Source: GIS Analysis

Table 4.82: High Potential Loss Properties Exposed to the Wildfire - Town of Rutherford College

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	2	\$5,606,106
Government	Wildfire Hazard	1	\$5,298,387
Industrial	Wildfire Hazard	2	\$20,019,988
Residential	Wildfire Hazard	1	\$1,125,324
All Categories	Wildfire Hazard	6	\$32,049,805

Source: GIS Analysis

Table 4.83: High Potential Loss Properties Exposed to the Wildfire - Town of Valdese

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	5	\$23,142,156
Government	Wildfire Hazard	4	\$45,341,260
Industrial	Wildfire Hazard	3	\$70,982,237
Residential	Wildfire Hazard	2	\$5,733,410
Utilities	Wildfire Hazard	2	\$34,348,494

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	Wildfire Hazard	16	\$179,547,557

Source: GIS Analysis

Table 4.84: High Potential Loss Properties Exposed to the Wildfire - Caldwell County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	21	\$98,935,328
Government	Wildfire Hazard	8	\$115,221,202
Industrial	Wildfire Hazard	6	\$17,552,497
Religious	Wildfire Hazard	2	\$10,065,892
Residential	Wildfire Hazard	4	\$6,574,222
All Categories	Wildfire Hazard	41	\$248,349,141

Table 4.85: High Potential Loss Properties Exposed to the Wildfire - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	15	\$153,399,022
Government	Wildfire Hazard	5	\$50,071,954
Industrial	Wildfire Hazard	7	\$110,646,079
Religious	Wildfire Hazard	4	\$7,453,806
Residential	Wildfire Hazard	8	\$46,938,002
Utilities	Wildfire Hazard	4	\$50,735,448
All Categories	Wildfire Hazard	43	\$419,244,311

Source: GIS Analysis

Table 4.86: High Potential Loss Properties Exposed to the Wildfire - Town of Cajah's Mountain

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$3,165,864
Residential	Wildfire Hazard	1	\$12,415,749

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	Wildfire Hazard	2	\$15,581,613

Source: GIS Analysis

Table 4.87: High Potential Loss Properties Exposed to the Wildfire - Town of Gamewell

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$1,706,144
Government	Wildfire Hazard	2	\$53,836,970
Industrial	Wildfire Hazard	3	\$12,485,670
All Categories	Wildfire Hazard	6	\$68,028,784

Source: GIS Analysis

Table 4.88: High Potential Loss Properties Exposed to the Wildfire - Town of Granite Falls

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	10	\$110,105,784
Government	Wildfire Hazard	5	\$64,138,602
Industrial	Wildfire Hazard	2	\$28,078,517
Religious	Wildfire Hazard	2	\$3,740,955
Residential	Wildfire Hazard	7	\$18,949,444
Utilities	Wildfire Hazard	5	\$49,422,362
All Categories	Wildfire Hazard	31	\$274,435,664

Source: GIS Analysis

Table 4.89: High Potential Loss Properties Exposed to the Wildfire - Town of Hudson

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	5	\$24,112,033
Government	Wildfire Hazard	5	\$49,369,088
Industrial	Wildfire Hazard	7	\$51,594,684
Religious	Wildfire Hazard	1	\$5,896,000

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	Wildfire Hazard	5	\$16,330,642
All Categories	Wildfire Hazard	23	\$147,302,447

Source: GIS Analysis

Table 4.90: High Potential Loss Properties Exposed to the Wildfire - Town of Rhodhiss

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$2,553,834
Government	Wildfire Hazard	1	\$10,106,825
Residential	Wildfire Hazard	1	\$2,030,648
All Categories	Wildfire Hazard	3	\$14,691,307

Source: GIS Analysis

Table 4.91: High Potential Loss Properties Exposed to the Wildfire - Town of Sawmills

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	8	\$26,469,958
Government	Wildfire Hazard	1	\$14,920,509
Industrial	Wildfire Hazard	1	\$1,551,285
Residential	Wildfire Hazard	1	\$1,053,025
All Categories	Wildfire Hazard	11	\$43,994,777

Source: GIS Analysis

Table 4.92: High Potential Loss Properties Exposed to the Wildfire - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	26	\$92,545,225
Government	Wildfire Hazard	19	\$396,522,898
Industrial	Wildfire Hazard	6	\$171,795,449
Religious	Wildfire Hazard	3	\$3,688,187

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	Wildfire Hazard	6	\$8,972,739
Utilities	Wildfire Hazard	5	\$35,585,357
All Categories	Wildfire Hazard	65	\$709,109,855

Source: GIS Analysis

Table 4.93: High Potential Loss Properties Exposed to the Wildfire - City of Claremont

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$1,110,809
Government	Wildfire Hazard	1	\$9,371,990
Industrial	Wildfire Hazard	2	\$45,200,697
All Categories	Wildfire Hazard	4	\$55,683,496

Source: GIS Analysis

Table 4.94: High Potential Loss Properties Exposed to the Wildfire - City of Conover

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	9	\$86,138,616
Government	Wildfire Hazard	1	\$4,544,257
Industrial	Wildfire Hazard	7	\$177,314,430
Residential	Wildfire Hazard	2	\$5,291,240
All Categories	Wildfire Hazard	19	\$273,288,543

Source: GIS Analysis

Table 4.95: High Potential Loss Properties Exposed to the Wildfire - City of Hickory

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	10	\$168,520,432
Government	Wildfire Hazard	5	\$61,496,272
Industrial	Wildfire Hazard	5	\$54,722,947
Religious	Wildfire Hazard	1	\$6,410,104

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	Wildfire Hazard	7	\$111,085,782
Utilities	Wildfire Hazard	3	\$23,047,849
All Categories	Wildfire Hazard	31	\$425,283,386

Source: GIS Analysis

Table 4.96: High Potential Loss Properties Exposed to the Wildfire - City of Newton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	5	\$285,278,180
Government	Wildfire Hazard	2	\$48,127,772
Industrial	Wildfire Hazard	1	\$29,430,254
Residential	Wildfire Hazard	1	\$1,115,300
All Categories	Wildfire Hazard	9	\$363,951,506

Source: GIS Analysis

Table 4.97: High Potential Loss Properties Exposed to the Wildfire - Town of Catawba

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$19,921,357
All Categories	Wildfire Hazard	1	\$19,921,357

Source: GIS Analysis

Table 4.98: High Potential Loss Properties Exposed to the Wildfire - Town of Long View

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	1	\$9,622,102
Government	Wildfire Hazard	1	\$26,679,023
All Categories	Wildfire Hazard	2	\$36,301,125

Source: GIS Analysis

Table 4.99: High Potential Loss Properties Exposed to the Wildfire - Town of Maiden

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	Wildfire Hazard	2	\$3,254,626
Government	Wildfire Hazard	2	\$12,971,472
Industrial	Wildfire Hazard	3	\$115,916,633
Utilities	Wildfire Hazard	2	\$60,000,000
All Categories	Wildfire Hazard	9	\$192,142,731

Source: GIS Analysis

4.5.4 Tornado







A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes and tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. According to the National Weather Service, tornado wind speeds normally range from 40 to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

Each year, an average of over 800 tornadoes is reported nationwide, resulting in an average of 80 death(s) and 1,500 injuries (NOAA, 2002). They are more likely to occur during the spring and early summer months of March through June and can occur at any time of day but are likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small short-lived tornadoes can inflict tremendous damage. Highly destructive tornadoes may carve out a path over a mile wide and several miles long.

Waterspouts are weak tornadoes that form over warm water and are most common along the Gulf Coast and southeastern states. Waterspouts occasionally move inland, becoming tornadoes that cause damage and injury. However, most waterspouts dissipate over the open water causing threats only to marine and boating interests. Typically, a waterspout is weak and short-lived, and because they are so common, most go unreported unless they cause damage.

The destruction caused by tornadoes ranges from light to inconceivable depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damages to structures of light construction such as residential homes (particularly mobile homes) and tend to remain localized in impact. The below table shows the Enhanced Fujita Scale for Tornadoes which was developed to measure tornado strength and associated damages.

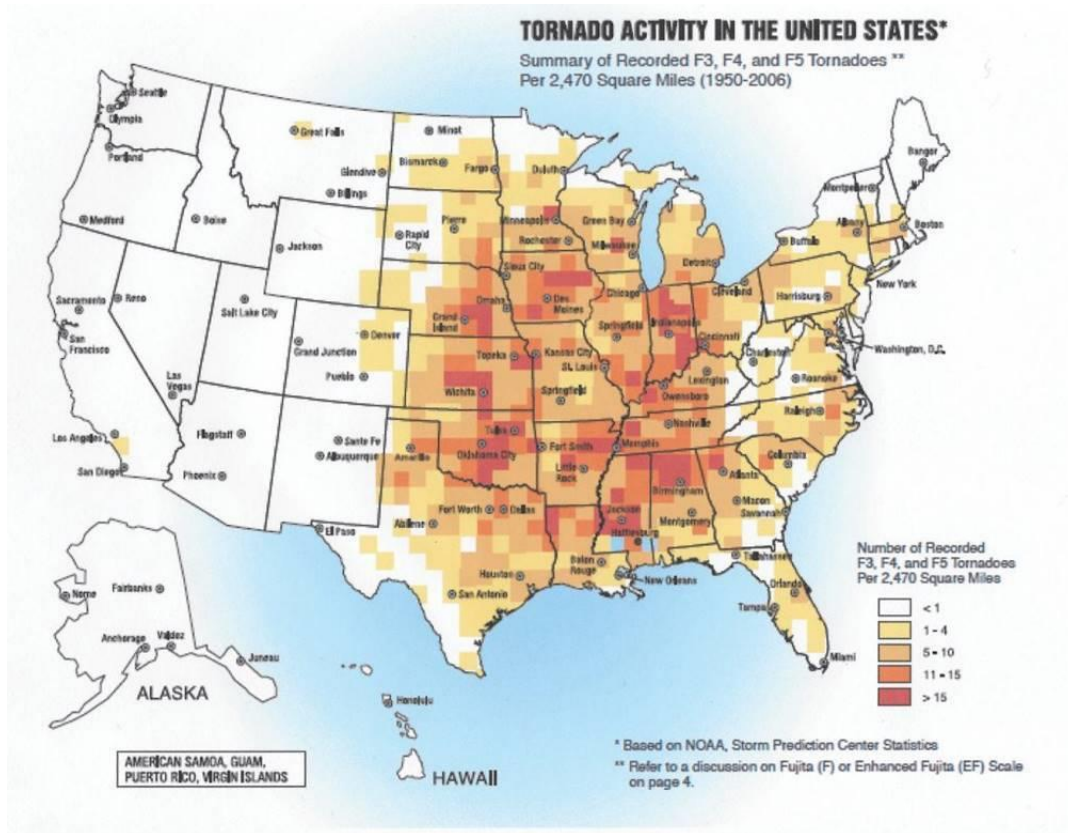
Table 4.100: Enhanced Fujita Scale for Tornadoes

Storm Category	Damage Level	3 Second Gust (mph)	Description of Damages	Photo Example
EF0	GALE	65–85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards	
EF1	WEAK	86–110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages might be destroyed.	
EF2	STRONG	111–135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	
EF3	SEVERE	136–165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	
EF4	DEVASTATING	166–200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	
EF5	INCREDIBLE	200+	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.	

Source: NOAA, FEMA

According to the NOAA Storm Prediction Center (SPC), the highest concentration of tornadoes in the United States has been in Oklahoma, Texas, Kansas and Florida respectively. Although the Great Plains region of the Central United States does favor the development of the largest and most dangerous tornadoes (earning the designation of “tornado alley”), Florida experiences the greatest number of tornadoes per square mile of all U.S. states. The below figure shows tornado activity in the United States based on the number of recorded tornadoes per 1,000 square miles.

Figure 4.47: Tornado Activity in the United States



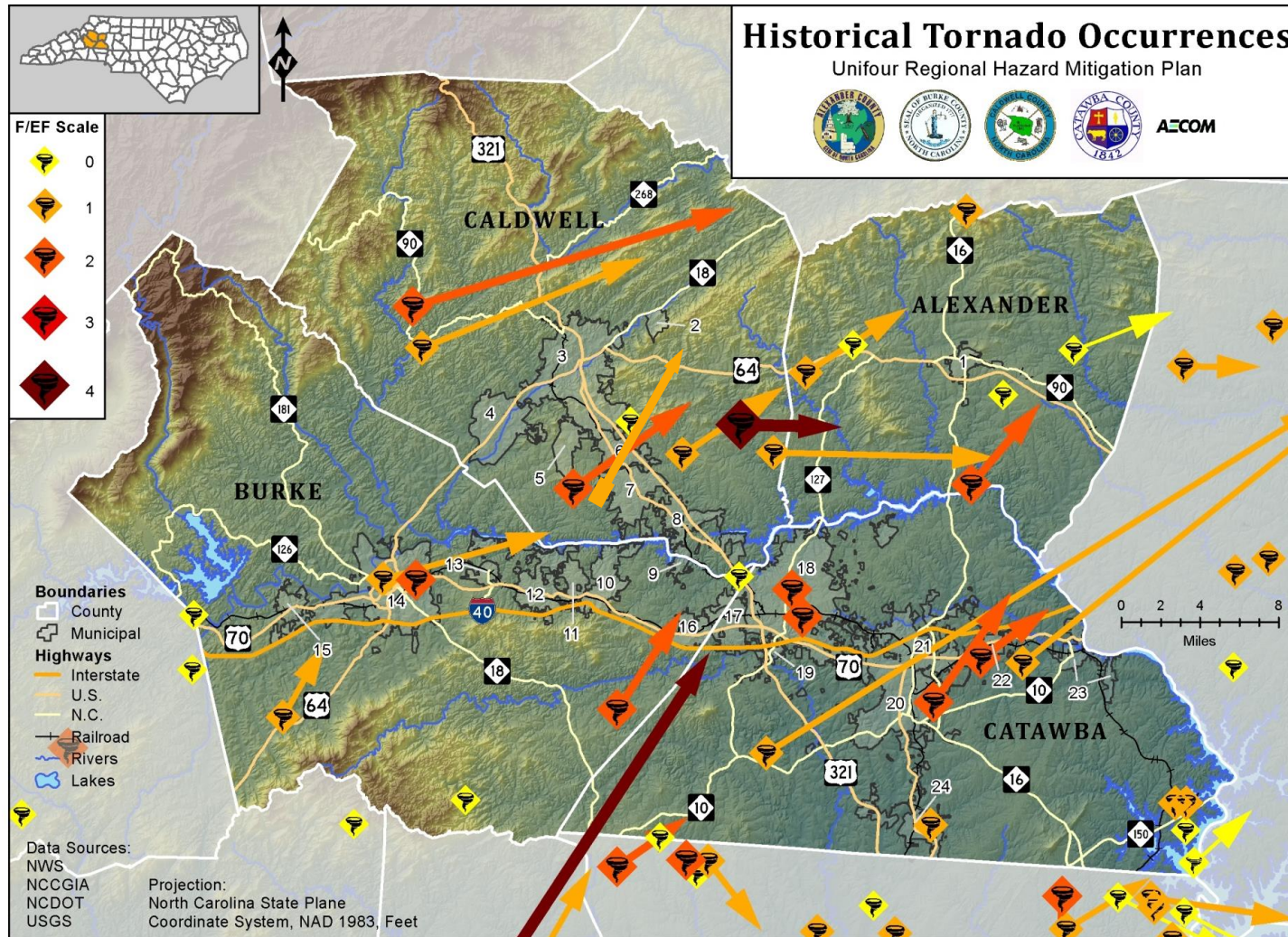
Source: American Society of Civil Engineers

The tornadoes associated with tropical cyclones are most frequent in September and October when the incidence of tropical storm systems is greatest. This type of tornado usually occurs around the perimeter of the storm, and most often to the right and ahead of the storm path or the storm center as it comes ashore. These tornadoes commonly occur as part of large outbreaks and generally move in an easterly direction.

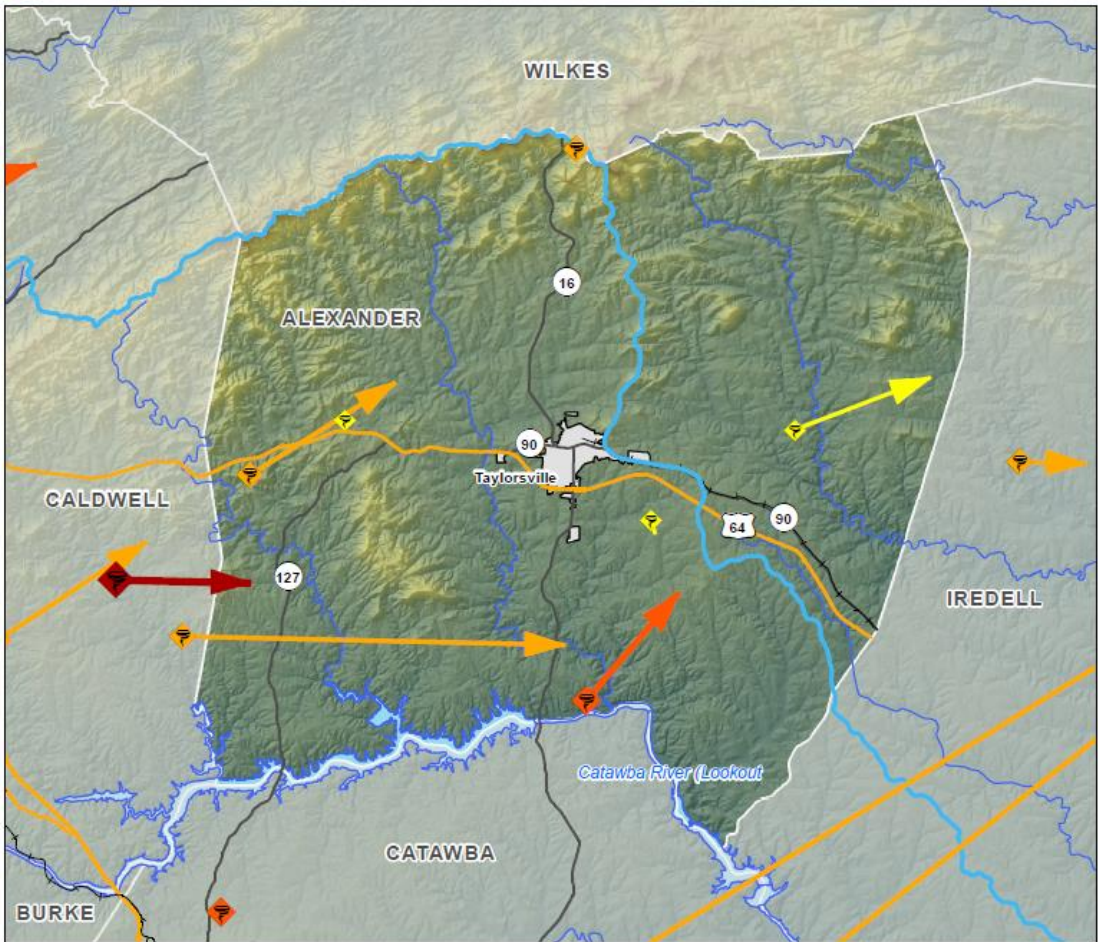
Location within the Planning Area

Tornadoes are unpredictable manifestations and are not isolated to a specific geographic location. Therefore it is assumed that the entire planning area is exposed to this hazard.

Figure 4.48: Historic Tornado Point Locations and Damage Paths in the Unifour Region (1951-2019)



Tornado Hazard Areas - Alexander County



Tornado F/EF Scale

- 0
- 1
- 2
- 3
- 4

Boundaries

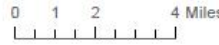
- River Basin
- County
- Municipal

Highways

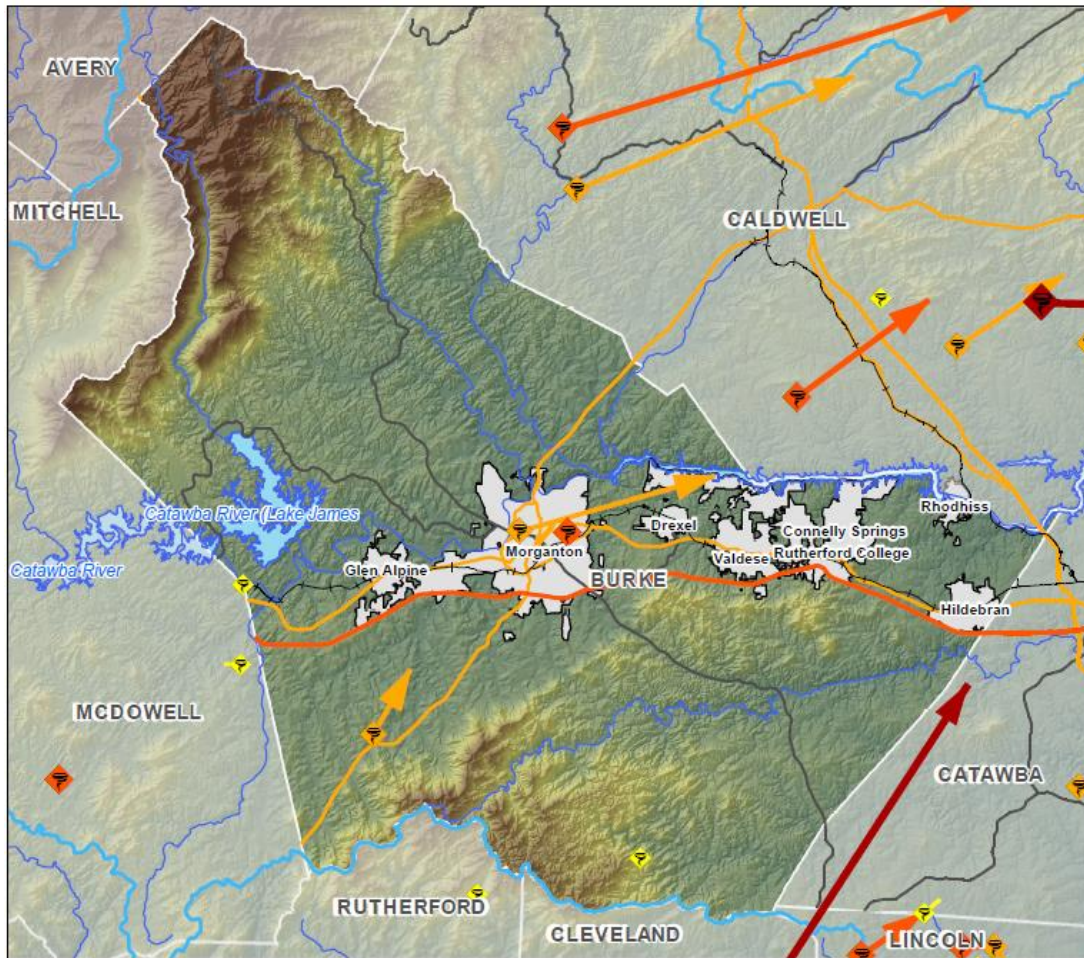
- Interstate Hwy.
- U.S. Hwy.
- N.C. Hwy.

Other

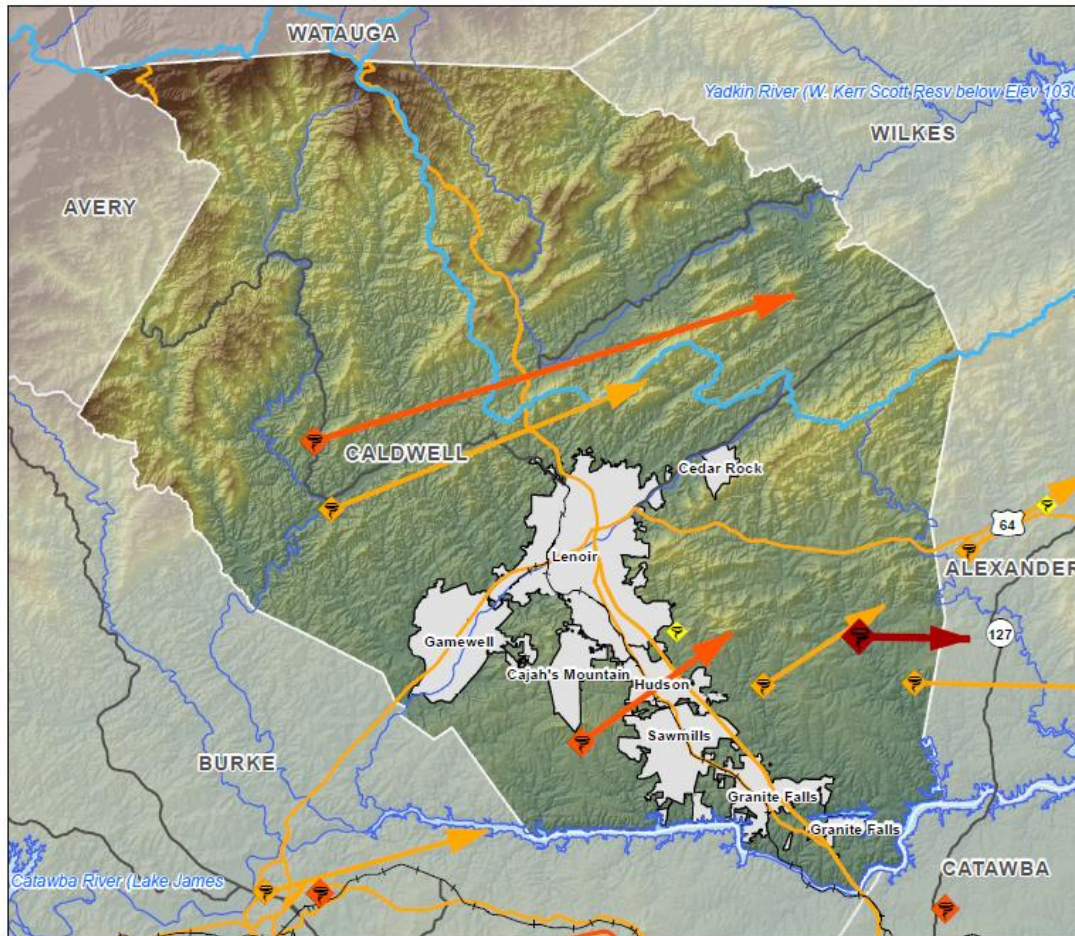
- Railroad
- Rivers
- Lakes



Tornado Hazard Areas - Burke County



Tornado Hazard Areas - Caldwell County



Tornado F/EF Scale

- 0
- 1
- 2
- 3
- 4

Boundaries

- River Basin
- County
- Municipal

Highways

- Interstate Hwy.
- U.S. Hwy.
- N.C. Hwy.

Other

- Railroad
- Rivers
- Lakes



Tornado Hazard Areas - Catawba County

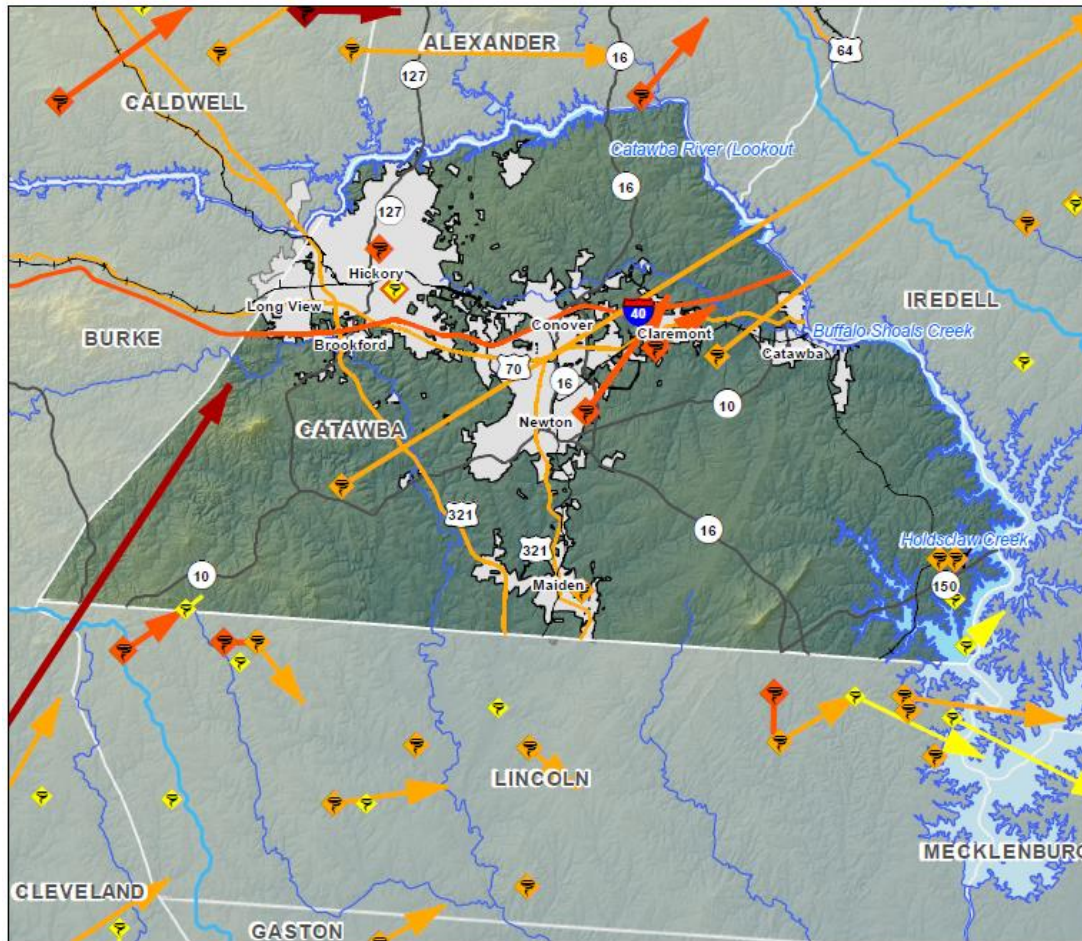


Figure 4.49: Tornado Hazard Areas (Depicting Probability High-Low)

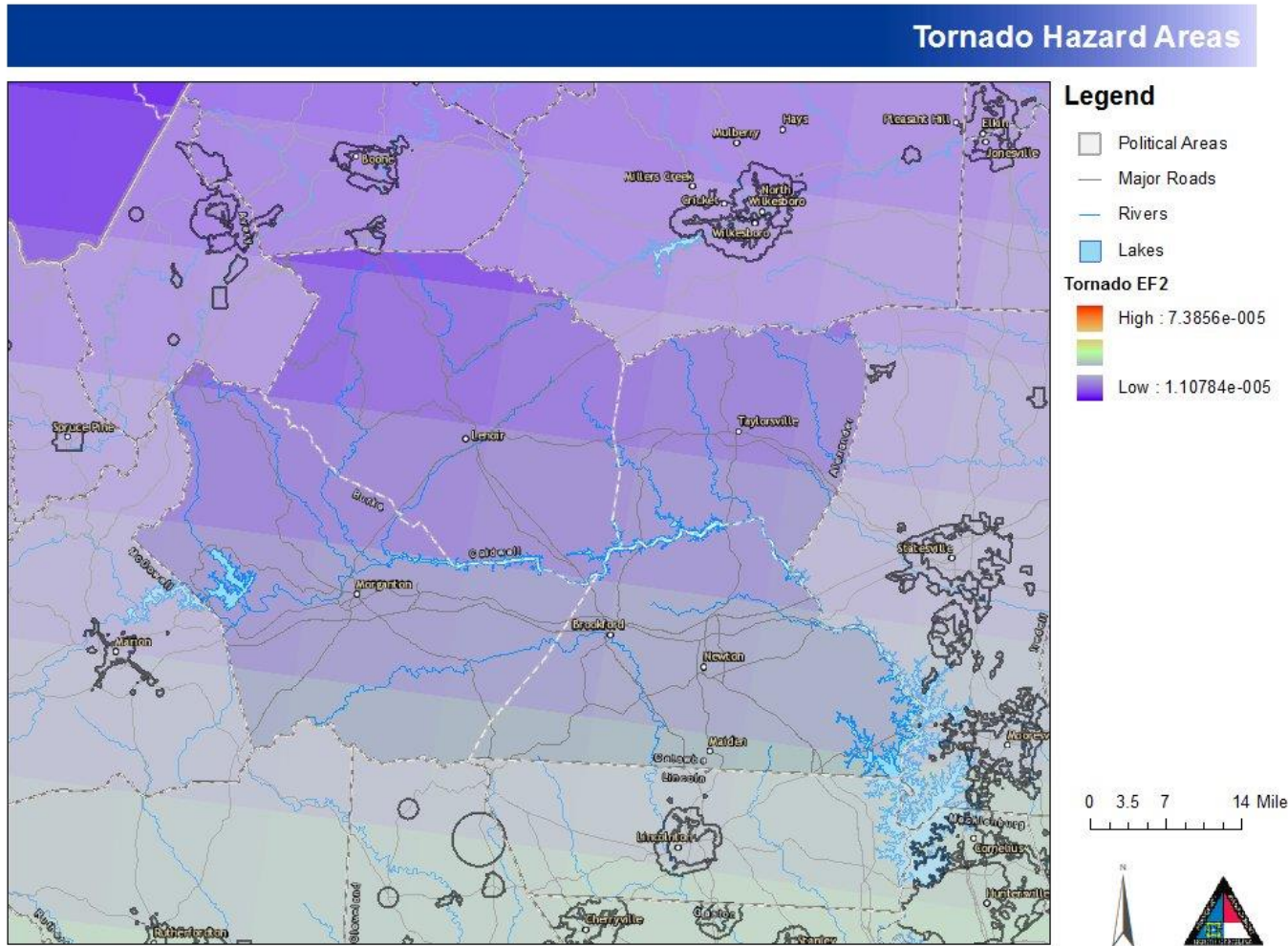


Figure 4.50: Tornado Hazard Areas (Depicting Probability High-Low)

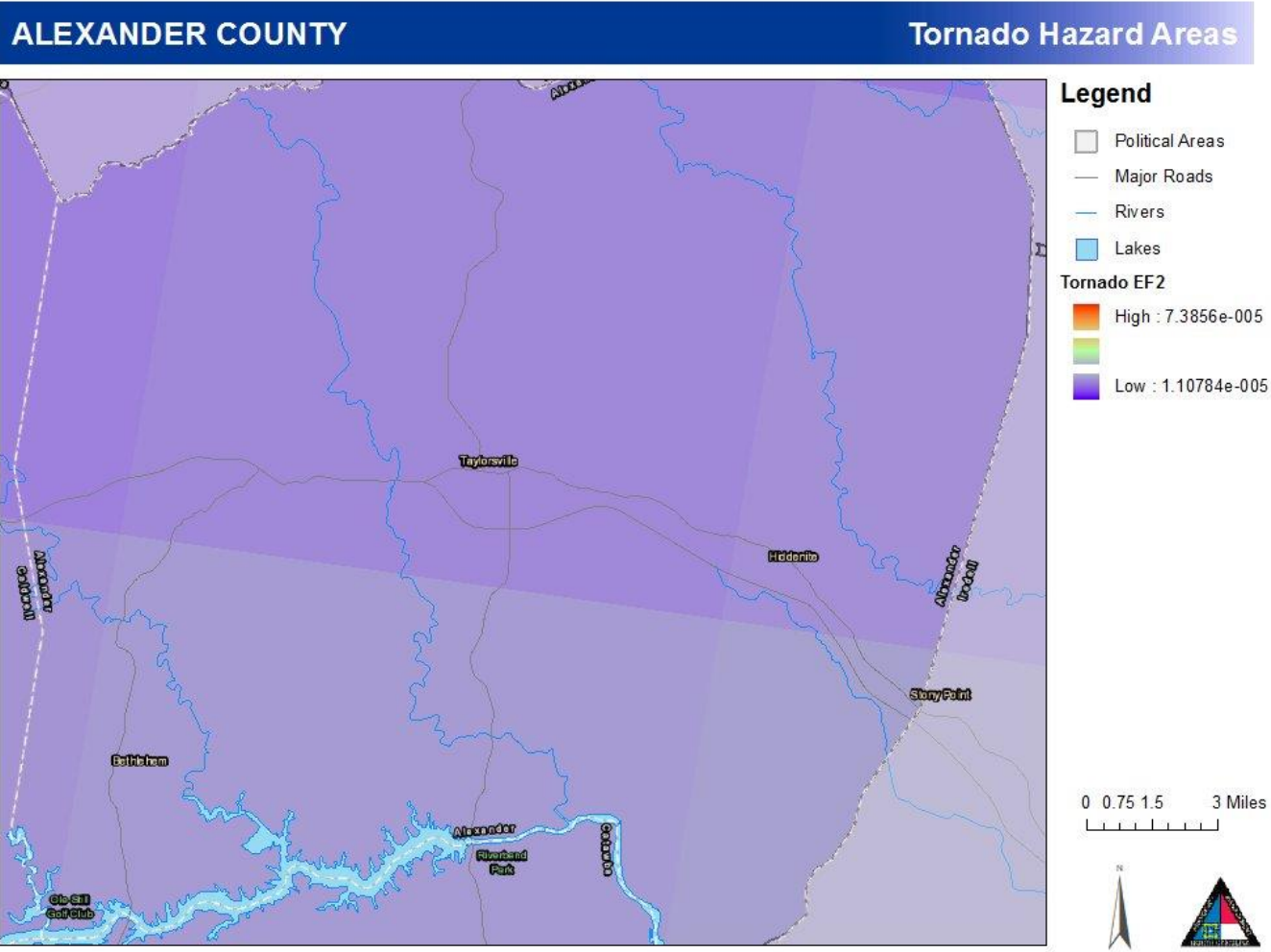


Figure 4.51: Tornado Hazard Areas (Depicting Probability High-Low)

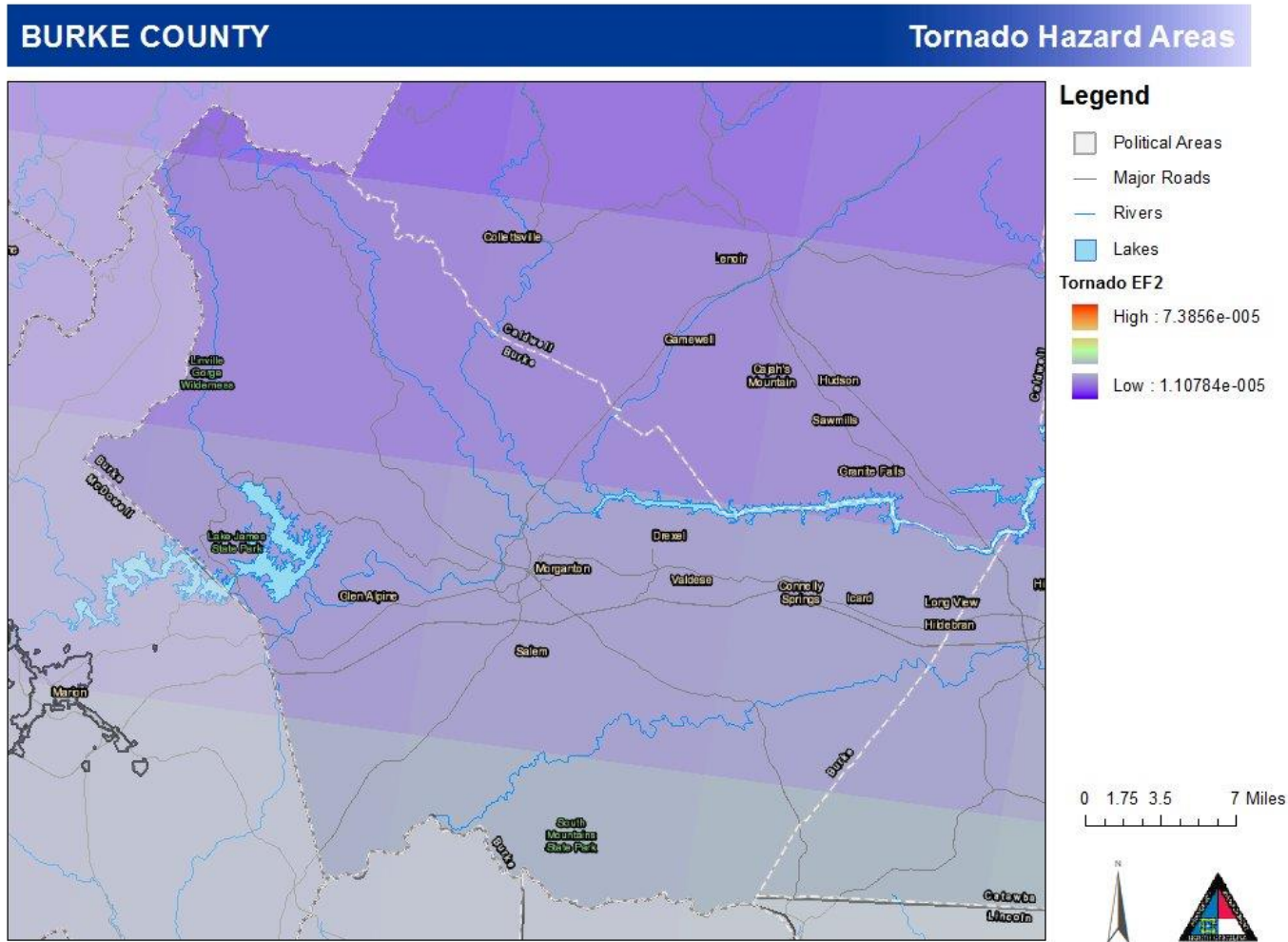


Figure 4.52: Tornado Hazard Areas (Depicting Probability High-Low)

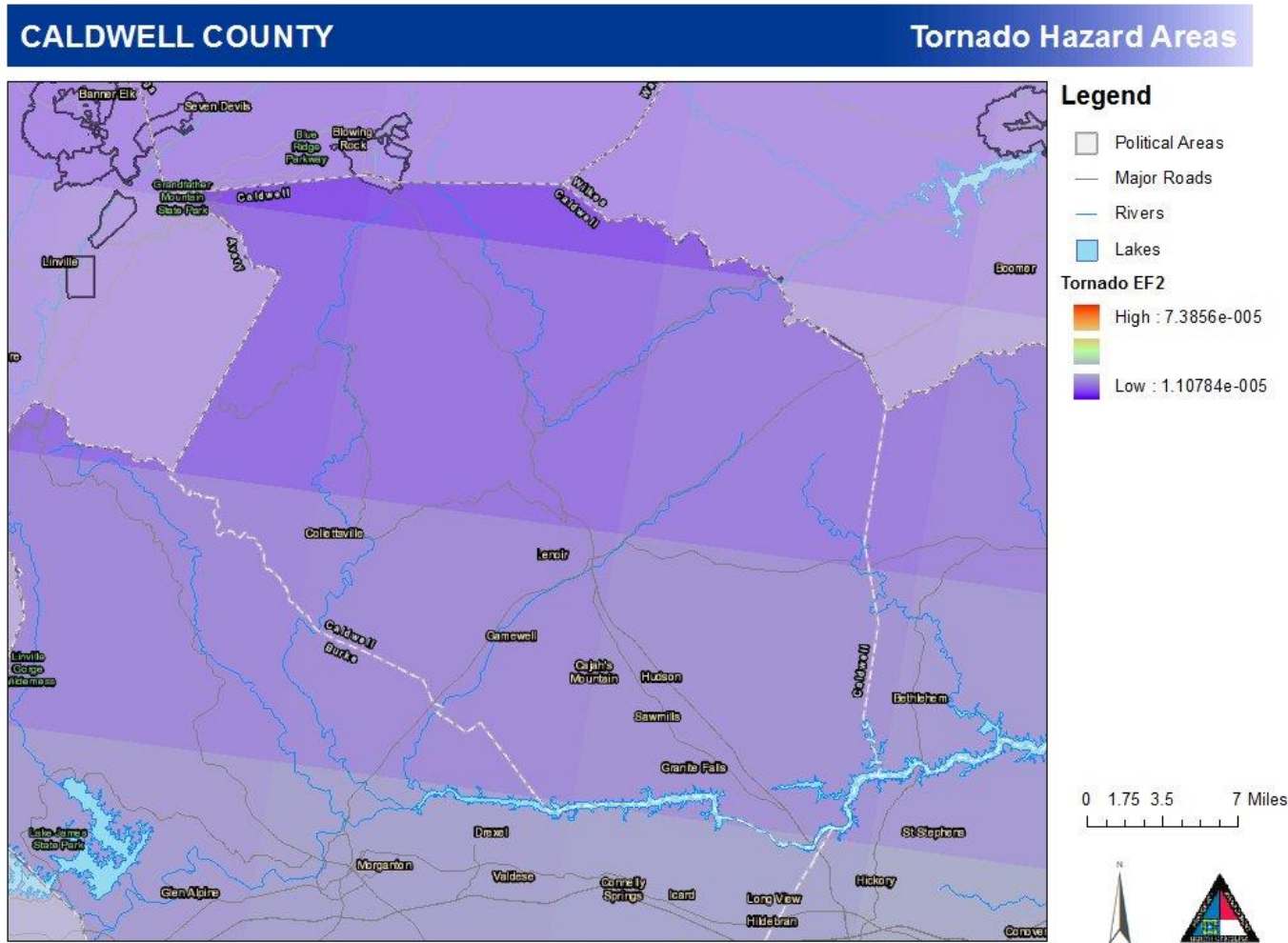
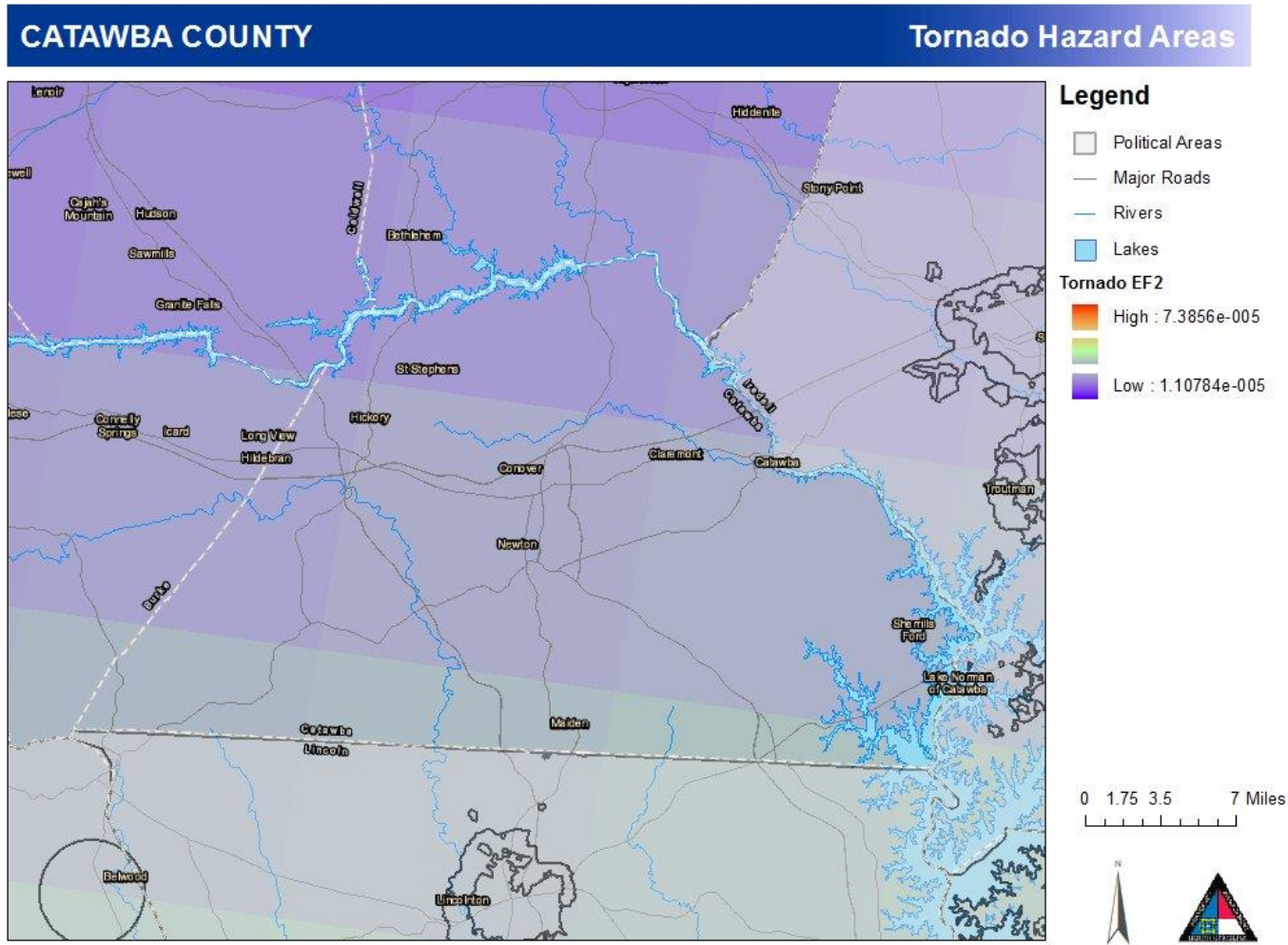


Figure 4.53: Tornado Hazard Areas (Depicting Probability High-Low)



Extent (Magnitude and Severity)

Definition:

Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale.

Extent Event:

Tornadoes of any magnitude and severity are possible within the planning area. Since 1951, the highest magnitude tornado to impact the Unifour Region has been an F4 on the Fujita Scale for Tornado Damage which has occurred on 05/05/1989 in Catawba County (Unincorporated Area) and on 05/07/1998 in Caldwell County (Unincorporated Area). The following table provides the highest recorded events in the jurisdictions below.

Location	Date	Magnitude
Alexander County (Unincorporated Area)	03/05/83	F1
Burke County (Unincorporated Area)	09/27/10	EF1
Burke County (Unincorporated Area)	10/08/17	EF1
City of Morganton	05/24/79	F2
Caldwell County (Unincorporated Area)	05/07/98	F4
Town of Hudson	07/09/77	F0
Town of Sawmills	10/08/17	EF0
Catawba County (Unincorporated Area)	05/05/89	F4
City of Claremont	10/26/10	EF2
City of Hickory	08/09/51	F2
City of Newton	08/18/54	F2
Town of Maiden	05/23/73	F1

Historical Occurrences

The following historical occurrences ranging from 1951 to 2019 have been identified based on the NCDC Storm Events database (**Table 4.101**). It should be noted that only those historical occurrences listed in the NCDC database are shown here and that other, unrecorded or unreported events may have occurred within the planning area during this timeframe. Cities and Towns of Taylorsville, Connelly Springs, Drexel, Glen Alpine, Hildebran, Rhodhiss, Rutherford College, Valdese, Cahaj's Mountain, Cedar Rock, Gamewell, Granite Falls, Lenoir, , Brookford, Catawba, Conover, Longview, have no recorded events or extent.

Table 4.101: Historical Occurrences of Tornado (1951 to 2019)

Location	Date	Magnitude	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander								
Alexander County (Unincorporated Area)	03/05/83	F1	0	0	\$25,000	\$7,154	\$0	\$0
Alexander County (Unincorporated Area)	03/10/92	F0	0	0	\$25,000	\$9,757	\$0	\$0
Alexander County (Unincorporated Area)	05/07/98	F0	0	0	\$425,000	\$205,094	0	\$0
Alexander County (Unincorporated Area)	04/28/11	EF1	0	0	0	\$0	0	\$0
Alexander County (Unincorporated Area)	08/18/11	EF0	0	0	\$500,000	\$381,145	0	\$0
Alexander County (Unincorporated Area)	10/23/17	EF1	0	0	\$0	\$0	\$0	\$0
Alexander County (Unincorporated Area)	10/23/17	EF1	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	7 Events		0	0	\$975,000	\$603,150	\$0	\$0
Burke								
Burke County (Unincorporated Area)	05/11/08	EF0	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	09/27/10	EF1	0	0	\$400,000	\$295,722	\$0	\$0

Location	Date	Magnitude	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Burke County (Unincorporated Area)	01/11/12	EF2	0	8	\$13,400,000	\$10,356,227	0	\$0
Burke County (Unincorporated Area)	10/14/14	EF0	0	0	\$0	\$0	\$0	\$0
Burke County (Unincorporated Area)	10/08/17	EF0	0	0	\$1,000	\$942	\$0	\$0
Burke County (Unincorporated Area)	10/08/17	EF1	0	0	\$150,000	\$141,236	\$0	\$0
City of Morganton	04/03/74	F1	0	0	\$25,000	\$5,264	\$0	\$0
City of Morganton	05/24/79	F2	0	0	\$250,000	\$62,818	\$0	\$0
Subtotal Burke	8 Events		0	8	\$14,226,000	\$10,862,209	\$0	\$0
Caldwell								
Caldwell County (Unincorporated Area)	05/27/73	F1	0	0	\$25,000	\$5,110	\$0	\$0
Caldwell County (Unincorporated Area)	04/04/74	F2	0	0	\$250,000	\$52,637	\$0	\$0
Caldwell County (Unincorporated Area)	05/05/89	F2	0	0	\$250,000	\$88,489	\$0	\$0
Caldwell County (Unincorporated Area)	05/07/98	F4	0	2	\$1,100,000	\$530,831	0	\$0
Caldwell County (Unincorporated Area)	05/07/98	F1	0	0	\$450,000	\$217,158	0	\$0
Caldwell County (Unincorporated Area)	04/28/11	EF1	0	1	0	\$0	0	\$0
Caldwell County (Unincorporated Area)	10/14/14	EF0	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	10/23/17	EF1	0	0	\$0	\$0	\$0	\$0

Location	Date	Magnitude	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Town of Hudson	07/09/77	F0	0	0	\$25,000	\$5,888	\$0	\$0
Town of Hudson	10/08/17	EF1	0	0	\$300,000	\$282,472	\$0	\$0
Town of Sawmills	10/08/17	EF0	0	0	\$10,000	\$9,416	\$0	\$0
Subtotal Caldwell	11 Events		0	3	\$2,410,000	\$1,192,002	\$0	\$0
Catawba								
Catawba County (Unincorporated Area)	05/27/73	F1	0	0	\$250,000	\$51,103	\$0	\$0
Catawba County (Unincorporated Area)	03/14/75	F1	0	0	\$2,500	\$544	\$0	\$0
Catawba County (Unincorporated Area)	05/25/75	F1	0	0	\$2,500	\$547	\$0	\$0
Catawba County (Unincorporated Area)	05/05/89	F4	0	3	\$25,000,000	\$8,848,932	\$0	\$0
Catawba County (Unincorporated Area)	03/07/92	F0	0	0	\$2,500	\$976	\$0	\$0
Catawba County (Unincorporated Area)	11/22/92	F1	0	0	\$250,000	\$99,984	\$0	\$0
Catawba County (Unincorporated Area)	10/26/10	EF0	0	0	0	\$0	0	\$0
Catawba County (Unincorporated Area)	10/26/10	EF0	0	0	0	\$0	0	\$0
Catawba County (Unincorporated Area)	10/26/10	EF0	0	0	0	\$0	0	\$0
Catawba County (Unincorporated Area)	05/01/17	EF0	0	0	\$10,000	\$9,274	\$0	\$0
Catawba County (Unincorporated Area)	10/23/17	EF0	0	0	\$0	\$0	\$0	\$0

Location	Date	Magnitude	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
City of Claremont	10/26/10	EF2	0	0	\$6,610,000	\$4,900,275	0	\$0
City of Hickory	08/09/51	F2	0	0	\$25,000	\$2,413	\$0	\$0
City of Hickory	09/28/98	F0	0	0	\$20,000	\$9,782	0	\$0
City of Hickory	10/23/17	EF1	0	0	\$500,000	\$471,435	\$0	\$0
City of Newton	08/18/54	F2	0	0	\$25,000	\$2,678	\$0	\$0
Town of Maiden	05/23/73	F1	0	2	\$25,000	\$5,109	\$0	\$0
Subtotal Catawba	17 Events		0	5	\$32,722,500	\$14,403,051	\$0	\$0
TOTAL PLAN	43 Events		0	16	\$50,333,500	\$27,060,412	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

According to the information provided in the preceding table, 43 recorded instances of Tomado have affected the planning area since 1951, causing an estimated \$50,333,500 in property damage, \$0 in crop damages, 0 death(s), and 16 injury(ies). The highest magnitude tornado on record is an Ef4. The lowest magnitude tornado on record is an Ef0.

Table 4.102 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.102: Summary of Historical Tornado Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander							
Alexander County (Unincorporated Area)	7	0	0	\$975,000	\$279,013	\$0	\$0
Subtotal Alexander	7	0	0	\$975,000	\$279,013	\$0	\$0
Burke							
Burke County (Unincorporated Area)	6	0	8	\$13,951,000	\$9,503,226	\$0	\$0
City of Morganton	2	0	0	\$275,000	\$57,901	\$0	\$0
Subtotal Burke	8	0	8	\$14,226,000	\$9,561,126	\$0	\$0
Caldwell							
Caldwell County (Unincorporated Area)	8	0	3	\$2,075,000	\$424,151	\$0	\$0
Town of Hudson	2	0	0	\$325,000	\$76,549	\$0	\$0
Town of Sawmills	1	0	0	\$10,000	\$9,416	\$0	\$0
Subtotal Caldwell	11	0	3	\$2,410,000	\$510,116	\$0	\$0
Catawba							
Catawba County (Unincorporated Area)	11	0	3	\$25,517,500	\$5,216,041	\$0	\$0
City of Claremont	1	0	0	\$6,610,000	\$4,900,275	0	\$0
City of Hickory	3	0	0	\$545,000	\$52,608	\$0	\$0
City of Newton	1	0	0	\$25,000	\$2,678	\$0	\$0
Town of Maiden	1	0	2	\$25,000	\$5,109	\$0	\$0

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Subtotal Catawba	17	0	5	\$32,722,500	\$10,176,710	\$0	\$0
TOTAL PLAN	43	0	16	\$50,333,500	\$20,526,965	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Tornado is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low - Less Than 1% Annual Probability of Ef2 Event
- Medium - Between 1% And 10% Annual Probability of Ef2 Event
- High - More Than 10% Annual Probability of Ef2 Event

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cahah's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low

Jurisdiction	IRISK Probability of Future Occurrence
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Tornado Hazard Vulnerability

All of the inventoried assets in the Unifour Region are exposed to potential tornado activity. Any specific vulnerability of individual assets would depend greatly on individual design, building characteristics, and any existing mitigation measures currently in place. Such site-specific vulnerability determinations are outside the scope of this risk assessment but may be considered during future plan updates. The following tables provide counts and values by jurisdiction relevant to Tornado hazard vulnerability in the Unifour Regional HMP Area.

Table 4.103: Population Impacted by the EF0 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.104: Population Impacted by the EF1 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.105: Population Impacted by the EF2 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.106: Population Impacted by the EF3 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.107: Population Impacted by the EF4 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.108: Population Impacted by the EF5 Tornado

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	0	0%	4,995	0	0%	1,961	0	0%
Town of Taylorsville	4,180	0	0%	632	0	0%	248	0	0%
Subtotal Alexander	37,196	0	0%	5627	0	0%	2209	0	0%
Burke									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke County (Unincorporated Area)	49,470	0	0%	7,997	0	0%	2,762	0	0%
City of Hickory	456	0	0%	74	0	0%	25	0	0%
City of Morganton	22,546	0	0%	3,645	0	0%	1,259	0	0%
Town of Connelly Springs	1,659	0	0%	268	0	0%	93	0	0%
Town of Drexel	5,506	0	0%	890	0	0%	307	0	0%
Town of Glen Alpine	1,964	0	0%	318	0	0%	110	0	0%
Town of Hildebran	1,945	0	0%	314	0	0%	109	0	0%
Town of Long View	698	0	0%	113	0	0%	39	0	0%
Town of Rhodhiss	640	0	0%	103	0	0%	36	0	0%
Town of Rutherford College	1,502	0	0%	243	0	0%	84	0	0%
Town of Valdese	4,387	0	0%	709	0	0%	245	0	0%
Subtotal Burke	90,773	0	0%	14674	0	0%	5069	0	0%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	0	0%	5,352	0	0%	1,940	0	0%
City of Hickory	51	0	0%	8	0	0%	3	0	0%
City of Lenoir	20,837	0	0%	3,216	0	0%	1,166	0	0%
Town of Blowing Rock	51	0	0%	8	0	0%	3	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Cahaj's Mountain	2,789	0	0%	430	0	0%	156	0	0%
Town of Gamewell	4,043	0	0%	624	0	0%	226	0	0%
Town of Granite Falls	7,104	0	0%	1,096	0	0%	397	0	0%
Town of Hudson	6,431	0	0%	992	0	0%	360	0	0%
Town of Rhodhiss	385	0	0%	59	0	0%	22	0	0%
Town of Sawmills	6,380	0	0%	985	0	0%	357	0	0%
Village of Cedar Rock	294	0	0%	45	0	0%	16	0	0%
Subtotal Caldwell	83,045	0	0%	12815	0	0%	4646	0	0%
Catawba									
Catawba County (Unincorporated Area)	70,017	0	0%	9,835	0	0%	4,368	0	0%
City of Claremont	1,957	0	0%	275	0	0%	122	0	0%
City of Conover	9,669	0	0%	1,358	0	0%	603	0	0%
City of Hickory	48,481	0	0%	6,810	0	0%	3,024	0	0%
City of Newton	14,214	0	0%	1,997	0	0%	887	0	0%
Town of Brookford	371	0	0%	52	0	0%	23	0	0%
Town of Catawba	1,152	0	0%	162	0	0%	72	0	0%
Town of Long View	4,181	0	0%	587	0	0%	261	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Maiden	4,964	0	0%	697	0	0%	310	0	0%
Subtotal Catawba	155,006	0	0%	21773	0	0%	9670	0	0%
TOTAL PLAN	366,020	0	0%	54889	0	0%	21594	0	0%

Source: GIS Analysis

Table 4.109: Buildings Impacted by the EF0 Tornado

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$159,897,627	1,814	7.4%	\$105,767,672	218	0.9%	\$15,175,670	24,650	99.9%	\$280,840,969
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$16,699,024	309	10.9%	\$23,075,249	76	2.7%	\$2,581,020	2,821	99.9%	\$42,355,294
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$176,596,651	2,123	7.7%	\$128,842,921	294	1.1%	\$17,756,690	27,471	99.9%	\$323,196,263
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$203,938,669	1,102	3.9%	\$70,133,247	229	0.8%	\$15,174,869	28,084	100%	\$289,246,784
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$82,226,986	1,134	10.6%	\$92,314,365	301	2.8%	\$18,762,685	10,704	99.8%	\$193,304,035
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$6,067,803	38	4.3%	\$1,563,281	8	0.9%	\$517,071	889	100%	\$8,148,154
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$20,640,134	98	3.3%	\$6,564,034	26	0.9%	\$1,613,646	2,948	100%	\$28,817,815

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$7,305,877	44	4.1%	\$1,793,227	9	0.8%	\$1,171,299	1,086	100%	\$10,270,404
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$7,844,779	121	11.3%	\$17,435,142	16	1.5%	\$2,545,586	1,067	99.8%	\$27,825,506
Town of Rutherford College	827	682	82.5%	755	91.3%	\$6,865,379	49	5.9%	\$3,758,741	23	2.8%	\$1,303,856	827	100%	\$11,927,976
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$17,200,572	175	8.2%	\$20,800,764	32	1.5%	\$2,773,312	2,121	99.5%	\$40,774,647
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$352,090,199	2,761	5.8%	\$214,362,801	644	1.3%	\$43,862,324	47,726	99.9%	\$610,315,321
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$166,346,984	887	4.3%	\$50,358,029	166	0.8%	\$11,095,928	20,772	100%	\$227,800,942
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$93,481,220	938	9.1%	\$96,171,029	160	1.6%	\$11,814,541	10,299	99.8%	\$201,466,789
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$12,430,036	87	6.4%	\$5,160,093	13	1%	\$352,427	1,350	100%	\$17,942,557
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$16,169,892	78	3.8%	\$5,461,600	13	0.6%	\$3,007,000	2,062	100%	\$24,638,491
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$32,451,130	262	7.7%	\$24,464,846	60	1.8%	\$4,398,821	3,385	99.7%	\$61,314,796
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$23,770,409	231	7.4%	\$18,072,949	37	1.2%	\$2,948,535	3,116	100%	\$44,791,893
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$3,031,084	17	3.5%	\$745,214	8	1.6%	\$559,265	490	100%	\$4,335,563
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$24,554,593	175	5.4%	\$14,674,463	14	0.4%	\$1,309,044	3,234	100%	\$40,538,100
Village of Cedar Rock	135	135	100%	131	97%	\$2,731,634	3	2.2%	\$224,564	1	0.7%	\$67,447	135	100%	\$3,023,645
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$374,966,982	2,678	6%	\$215,332,787	472	1.1%	\$35,553,008	44,843	99.9%	\$625,852,776
Catawba															

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$360,932,692	2,695	5.4%	\$97,679,942	271	0.5%	\$26,170,499	50,023	99.9%	\$484,783,132
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$9,504,940	230	17%	\$27,237,354	14	1%	\$740,010	1,351	100%	\$37,482,305
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$37,069,902	931	18.3%	\$81,013,462	21	0.4%	\$3,946,993	5,083	99.9%	\$122,030,357
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$188,966,633	3,248	14.4%	\$189,512,331	184	0.8%	\$14,075,364	22,473	99.8%	\$392,554,328
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$52,437,766	903	11.8%	\$63,124,260	48	0.6%	\$4,512,615	7,646	99.9%	\$120,074,641
Town of Brookford	304	274	90.1%	267	87.8%	\$1,596,625	36	11.8%	\$1,459,330	1	0.3%	\$1,774	304	100%	\$3,057,729
Town of Catawba	1,016	706	69.5%	901	88.7%	\$5,571,111	107	10.5%	\$4,842,116	8	0.8%	\$1,969,807	1,016	100%	\$12,383,034
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$16,374,128	305	11.2%	\$22,484,914	19	0.7%	\$1,829,994	2,716	100%	\$40,689,037
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$20,510,340	417	12.9%	\$31,616,335	18	0.6%	\$3,411,158	3,223	99.8%	\$55,537,833
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$692,964,137	8,872	9.4%	\$518,970,044	584	0.6%	\$56,658,214	93,835	99.9%	\$1,268,592,396
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$1,596,617,969	16,434	7.7%	\$1,077,508,553	1,994	0.9%	\$153,830,236	213,875	99.9%	\$2,827,956,756

Source: GIS Analysis

Table 4.110: Buildings Impacted by the EF1 Tornado

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$1,158,397,916	1,814	7.4%	\$679,647,570	218	0.9%	\$86,809,487	24,650	99.9%	\$1,924,854,973
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$118,625,998	309	10.9%	\$154,849,232	76	2.7%	\$15,312,087	2,821	99.9%	\$288,787,316
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$1,277,023,914	2,123	7.7%	\$834,496,802	294	1.1%	\$102,121,574	27,471	99.9%	\$2,213,642,289
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$1,462,655,951	1,102	3.9%	\$447,629,880	229	0.8%	\$80,829,529	28,084	100%	\$1,991,115,359
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$582,150,985	1,134	10.6%	\$582,985,830	301	2.8%	\$105,061,220	10,704	99.8%	\$1,270,198,035
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$42,502,653	38	4.3%	\$10,748,020	8	0.9%	\$3,894,259	889	100%	\$57,144,932
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$145,372,388	98	3.3%	\$38,380,838	26	0.9%	\$8,534,733	2,948	100%	\$192,287,959
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$52,818,471	44	4.1%	\$11,727,764	9	0.8%	\$5,380,551	1,086	100%	\$69,926,787
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$54,794,650	121	11.3%	\$120,312,386	16	1.5%	\$15,843,687	1,067	99.8%	\$190,950,722
Town of Rutherford College	827	682	82.5%	755	91.3%	\$48,286,726	49	5.9%	\$22,081,782	23	2.8%	\$6,443,521	827	100%	\$76,812,030
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$118,762,240	175	8.2%	\$135,566,520	32	1.5%	\$13,078,454	2,121	99.5%	\$267,407,215
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$2,507,344,064	2,761	5.8%	\$1,369,433,020	644	1.3%	\$239,065,954	47,726	99.9%	\$4,115,843,039
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$1,198,774,766	887	4.3%	\$329,670,034	166	0.8%	\$59,255,921	20,772	100%	\$1,587,700,720

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$666,481,148	938	9.1%	\$586,345,522	160	1.6%	\$64,487,651	10,299	99.8%	\$1,317,314,320
Town of Cahah's Mountain	1,350	1,350	100%	1,250	92.6%	\$89,339,068	87	6.4%	\$31,735,439	13	1%	\$2,841,445	1,350	100%	\$123,915,953
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$116,708,944	78	3.8%	\$34,587,550	13	0.6%	\$13,560,442	2,062	100%	\$164,856,936
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$229,502,084	262	7.7%	\$150,748,816	60	1.8%	\$22,655,020	3,385	99.7%	\$402,905,920
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$168,734,683	231	7.4%	\$113,138,133	37	1.2%	\$17,353,923	3,116	100%	\$299,226,739
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$20,974,927	17	3.5%	\$5,020,379	8	1.6%	\$2,489,169	490	100%	\$28,484,475
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$172,980,483	175	5.4%	\$93,651,496	14	0.4%	\$7,291,504	3,234	100%	\$273,923,483
Village of Cedar Rock	135	135	100%	131	97%	\$19,349,122	3	2.2%	\$1,000,290	1	0.7%	\$282,376	135	100%	\$20,631,787
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$2,682,845,225	2,678	6%	\$1,345,897,659	472	1.1%	\$190,217,451	44,843	99.9%	\$4,218,960,333
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$2,613,261,948	2,695	5.4%	\$604,689,905	271	0.5%	\$122,748,691	50,023	99.9%	\$3,340,700,543
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$69,360,182	230	17%	\$181,796,369	14	1%	\$3,524,834	1,351	100%	\$254,681,385
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$271,148,128	931	18.3%	\$528,816,812	21	0.4%	\$17,876,089	5,083	99.9%	\$817,841,029
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$1,374,576,600	3,248	14.4%	\$1,139,288,273	184	0.8%	\$76,567,592	22,473	99.8%	\$2,590,432,465
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$381,606,357	903	11.8%	\$385,618,269	48	0.6%	\$21,349,604	7,646	99.9%	\$788,574,230
Town of Brookford	304	274	90.1%	267	87.8%	\$11,502,024	36	11.8%	\$8,622,244	1	0.3%	\$14,300	304	100%	\$20,138,569

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Catawba	1,016	706	69.5%	901	88.7%	\$39,952,688	107	10.5%	\$29,470,349	8	0.8%	\$8,455,617	1,016	100%	\$77,878,654
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$117,963,306	305	11.2%	\$145,865,691	19	0.7%	\$8,149,759	2,716	100%	\$271,978,755
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$148,905,396	417	12.9%	\$215,884,963	18	0.6%	\$14,592,381	3,223	99.8%	\$379,382,740
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$5,028,276,629	8,872	9.4%	\$3,240,052,875	584	0.6%	\$273,278,867	93,835	99.9%	\$8,541,608,370
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$11,495,489,832	16,434	7.7%	\$6,789,880,356	1,994	0.9%	\$804,683,846	213,875	99.9%	\$19,090,054,031

Source: GIS Analysis

Table 4.111: Buildings Impacted by the EF2 Tornado

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$2,153,069,698	1,814	7.4%	\$1,409,696,605	218	0.9%	\$277,441,269	24,650	99.9%	\$3,840,207,572
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$233,104,640	309	10.9%	\$344,534,115	76	2.7%	\$49,734,802	2,821	99.9%	\$627,373,557
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$2,386,174,338	2,123	7.7%	\$1,754,230,720	294	1.1%	\$327,176,071	27,471	99.9%	\$4,467,581,129
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$2,666,948,205	1,102	3.9%	\$993,841,869	229	0.8%	\$249,629,122	28,084	100%	\$3,910,419,195
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$1,160,170,489	1,134	10.6%	\$1,369,474,014	301	2.8%	\$332,472,464	10,704	99.8%	\$2,862,116,967

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$81,566,738	38	4.3%	\$23,566,918	8	0.9%	\$13,809,476	889	100%	\$118,943,132
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$285,990,238	98	3.3%	\$90,887,121	26	0.9%	\$26,263,690	2,948	100%	\$403,141,049
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$99,227,960	44	4.1%	\$25,259,739	9	0.8%	\$15,274,691	1,086	100%	\$139,762,391
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$111,683,388	121	11.3%	\$274,177,007	16	1.5%	\$52,502,944	1,067	99.8%	\$438,363,339
Town of Rutherford College	827	682	82.5%	755	91.3%	\$98,976,588	49	5.9%	\$49,471,531	23	2.8%	\$19,115,578	827	100%	\$167,563,697
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$248,025,677	175	8.2%	\$314,132,543	32	1.5%	\$37,742,338	2,121	99.5%	\$599,900,557
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$4,752,589,283	2,761	5.8%	\$3,140,810,742	644	1.3%	\$746,810,303	47,726	99.9%	\$8,640,210,327
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$2,234,015,670	887	4.3%	\$727,877,988	166	0.8%	\$183,241,756	20,772	100%	\$3,145,135,414
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$1,329,730,630	938	9.1%	\$1,389,089,902	160	1.6%	\$201,594,528	10,299	99.8%	\$2,920,415,060
Town of Cahah's Mountain	1,350	1,350	100%	1,250	92.6%	\$171,974,434	87	6.4%	\$72,558,436	13	1%	\$10,283,084	1,350	100%	\$254,815,954
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$218,113,232	78	3.8%	\$77,689,272	13	0.6%	\$38,038,175	2,062	100%	\$333,840,679
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$463,763,612	262	7.7%	\$356,520,731	60	1.8%	\$68,753,840	3,385	99.7%	\$889,038,183
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$326,904,853	231	7.4%	\$258,196,143	37	1.2%	\$56,172,437	3,116	100%	\$641,273,434
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$41,614,152	17	3.5%	\$11,654,864	8	1.6%	\$6,921,554	490	100%	\$60,190,569
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$335,802,303	175	5.4%	\$220,363,212	14	0.4%	\$23,017,191	3,234	100%	\$579,182,705

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Village of Cedar Rock	135	135	100%	131	97%	\$35,834,727	3	2.2%	\$1,943,604	1	0.7%	\$751,854	135	100%	\$38,530,185			
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$5,157,753,613	2,678	6%	\$3,115,894,152	472	1.1%	\$588,774,419	44,843	99.9%	\$8,862,422,183			
Catawba																		
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$4,769,469,529	2,695	5.4%	\$1,444,281,024	271	0.5%	\$353,055,476	50,023	99.9%	\$6,566,806,029			
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$132,804,158	230	17%	\$436,544,181	14	1%	\$10,234,062	1,351	100%	\$579,582,401			
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$516,348,832	931	18.3%	\$1,282,093,680	21	0.4%	\$50,285,452	5,083	99.9%	\$1,848,727,964			
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$2,661,533,604	3,248	14.4%	\$2,956,005,589	184	0.8%	\$238,960,260	22,473	99.8%	\$5,856,499,453			
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$724,314,960	903	11.8%	\$1,007,872,962	48	0.6%	\$61,733,243	7,646	99.9%	\$1,793,921,165			
Town of Brookford	304	274	90.1%	267	87.8%	\$22,571,282	36	11.8%	\$21,165,598	1	0.3%	\$51,753	304	100%	\$43,788,634			
Town of Catawba	1,016	706	69.5%	901	88.7%	\$72,824,032	107	10.5%	\$74,862,917	8	0.8%	\$22,929,202	1,016	100%	\$170,616,151			
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$226,470,792	305	11.2%	\$354,565,459	19	0.7%	\$22,670,839	2,716	100%	\$603,707,090			
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$277,998,923	417	12.9%	\$508,926,461	18	0.6%	\$39,472,556	3,223	99.8%	\$826,397,941			
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$9,404,336,112	8,872	9.4%	\$8,086,317,871	584	0.6%	\$799,392,843	93,835	99.9%	\$18,290,046,828			
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$21,700,853,346	16,434	7.7%	\$16,097,253,485	1,994	0.9%	\$2,462,153,636	213,875	99.9%	\$40,260,260,467			

Source: GIS Analysis

Table 4.112: Buildings Impacted by the EF3 Tornado

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Alexander																		
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$2,569,679,029	1,814	7.4%	\$1,695,811,300	218	0.9%	\$433,099,852	24,650	99.9%	\$4,698,590,181			
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$305,816,428	309	10.9%	\$403,428,111	76	2.7%	\$77,840,944	2,821	99.9%	\$787,085,483			
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$2,875,495,457	2,123	7.7%	\$2,099,239,411	294	1.1%	\$510,940,796	27,471	99.9%	\$5,485,675,664			
Burke																		
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$3,188,727,782	1,102	3.9%	\$1,229,172,955	229	0.8%	\$387,476,120	28,084	100%	\$4,805,376,858			
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$1,550,699,177	1,134	10.6%	\$1,747,233,984	301	2.8%	\$518,168,768	10,704	99.8%	\$3,816,101,929			
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$107,719,114	38	4.3%	\$26,877,408	8	0.9%	\$21,903,258	889	100%	\$156,499,780			
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$381,776,343	98	3.3%	\$120,038,486	26	0.9%	\$40,741,882	2,948	100%	\$542,556,710			
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$120,316,084	44	4.1%	\$32,428,721	9	0.8%	\$23,357,033	1,086	100%	\$176,101,838			
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$155,808,955	121	11.3%	\$307,844,228	16	1.5%	\$82,433,436	1,067	99.8%	\$546,086,619			
Town of Rutherford College	827	682	82.5%	755	91.3%	\$137,005,813	49	5.9%	\$58,721,130	23	2.8%	\$29,465,422	827	100%	\$225,192,365			
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$359,422,868	175	8.2%	\$376,633,517	32	1.5%	\$57,888,525	2,121	99.5%	\$793,944,910			
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$6,001,476,136	2,761	5.8%	\$3,898,950,429	644	1.3%	\$1,161,434,444	47,726	99.9%	\$11,061,861,009			
Caldwell																		
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$2,704,688,887	887	4.3%	\$877,750,602	166	0.8%	\$284,492,004	20,772	100%	\$3,866,931,493			

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$1,755,908,109	938	9.1%	\$1,751,808,028	160	1.6%	\$313,555,771	10,299	99.8%	\$3,821,271,909			
Town of Cahah's Mountain	1,350	1,350	100%	1,250	92.6%	\$216,303,421	87	6.4%	\$93,450,832	13	1%	\$16,357,372	1,350	100%	\$326,111,625			
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$263,961,508	78	3.8%	\$95,091,170	13	0.6%	\$58,034,548	2,062	100%	\$417,087,227			
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$628,368,927	262	7.7%	\$456,206,981	60	1.8%	\$106,401,811	3,385	99.7%	\$1,190,977,720			
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$424,065,701	231	7.4%	\$315,829,412	37	1.2%	\$87,868,082	3,116	100%	\$827,763,195			
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$57,818,671	17	3.5%	\$13,444,540	8	1.6%	\$10,542,591	490	100%	\$81,805,802			
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$442,949,039	175	5.4%	\$268,297,319	14	0.4%	\$35,858,355	3,234	100%	\$747,104,713			
Village of Cedar Rock	135	135	100%	131	97%	\$44,744,259	3	2.2%	\$2,406,831	1	0.7%	\$1,135,466	135	100%	\$48,286,557			
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$6,538,808,522	2,678	6%	\$3,874,285,715	472	1.1%	\$914,246,000	44,843	99.9%	\$11,327,340,241			
Catawba																		
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$5,587,487,063	2,695	5.4%	\$1,815,847,425	271	0.5%	\$541,179,254	50,023	99.9%	\$7,944,513,743			
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$161,052,292	230	17%	\$504,505,553	14	1%	\$15,714,230	1,351	100%	\$681,272,075			
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$619,537,078	931	18.3%	\$1,509,261,290	21	0.4%	\$76,761,038	5,083	99.9%	\$2,205,559,406			
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$3,286,127,414	3,248	14.4%	\$3,822,685,892	184	0.8%	\$371,570,558	22,473	99.8%	\$7,480,383,864			
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$875,413,363	903	11.8%	\$1,269,062,765	48	0.6%	\$94,719,540	7,646	99.9%	\$2,239,195,668			
Town of Brookford	304	274	90.1%	267	87.8%	\$28,783,469	36	11.8%	\$28,008,463	1	0.3%	\$82,324	304	100%	\$56,874,256			

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Catawba	1,016	706	69.5%	901	88.7%	\$87,058,315	107	10.5%	\$93,508,574	8	0.8%	\$34,754,665	1,016	100%	\$215,321,553
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$282,756,171	305	11.2%	\$420,062,093	19	0.7%	\$34,533,819	2,716	100%	\$737,352,083
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$331,838,448	417	12.9%	\$577,567,843	18	0.6%	\$59,800,815	3,223	99.8%	\$969,207,105
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$11,260,053,613	8,872	9.4%	\$10,040,509,898	584	0.6%	\$1,229,116,243	93,835	99.9%	\$22,529,679,753
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$26,675,833,728	16,434	7.7%	\$19,912,985,453	1,994	0.9%	\$3,815,737,483	213,875	99.9%	\$50,404,556,667

Source: GIS Analysis

Table 4.113: Buildings Impacted by the EF4 Tornado

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$2,587,543,219	1,814	7.4%	\$1,747,738,771	218	0.9%	\$463,592,340	24,650	99.9%	\$4,798,874,331
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$314,082,405	309	10.9%	\$410,996,824	76	2.7%	\$82,946,096	2,821	99.9%	\$808,025,325
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$2,901,625,624	2,123	7.7%	\$2,158,735,595	294	1.1%	\$546,538,436	27,471	99.9%	\$5,606,899,656
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$3,216,653,738	1,102	3.9%	\$1,266,401,078	229	0.8%	\$418,849,300	28,084	100%	\$4,901,904,116
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$1,598,221,838	1,134	10.6%	\$1,810,161,722	301	2.8%	\$556,203,399	10,704	99.8%	\$3,964,586,959

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$110,953,586	38	4.3%	\$27,172,654	8	0.9%	\$22,803,935	889	100%	\$160,930,175			
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$393,649,103	98	3.3%	\$125,802,358	26	0.9%	\$44,086,925	2,948	100%	\$563,538,386			
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$121,556,433	44	4.1%	\$33,426,998	9	0.8%	\$25,905,378	1,086	100%	\$180,888,809			
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$161,937,079	121	11.3%	\$311,380,641	16	1.5%	\$87,358,965	1,067	99.8%	\$560,676,685			
Town of Rutherford College	827	682	82.5%	755	91.3%	\$142,107,285	49	5.9%	\$60,224,842	23	2.8%	\$32,235,123	827	100%	\$234,567,250			
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$376,163,298	175	8.2%	\$384,902,057	32	1.5%	\$63,872,274	2,121	99.5%	\$824,937,630			
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$6,121,242,360	2,761	5.8%	\$4,019,472,350	644	1.3%	\$1,251,315,299	47,726	99.9%	\$11,392,030,010			
Caldwell																		
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$2,732,995,044	887	4.3%	\$900,512,591	166	0.8%	\$307,409,609	20,772	100%	\$3,940,917,244			
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$1,804,537,158	938	9.1%	\$1,819,689,302	160	1.6%	\$337,751,757	10,299	99.8%	\$3,961,978,217			
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$220,193,354	87	6.4%	\$96,555,540	13	1%	\$16,943,622	1,350	100%	\$333,692,515			
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$266,646,309	78	3.8%	\$97,984,440	13	0.6%	\$64,614,061	2,062	100%	\$429,244,810			
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$649,142,862	262	7.7%	\$475,423,574	60	1.8%	\$115,610,626	3,385	99.7%	\$1,240,177,063			
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$434,737,617	231	7.4%	\$325,213,353	37	1.2%	\$93,720,608	3,116	100%	\$853,671,578			
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$60,124,423	17	3.5%	\$13,726,960	8	1.6%	\$11,771,158	490	100%	\$85,622,541			
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$455,819,218	175	5.4%	\$277,529,099	14	0.4%	\$38,517,653	3,234	100%	\$771,865,970			

Jurisdiction	All Buildings			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Village of Cedar Rock	135	135	100%	131	97%	\$45,579,958	3	2.2%	\$2,479,298	1	0.7%	\$1,286,261	135	100%	\$49,345,518
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$6,669,775,943	2,678	6%	\$4,009,114,157	472	1.1%	\$987,625,355	44,843	99.9%	\$11,666,515,456
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$5,606,296,465	2,695	5.4%	\$1,896,763,942	271	0.5%	\$597,743,676	50,023	99.9%	\$8,100,804,084
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$162,514,516	230	17%	\$517,473,433	14	1%	\$17,305,710	1,351	100%	\$697,293,658
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$623,674,207	931	18.3%	\$1,556,745,263	21	0.4%	\$85,386,004	5,083	99.9%	\$2,265,805,474
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$3,328,674,869	3,248	14.4%	\$4,028,881,167	184	0.8%	\$400,435,120	22,473	99.8%	\$7,757,991,157
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$883,104,825	903	11.8%	\$1,332,713,528	48	0.6%	\$104,445,871	7,646	99.9%	\$2,320,264,224
Town of Brookford	304	274	90.1%	267	87.8%	\$29,364,962	36	11.8%	\$29,399,165	1	0.3%	\$85,274	304	100%	\$58,849,401
Town of Catawba	1,016	706	69.5%	901	88.7%	\$87,819,289	107	10.5%	\$98,150,133	8	0.8%	\$39,127,850	1,016	100%	\$225,097,272
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$287,368,461	305	11.2%	\$434,008,044	19	0.7%	\$38,553,150	2,716	100%	\$759,929,656
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$334,055,885	417	12.9%	\$588,756,350	18	0.6%	\$67,381,398	3,223	99.8%	\$990,193,632
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$11,342,873,479	8,872	9.4%	\$10,482,891,025	584	0.6%	\$1,350,464,053	93,835	99.9%	\$23,176,228,558
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$27,035,517,406	16,434	7.7%	\$20,670,213,127	1,994	0.9%	\$4,135,943,143	213,875	99.9%	\$51,841,673,680

Source: GIS Analysis

Table 4.114: Buildings Impacted by the EF5 Tornado

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk			
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	
Alexander																
Alexander County (Unincorporated Area)	24,663	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Taylorsville	2,823	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Subtotal Alexander	27,486	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Burke																
Burke County (Unincorporated Area)	28,091	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
City of Morganton	10,727	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Connelly Springs	889	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Drexel	2,949	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Glen Alpine	1,086	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Hildebran	1,069	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Rutherford College	827	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Town of Valdese	2,132	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Subtotal Burke	47,770	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	
Caldwell																
Caldwell County (Unincorporated Area)	20,773	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0	

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Cahah's Mountain	1,350	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Gamewell	2,062	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Granite Falls	3,394	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hudson	3,116	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rhodhiss	490	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Sawmills	3,234	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Village of Cedar Rock	135	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Caldwell	44,870	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Catawba															
Catawba County (Unincorporated Area)	50,060	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Claremont	1,351	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Conover	5,089	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Hickory	22,507	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Newton	7,657	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Brookford	304	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Catawba	1,016	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Long View	2,716	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Maiden	3,230	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Catawba	93,930	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
TOTAL PLAN	214,056	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.115: Critical Facilities Exposed to the Tornado - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	19	\$558,793
Banking and Finance	EF1	19	\$3,472,863
Banking and Finance	EF2	19	\$9,850,945
Banking and Finance	EF3	19	\$12,519,752
Banking and Finance	EF4	19	\$12,642,383
Commercial Facilities	EF0	680	\$40,343,476
Commercial Facilities	EF1	680	\$264,752,338
Commercial Facilities	EF2	680	\$699,553,422
Commercial Facilities	EF3	680	\$938,404,694
Commercial Facilities	EF4	680	\$985,056,848
Critical Manufacturing	EF0	384	\$27,268,118
Critical Manufacturing	EF1	384	\$196,642,595
Critical Manufacturing	EF2	384	\$443,911,106
Critical Manufacturing	EF3	384	\$476,033,181
Critical Manufacturing	EF4	384	\$476,077,591
Defense Industrial Base	EF0	1	\$23,354
Defense Industrial Base	EF1	1	\$168,543
Defense Industrial Base	EF2	1	\$380,854
Defense Industrial Base	EF3	1	\$408,291
Defense Industrial Base	EF4	1	\$408,291
Emergency Services	EF0	7	\$247,671
Emergency Services	EF1	7	\$1,996,845

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	EF2	7	\$7,226,505
Emergency Services	EF3	7	\$11,495,252
Emergency Services	EF4	7	\$11,907,242
Energy	EF0	14	\$6,717,275
Energy	EF1	14	\$48,471,421
Energy	EF2	14	\$109,513,158
Energy	EF3	14	\$117,408,178
Energy	EF4	14	\$117,409,916
Food and Agriculture	EF0	617	\$22,777,730
Food and Agriculture	EF1	617	\$146,934,949
Food and Agriculture	EF2	617	\$176,511,958
Food and Agriculture	EF3	617	\$176,869,000
Food and Agriculture	EF4	617	\$176,869,000
Government Facilities	EF0	76	\$9,431,408
Government Facilities	EF1	76	\$40,496,376
Government Facilities	EF2	76	\$109,835,863
Government Facilities	EF3	76	\$166,488,781
Government Facilities	EF4	76	\$187,425,911
Healthcare and Public Health	EF0	35	\$3,168,218
Healthcare and Public Health	EF1	35	\$13,144,556
Healthcare and Public Health	EF2	35	\$25,549,905
Healthcare and Public Health	EF3	35	\$32,930,287
Healthcare and Public Health	EF4	35	\$34,095,942
Transportation Systems	EF0	207	\$16,924,719
Transportation Systems	EF1	207	\$97,251,072

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF2	207	\$208,648,669
Transportation Systems	EF3	207	\$304,810,726
Transportation Systems	EF4	207	\$317,579,666
All Categories	EF0	2,040	\$127,460,762
All Categories	EF1	2,040	\$813,331,558
All Categories	EF2	2,040	\$1,790,982,385
All Categories	EF3	2,040	\$2,237,368,142
All Categories	EF4	2,040	\$2,319,472,790

Source: GIS Analysis

Table 4.116: Critical Facilities Exposed to the Tornado - Town of Taylorsville

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	14	\$611,993
Banking and Finance	EF1	14	\$3,803,494
Banking and Finance	EF2	14	\$10,788,797
Banking and Finance	EF3	14	\$13,711,685
Banking and Finance	EF4	14	\$13,845,992
Commercial Facilities	EF0	195	\$9,740,417
Commercial Facilities	EF1	195	\$68,872,592
Commercial Facilities	EF2	195	\$157,746,437
Commercial Facilities	EF3	195	\$192,942,492
Commercial Facilities	EF4	195	\$198,638,707
Critical Manufacturing	EF0	62	\$8,789,498
Critical Manufacturing	EF1	62	\$63,444,253
Critical Manufacturing	EF2	62	\$143,524,371
Critical Manufacturing	EF3	62	\$154,085,023

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF4	62	\$154,109,314
Emergency Services	EF0	4	\$51,955
Emergency Services	EF1	4	\$418,888
Emergency Services	EF2	4	\$1,515,941
Emergency Services	EF3	4	\$2,411,417
Emergency Services	EF4	4	\$2,497,843
Energy	EF0	2	\$2,857,555
Energy	EF1	2	\$20,622,353
Energy	EF2	2	\$46,600,123
Energy	EF3	2	\$49,957,250
Energy	EF4	2	\$49,957,250
Food and Agriculture	EF0	7	\$248,618
Food and Agriculture	EF1	7	\$1,601,211
Food and Agriculture	EF2	7	\$1,897,844
Food and Agriculture	EF3	7	\$1,897,844
Food and Agriculture	EF4	7	\$1,897,844
Government Facilities	EF0	35	\$1,713,372
Government Facilities	EF1	35	\$8,316,673
Government Facilities	EF2	35	\$24,418,663
Government Facilities	EF3	35	\$37,570,387
Government Facilities	EF4	35	\$41,232,240
Healthcare and Public Health	EF0	16	\$2,225,617
Healthcare and Public Health	EF1	16	\$10,365,187
Healthcare and Public Health	EF2	16	\$24,051,947
Healthcare and Public Health	EF3	16	\$33,545,666

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF4	16	\$34,739,040
Transportation Systems	EF0	44	\$2,135,697
Transportation Systems	EF1	44	\$12,217,504
Transportation Systems	EF2	44	\$26,266,193
Transportation Systems	EF3	44	\$38,648,298
Transportation Systems	EF4	44	\$40,294,307
All Categories	EF0	379	\$28,374,722
All Categories	EF1	379	\$189,662,155
All Categories	EF2	379	\$436,810,316
All Categories	EF3	379	\$524,770,062
All Categories	EF4	379	\$537,212,537

Source: GIS Analysis

Table 4.117: Critical Facilities Exposed to the Tornado - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	4	\$68,733
Banking and Finance	EF1	4	\$427,169
Banking and Finance	EF2	4	\$1,211,687
Banking and Finance	EF3	4	\$1,539,955
Banking and Finance	EF4	4	\$1,555,039
Commercial Facilities	EF0	599	\$32,389,058
Commercial Facilities	EF1	599	\$220,204,275
Commercial Facilities	EF2	599	\$545,175,962
Commercial Facilities	EF3	599	\$699,678,135
Commercial Facilities	EF4	599	\$726,450,980
Critical Manufacturing	EF0	316	\$16,286,870

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF1	316	\$117,517,568
Critical Manufacturing	EF2	316	\$265,489,001
Critical Manufacturing	EF3	316	\$284,635,898
Critical Manufacturing	EF4	316	\$284,642,381
Emergency Services	EF0	13	\$289,007
Emergency Services	EF1	13	\$2,330,115
Emergency Services	EF2	13	\$8,432,599
Emergency Services	EF3	13	\$13,413,793
Emergency Services	EF4	13	\$13,894,544
Energy	EF0	7	\$9,152,000
Energy	EF1	7	\$66,048,000
Energy	EF2	7	\$149,248,000
Energy	EF3	7	\$160,000,000
Energy	EF4	7	\$160,000,000
Food and Agriculture	EF0	59	\$1,870,443
Food and Agriculture	EF1	59	\$12,078,885
Food and Agriculture	EF2	59	\$14,639,905
Food and Agriculture	EF3	59	\$14,688,895
Food and Agriculture	EF4	59	\$14,688,895
Government Facilities	EF0	81	\$10,844,654
Government Facilities	EF1	81	\$45,917,177
Government Facilities	EF2	81	\$123,282,630
Government Facilities	EF3	81	\$186,495,888
Government Facilities	EF4	81	\$210,665,923
Healthcare and Public Health	EF0	22	\$4,330,764

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF1	22	\$18,338,918
Healthcare and Public Health	EF2	22	\$36,927,215
Healthcare and Public Health	EF3	22	\$48,429,185
Healthcare and Public Health	EF4	22	\$50,145,412
Transportation Systems	EF0	206	\$18,529,235
Transportation Systems	EF1	206	\$106,006,777
Transportation Systems	EF2	206	\$227,906,381
Transportation Systems	EF3	206	\$335,307,979
Transportation Systems	EF4	206	\$349,584,512
All Categories	EF0	1,307	\$93,760,764
All Categories	EF1	1,307	\$588,868,884
All Categories	EF2	1,307	\$1,372,313,380
All Categories	EF3	1,307	\$1,744,189,728
All Categories	EF4	1,307	\$1,811,627,686

Source: GIS Analysis

Table 4.118: Critical Facilities Exposed to the Tornado - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	36	\$1,392,468
Banking and Finance	EF1	36	\$8,899,996
Banking and Finance	EF2	36	\$26,135,029
Banking and Finance	EF3	36	\$34,533,012
Banking and Finance	EF4	36	\$35,053,613
Commercial Facilities	EF0	622	\$30,787,751
Commercial Facilities	EF1	622	\$194,834,231
Commercial Facilities	EF2	622	\$506,542,631

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF3	622	\$680,535,906
Commercial Facilities	EF4	622	\$720,336,714
Communications	EF0	2	\$629,162
Communications	EF1	2	\$3,081,719
Communications	EF2	2	\$9,382,744
Communications	EF3	2	\$13,725,008
Communications	EF4	2	\$14,970,933
Critical Manufacturing	EF0	274	\$28,720,273
Critical Manufacturing	EF1	274	\$206,703,083
Critical Manufacturing	EF2	274	\$465,833,359
Critical Manufacturing	EF3	274	\$500,080,835
Critical Manufacturing	EF4	274	\$500,307,776
Emergency Services	EF0	6	\$162,308
Emergency Services	EF1	6	\$1,308,608
Emergency Services	EF2	6	\$4,735,803
Emergency Services	EF3	6	\$7,533,275
Emergency Services	EF4	6	\$7,803,268
Energy	EF0	25	\$10,399,766
Energy	EF1	25	\$74,783,599
Energy	EF2	25	\$169,618,403
Energy	EF3	25	\$182,572,730
Energy	EF4	25	\$182,762,178
Food and Agriculture	EF0	5	\$791,207
Food and Agriculture	EF1	5	\$5,686,170
Food and Agriculture	EF2	5	\$12,636,817

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	EF3	5	\$13,530,328
Food and Agriculture	EF4	5	\$13,530,328
Government Facilities	EF0	152	\$14,933,050
Government Facilities	EF1	152	\$74,184,792
Government Facilities	EF2	152	\$220,731,830
Government Facilities	EF3	152	\$340,422,174
Government Facilities	EF4	152	\$372,086,356
Healthcare and Public Health	EF0	81	\$6,695,040
Healthcare and Public Health	EF1	81	\$33,976,925
Healthcare and Public Health	EF2	81	\$87,654,940
Healthcare and Public Health	EF3	81	\$126,996,382
Healthcare and Public Health	EF4	81	\$131,598,988
Nuclear Reactors, Materials and Waste	EF0	1	\$201,332
Nuclear Reactors, Materials and Waste	EF1	1	\$1,341,707
Nuclear Reactors, Materials and Waste	EF2	1	\$2,695,239
Nuclear Reactors, Materials and Waste	EF3	1	\$2,998,147
Nuclear Reactors, Materials and Waste	EF4	1	\$3,032,106
Transportation Systems	EF0	201	\$24,491,093
Transportation Systems	EF1	201	\$140,099,966
Transportation Systems	EF2	201	\$301,220,711
Transportation Systems	EF3	201	\$443,218,039
Transportation Systems	EF4	201	\$462,099,795
All Categories	EF0	1,405	\$119,203,450
All Categories	EF1	1,405	\$744,900,796

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF2	1,405	\$1,807,187,506
All Categories	EF3	1,405	\$2,346,145,836
All Categories	EF4	1,405	\$2,443,582,055

Source: GIS Analysis

Table 4.119: Critical Facilities Exposed to the Tornado - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	29	\$950,506
Commercial Facilities	EF1	29	\$7,145,267
Commercial Facilities	EF2	29	\$20,589,123
Commercial Facilities	EF3	29	\$29,063,930
Commercial Facilities	EF4	29	\$29,880,737
Critical Manufacturing	EF0	13	\$785,935
Critical Manufacturing	EF1	13	\$5,638,325
Critical Manufacturing	EF2	13	\$12,639,219
Critical Manufacturing	EF3	13	\$13,582,600
Critical Manufacturing	EF4	13	\$13,592,855
Government Facilities	EF0	2	\$70,855
Government Facilities	EF1	2	\$296,644
Government Facilities	EF2	2	\$789,845
Government Facilities	EF3	2	\$1,192,841
Government Facilities	EF4	2	\$1,351,256
Transportation Systems	EF0	2	\$273,055
Transportation Systems	EF1	2	\$1,562,043
Transportation Systems	EF2	2	\$3,358,207
Transportation Systems	EF3	2	\$4,941,295

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF4	2	\$5,151,742
All Categories	EF0	46	\$2,080,351
All Categories	EF1	46	\$14,642,279
All Categories	EF2	46	\$37,376,394
All Categories	EF3	46	\$48,780,666
All Categories	EF4	46	\$49,976,590

Source: GIS Analysis

Table 4.120: Critical Facilities Exposed to the Tornado - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	64	\$3,515,935
Commercial Facilities	EF1	64	\$21,865,972
Commercial Facilities	EF2	64	\$58,116,251
Commercial Facilities	EF3	64	\$78,319,514
Commercial Facilities	EF4	64	\$82,814,504
Critical Manufacturing	EF0	17	\$665,079
Critical Manufacturing	EF1	17	\$4,799,733
Critical Manufacturing	EF2	17	\$10,845,908
Critical Manufacturing	EF3	17	\$11,627,260
Critical Manufacturing	EF4	17	\$11,627,260
Emergency Services	EF0	2	\$71,569
Emergency Services	EF1	2	\$577,024
Emergency Services	EF2	2	\$2,088,229
Emergency Services	EF3	2	\$3,321,760
Emergency Services	EF4	2	\$3,440,812
Energy	EF0	2	\$3,445,019

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	EF1	2	\$24,861,955
Energy	EF2	2	\$56,180,308
Energy	EF3	2	\$60,227,603
Energy	EF4	2	\$60,227,603
Government Facilities	EF0	10	\$1,208,645
Government Facilities	EF1	10	\$5,269,409
Government Facilities	EF2	10	\$14,446,607
Government Facilities	EF3	10	\$21,944,367
Government Facilities	EF4	10	\$24,615,706
Healthcare and Public Health	EF0	8	\$861,455
Healthcare and Public Health	EF1	8	\$4,043,303
Healthcare and Public Health	EF2	8	\$9,478,578
Healthcare and Public Health	EF3	8	\$13,272,526
Healthcare and Public Health	EF4	8	\$13,744,804
Transportation Systems	EF0	20	\$1,833,798
Transportation Systems	EF1	20	\$10,200,225
Transportation Systems	EF2	20	\$21,724,258
Transportation Systems	EF3	20	\$31,687,682
Transportation Systems	EF4	20	\$33,025,332
All Categories	EF0	123	\$11,601,500
All Categories	EF1	123	\$71,617,621
All Categories	EF2	123	\$172,880,139
All Categories	EF3	123	\$220,400,712
All Categories	EF4	123	\$229,496,021

Source: GIS Analysis

Table 4.121: Critical Facilities Exposed to the Tornado - Town of Glen Alpine

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	19	\$955,760
Commercial Facilities	EF1	19	\$6,824,328
Commercial Facilities	EF2	19	\$14,790,522
Commercial Facilities	EF3	19	\$17,684,939
Commercial Facilities	EF4	19	\$18,121,953
Critical Manufacturing	EF0	5	\$94,784
Critical Manufacturing	EF1	5	\$684,035
Critical Manufacturing	EF2	5	\$1,545,708
Critical Manufacturing	EF3	5	\$1,657,062
Critical Manufacturing	EF4	5	\$1,657,062
Emergency Services	EF0	1	\$10,665
Emergency Services	EF1	1	\$85,984
Emergency Services	EF2	1	\$311,172
Emergency Services	EF3	1	\$494,984
Emergency Services	EF4	1	\$512,724
Government Facilities	EF0	5	\$1,068,500
Government Facilities	EF1	5	\$4,551,736
Government Facilities	EF2	5	\$12,275,239
Government Facilities	EF3	5	\$18,585,784
Government Facilities	EF4	5	\$20,963,128
Healthcare and Public Health	EF0	1	\$33,659
Healthcare and Public Health	EF1	1	\$271,378
Healthcare and Public Health	EF2	1	\$982,106
Healthcare and Public Health	EF3	1	\$1,562,243

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF4	1	\$1,618,234
Transportation Systems	EF0	21	\$755,153
Transportation Systems	EF1	21	\$4,319,943
Transportation Systems	EF2	21	\$9,287,369
Transportation Systems	EF3	21	\$13,665,513
Transportation Systems	EF4	21	\$14,247,520
All Categories	EF0	52	\$2,918,521
All Categories	EF1	52	\$16,737,404
All Categories	EF2	52	\$39,192,116
All Categories	EF3	52	\$53,650,525
All Categories	EF4	52	\$57,120,621

Source: GIS Analysis

Table 4.122: Critical Facilities Exposed to the Tornado - Town of Hildebran

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$29,926
Banking and Finance	EF1	1	\$185,988
Banking and Finance	EF2	1	\$527,563
Banking and Finance	EF3	1	\$670,489
Banking and Finance	EF4	1	\$677,057
Commercial Facilities	EF0	63	\$6,798,648
Commercial Facilities	EF1	63	\$47,512,843
Commercial Facilities	EF2	63	\$123,722,639
Commercial Facilities	EF3	63	\$157,876,959
Commercial Facilities	EF4	63	\$162,325,953
Critical Manufacturing	EF0	45	\$10,231,147

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF1	45	\$73,835,968
Critical Manufacturing	EF2	45	\$166,846,394
Critical Manufacturing	EF3	45	\$178,866,202
Critical Manufacturing	EF4	45	\$178,866,202
Emergency Services	EF0	1	\$52,035
Emergency Services	EF1	1	\$419,534
Emergency Services	EF2	1	\$1,518,279
Emergency Services	EF3	1	\$2,415,138
Emergency Services	EF4	1	\$2,501,696
Energy	EF0	2	\$1,144,000
Energy	EF1	2	\$8,256,000
Energy	EF2	2	\$18,656,000
Energy	EF3	2	\$20,000,000
Energy	EF4	2	\$20,000,000
Government Facilities	EF0	5	\$1,221,669
Government Facilities	EF1	5	\$5,169,608
Government Facilities	EF2	5	\$13,873,854
Government Facilities	EF3	5	\$20,985,876
Government Facilities	EF4	5	\$23,709,120
Healthcare and Public Health	EF0	8	\$430,427
Healthcare and Public Health	EF1	8	\$1,951,550
Healthcare and Public Health	EF2	8	\$4,365,410
Healthcare and Public Health	EF3	8	\$5,999,438
Healthcare and Public Health	EF4	8	\$6,212,674
Transportation Systems	EF0	13	\$1,165,932

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF1	13	\$6,669,850
Transportation Systems	EF2	13	\$14,339,392
Transportation Systems	EF3	13	\$21,099,102
Transportation Systems	EF4	13	\$21,997,701
All Categories	EF0	138	\$21,073,784
All Categories	EF1	138	\$144,001,341
All Categories	EF2	138	\$343,849,531
All Categories	EF3	138	\$407,913,204
All Categories	EF4	138	\$416,290,403

Source: GIS Analysis

Table 4.123: Critical Facilities Exposed to the Tornado - Town of Rutherford College

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$28,842
Banking and Finance	EF1	1	\$179,252
Banking and Finance	EF2	1	\$508,458
Banking and Finance	EF3	1	\$646,209
Banking and Finance	EF4	1	\$652,539
Commercial Facilities	EF0	26	\$802,420
Commercial Facilities	EF1	26	\$4,941,124
Commercial Facilities	EF2	26	\$13,479,712
Commercial Facilities	EF3	26	\$18,318,771
Commercial Facilities	EF4	26	\$19,361,056
Critical Manufacturing	EF0	14	\$1,582,690
Critical Manufacturing	EF1	14	\$11,421,932
Critical Manufacturing	EF2	14	\$25,810,024

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF3	14	\$27,669,408
Critical Manufacturing	EF4	14	\$27,669,408
Government Facilities	EF0	13	\$1,072,981
Government Facilities	EF1	13	\$4,582,092
Government Facilities	EF2	13	\$12,379,134
Government Facilities	EF3	13	\$18,749,715
Government Facilities	EF4	13	\$21,135,364
Healthcare and Public Health	EF0	10	\$1,211,294
Healthcare and Public Health	EF1	10	\$4,990,804
Healthcare and Public Health	EF2	10	\$9,581,152
Healthcare and Public Health	EF3	10	\$12,270,665
Healthcare and Public Health	EF4	10	\$12,704,836
Transportation Systems	EF0	4	\$225,300
Transportation Systems	EF1	4	\$1,288,855
Transportation Systems	EF2	4	\$2,770,887
Transportation Systems	EF3	4	\$4,077,107
Transportation Systems	EF4	4	\$4,250,749
All Categories	EF0	68	\$4,923,527
All Categories	EF1	68	\$27,404,059
All Categories	EF2	68	\$64,529,367
All Categories	EF3	68	\$81,731,875
All Categories	EF4	68	\$85,773,952

Source: GIS Analysis

Table 4.124: Critical Facilities Exposed to the Tornado - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	2	\$111,524
Banking and Finance	EF1	2	\$693,112
Banking and Finance	EF2	2	\$1,966,046
Banking and Finance	EF3	2	\$2,498,684
Banking and Finance	EF4	2	\$2,523,159
Commercial Facilities	EF0	85	\$3,058,463
Commercial Facilities	EF1	85	\$18,714,447
Commercial Facilities	EF2	85	\$50,834,569
Commercial Facilities	EF3	85	\$69,316,565
Commercial Facilities	EF4	85	\$73,730,177
Critical Manufacturing	EF0	50	\$11,936,776
Critical Manufacturing	EF1	50	\$86,145,125
Critical Manufacturing	EF2	50	\$194,661,272
Critical Manufacturing	EF3	50	\$208,684,897
Critical Manufacturing	EF4	50	\$208,684,897
Emergency Services	EF0	3	\$63,713
Emergency Services	EF1	3	\$513,685
Emergency Services	EF2	3	\$1,859,008
Emergency Services	EF3	3	\$2,957,137
Emergency Services	EF4	3	\$3,063,121
Energy	EF0	11	\$6,872,580
Energy	EF1	11	\$49,597,920
Energy	EF2	11	\$112,075,920
Energy	EF3	11	\$120,150,000

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	EF4	11	\$120,150,000
Government Facilities	EF0	9	\$2,440,700
Government Facilities	EF1	9	\$10,396,770
Government Facilities	EF2	9	\$28,037,423
Government Facilities	EF3	9	\$42,450,850
Government Facilities	EF4	9	\$47,881,312
Healthcare and Public Health	EF0	20	\$2,705,602
Healthcare and Public Health	EF1	20	\$13,489,894
Healthcare and Public Health	EF2	20	\$34,036,793
Healthcare and Public Health	EF3	20	\$48,965,142
Healthcare and Public Health	EF4	20	\$50,710,275
Transportation Systems	EF0	31	\$3,232,451
Transportation Systems	EF1	31	\$18,491,610
Transportation Systems	EF2	31	\$39,754,782
Transportation Systems	EF3	31	\$58,495,521
Transportation Systems	EF4	31	\$60,986,813
All Categories	EF0	211	\$30,421,809
All Categories	EF1	211	\$198,042,563
All Categories	EF2	211	\$463,225,813
All Categories	EF3	211	\$553,518,796
All Categories	EF4	211	\$567,729,754

Source: GIS Analysis

Table 4.125: Critical Facilities Exposed to the Tornado - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$45,313
Banking and Finance	EF1	1	\$281,619
Banking and Finance	EF2	1	\$798,825
Banking and Finance	EF3	1	\$1,015,241
Banking and Finance	EF4	1	\$1,025,186
Commercial Facilities	EF0	484	\$23,350,574
Commercial Facilities	EF1	484	\$162,221,106
Commercial Facilities	EF2	484	\$400,865,729
Commercial Facilities	EF3	484	\$512,190,866
Commercial Facilities	EF4	484	\$530,210,246
Critical Manufacturing	EF0	275	\$14,387,308
Critical Manufacturing	EF1	275	\$103,804,828
Critical Manufacturing	EF2	275	\$234,490,309
Critical Manufacturing	EF3	275	\$251,407,950
Critical Manufacturing	EF4	275	\$251,415,660
Energy	EF0	1	\$572,000
Energy	EF1	1	\$4,128,000
Energy	EF2	1	\$9,328,000
Energy	EF3	1	\$10,000,000
Energy	EF4	1	\$10,000,000
Food and Agriculture	EF0	63	\$1,472,536
Food and Agriculture	EF1	63	\$9,570,359
Food and Agriculture	EF2	63	\$12,207,796
Food and Agriculture	EF3	63	\$12,338,775

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	EF4	63	\$12,338,775
Government Facilities	EF0	49	\$8,226,700
Government Facilities	EF1	49	\$36,122,770
Government Facilities	EF2	49	\$99,523,750
Government Facilities	EF3	49	\$151,321,196
Government Facilities	EF4	49	\$169,465,951
Healthcare and Public Health	EF0	19	\$2,270,984
Healthcare and Public Health	EF1	19	\$9,212,515
Healthcare and Public Health	EF2	19	\$17,183,857
Healthcare and Public Health	EF3	19	\$21,676,096
Healthcare and Public Health	EF4	19	\$22,442,279
Transportation Systems	EF0	156	\$11,612,331
Transportation Systems	EF1	156	\$67,001,558
Transportation Systems	EF2	156	\$143,475,667
Transportation Systems	EF3	156	\$208,198,302
Transportation Systems	EF4	156	\$216,783,188
All Categories	EF0	1,048	\$61,937,746
All Categories	EF1	1,048	\$392,342,755
All Categories	EF2	1,048	\$917,873,933
All Categories	EF3	1,048	\$1,168,148,426
All Categories	EF4	1,048	\$1,213,681,285

Source: GIS Analysis

Table 4.126: Critical Facilities Exposed to the Tornado - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	24	\$947,726
Banking and Finance	EF1	24	\$5,762,621
Banking and Finance	EF2	24	\$16,507,809
Banking and Finance	EF3	24	\$21,236,600
Banking and Finance	EF4	24	\$21,616,601
Commercial Facilities	EF0	617	\$32,553,995
Commercial Facilities	EF1	617	\$203,137,982
Commercial Facilities	EF2	617	\$547,592,415
Commercial Facilities	EF3	617	\$736,721,379
Commercial Facilities	EF4	617	\$778,532,973
Communications	EF0	1	\$94,053
Communications	EF1	1	\$626,782
Communications	EF2	1	\$1,259,088
Communications	EF3	1	\$1,400,592
Communications	EF4	1	\$1,416,456
Critical Manufacturing	EF0	207	\$34,544,971
Critical Manufacturing	EF1	207	\$237,318,050
Critical Manufacturing	EF2	207	\$559,209,154
Critical Manufacturing	EF3	207	\$630,727,965
Critical Manufacturing	EF4	207	\$641,516,630
Energy	EF0	4	\$572,000
Energy	EF1	4	\$4,128,000
Energy	EF2	4	\$9,328,001
Energy	EF3	4	\$10,000,001

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	EF4	4	\$10,000,001
Food and Agriculture	EF0	3	\$654,364
Food and Agriculture	EF1	3	\$4,680,249
Food and Agriculture	EF2	3	\$10,654,739
Food and Agriculture	EF3	3	\$11,524,953
Food and Agriculture	EF4	3	\$11,562,412
Government Facilities	EF0	53	\$8,544,897
Government Facilities	EF1	53	\$38,126,147
Government Facilities	EF2	53	\$106,193,236
Government Facilities	EF3	53	\$161,800,281
Government Facilities	EF4	53	\$180,557,340
Healthcare and Public Health	EF0	57	\$10,964,363
Healthcare and Public Health	EF1	57	\$47,459,350
Healthcare and Public Health	EF2	57	\$99,046,786
Healthcare and Public Health	EF3	57	\$132,089,814
Healthcare and Public Health	EF4	57	\$136,775,816
Transportation Systems	EF0	115	\$19,197,233
Transportation Systems	EF1	115	\$109,820,009
Transportation Systems	EF2	115	\$236,100,073
Transportation Systems	EF3	115	\$347,399,637
Transportation Systems	EF4	115	\$362,195,192
Water	EF0	13	\$5,055,344
Water	EF1	13	\$36,483,323
Water	EF2	13	\$82,440,998
Water	EF3	13	\$88,380,144

Sector	Event	Number of Buildings At Risk	Estimated Damages
Water	EF4	13	\$88,380,144
All Categories	EF0	1,094	\$113,128,946
All Categories	EF1	1,094	\$687,542,513
All Categories	EF2	1,094	\$1,668,332,299
All Categories	EF3	1,094	\$2,141,281,366
All Categories	EF4	1,094	\$2,232,553,565

Source: GIS Analysis

Table 4.127: Critical Facilities Exposed to the Tornado - Town of Cajah's Mountain

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	2	\$26,283
Banking and Finance	EF1	2	\$163,348
Banking and Finance	EF2	2	\$463,344
Banking and Finance	EF3	2	\$588,872
Banking and Finance	EF4	2	\$594,640
Commercial Facilities	EF0	43	\$2,045,509
Commercial Facilities	EF1	43	\$14,182,090
Commercial Facilities	EF2	43	\$34,479,293
Commercial Facilities	EF3	43	\$43,732,042
Commercial Facilities	EF4	43	\$45,386,835
Critical Manufacturing	EF0	26	\$759,041
Critical Manufacturing	EF1	26	\$5,477,832
Critical Manufacturing	EF2	26	\$12,378,202
Critical Manufacturing	EF3	26	\$13,269,942
Critical Manufacturing	EF4	26	\$13,269,942
Government Facilities	EF0	2	\$19,758

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	EF1	2	\$159,299
Government Facilities	EF2	2	\$576,496
Government Facilities	EF3	2	\$917,036
Government Facilities	EF4	2	\$949,903
Healthcare and Public Health	EF0	7	\$1,181,719
Healthcare and Public Health	EF1	7	\$5,791,445
Healthcare and Public Health	EF2	7	\$14,323,967
Healthcare and Public Health	EF3	7	\$20,461,394
Healthcare and Public Health	EF4	7	\$21,190,342
Transportation Systems	EF0	16	\$1,337,099
Transportation Systems	EF1	16	\$7,649,032
Transportation Systems	EF2	16	\$16,444,517
Transportation Systems	EF3	16	\$24,196,602
Transportation Systems	EF4	16	\$25,227,121
All Categories	EF0	96	\$5,369,409
All Categories	EF1	96	\$33,423,046
All Categories	EF2	96	\$78,665,819
All Categories	EF3	96	\$103,165,888
All Categories	EF4	96	\$106,618,783

Source: GIS Analysis

Table 4.128: Critical Facilities Exposed to the Tornado - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	45	\$2,327,834
Commercial Facilities	EF1	45	\$15,584,236

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF2	45	\$38,488,744
Commercial Facilities	EF3	45	\$50,326,306
Commercial Facilities	EF4	45	\$52,580,834
Critical Manufacturing	EF0	24	\$1,725,385
Critical Manufacturing	EF1	24	\$12,451,727
Critical Manufacturing	EF2	24	\$28,137,042
Critical Manufacturing	EF3	24	\$30,164,067
Critical Manufacturing	EF4	24	\$30,164,067
Government Facilities	EF0	5	\$2,814,819
Government Facilities	EF1	5	\$12,010,988
Government Facilities	EF2	5	\$32,430,761
Government Facilities	EF3	5	\$49,114,797
Government Facilities	EF4	5	\$55,374,625
Healthcare and Public Health	EF0	4	\$630,981
Healthcare and Public Health	EF1	4	\$2,554,444
Healthcare and Public Health	EF2	4	\$4,746,370
Healthcare and Public Health	EF3	4	\$5,974,696
Healthcare and Public Health	EF4	4	\$6,185,853
Transportation Systems	EF0	13	\$969,580
Transportation Systems	EF1	13	\$5,546,597
Transportation Systems	EF2	13	\$11,924,530
Transportation Systems	EF3	13	\$17,545,853
Transportation Systems	EF4	13	\$18,293,121
All Categories	EF0	91	\$8,468,599
All Categories	EF1	91	\$48,147,992

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF2	91	\$115,727,447
All Categories	EF3	91	\$153,125,719
All Categories	EF4	91	\$162,598,500

Source: GIS Analysis

Table 4.129: Critical Facilities Exposed to the Tornado - Town of Granite Falls

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	8	\$292,058
Banking and Finance	EF1	8	\$1,815,123
Banking and Finance	EF2	8	\$5,148,685
Banking and Finance	EF3	8	\$6,543,561
Banking and Finance	EF4	8	\$6,607,655
Commercial Facilities	EF0	154	\$12,666,919
Commercial Facilities	EF1	154	\$78,473,646
Commercial Facilities	EF2	154	\$205,802,786
Commercial Facilities	EF3	154	\$271,543,961
Commercial Facilities	EF4	154	\$286,616,642
Critical Manufacturing	EF0	70	\$4,986,536
Critical Manufacturing	EF1	70	\$35,975,294
Critical Manufacturing	EF2	70	\$81,288,201
Critical Manufacturing	EF3	70	\$87,181,898
Critical Manufacturing	EF4	70	\$87,187,798
Energy	EF0	1	\$5,720,000
Energy	EF1	1	\$41,280,000
Energy	EF2	1	\$93,280,000
Energy	EF3	1	\$100,000,000

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	EF4	1	\$100,000,000
Government Facilities	EF0	24	\$3,442,895
Government Facilities	EF1	24	\$14,947,868
Government Facilities	EF2	24	\$40,861,946
Government Facilities	EF3	24	\$62,033,983
Government Facilities	EF4	24	\$69,652,652
Healthcare and Public Health	EF0	9	\$681,470
Healthcare and Public Health	EF1	9	\$3,092,281
Healthcare and Public Health	EF2	9	\$6,925,012
Healthcare and Public Health	EF3	9	\$9,521,612
Healthcare and Public Health	EF4	9	\$9,860,044
Transportation Systems	EF0	52	\$6,693,459
Transportation Systems	EF1	52	\$38,290,711
Transportation Systems	EF2	52	\$82,320,515
Transportation Systems	EF3	52	\$121,127,100
Transportation Systems	EF4	52	\$126,285,835
Water	EF0	8	\$4,548,127
Water	EF1	8	\$32,822,848
Water	EF2	8	\$74,169,460
Water	EF3	8	\$79,512,714
Water	EF4	8	\$79,512,714
All Categories	EF0	326	\$39,031,464
All Categories	EF1	326	\$246,697,771
All Categories	EF2	326	\$589,796,605
All Categories	EF3	326	\$737,464,829

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF4	326	\$765,723,340

Source: GIS Analysis

Table 4.130: Critical Facilities Exposed to the Tornado - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	4	\$231,436
Banking and Finance	EF1	4	\$1,438,360
Banking and Finance	EF2	4	\$4,079,979
Banking and Finance	EF3	4	\$5,185,322
Banking and Finance	EF4	4	\$5,236,113
Commercial Facilities	EF0	122	\$6,751,346
Commercial Facilities	EF1	122	\$44,403,241
Commercial Facilities	EF2	122	\$112,428,779
Commercial Facilities	EF3	122	\$142,862,108
Commercial Facilities	EF4	122	\$149,171,090
Critical Manufacturing	EF0	66	\$5,522,089
Critical Manufacturing	EF1	66	\$39,851,718
Critical Manufacturing	EF2	66	\$90,052,526
Critical Manufacturing	EF3	66	\$96,540,015
Critical Manufacturing	EF4	66	\$96,540,015
Government Facilities	EF0	24	\$2,531,038
Government Facilities	EF1	24	\$13,987,858
Government Facilities	EF2	24	\$43,990,776
Government Facilities	EF3	24	\$68,490,630
Government Facilities	EF4	24	\$73,648,667
Healthcare and Public Health	EF0	15	\$2,051,313

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF1	15	\$8,304,474
Healthcare and Public Health	EF2	15	\$15,430,406
Healthcare and Public Health	EF3	15	\$19,423,682
Healthcare and Public Health	EF4	15	\$20,110,153
Transportation Systems	EF0	37	\$3,934,262
Transportation Systems	EF1	37	\$22,506,404
Transportation Systems	EF2	37	\$48,386,115
Transportation Systems	EF3	37	\$71,195,738
Transportation Systems	EF4	37	\$74,227,924
All Categories	EF0	268	\$21,021,484
All Categories	EF1	268	\$130,492,055
All Categories	EF2	268	\$314,368,581
All Categories	EF3	268	\$403,697,495
All Categories	EF4	268	\$418,933,962

Source: GIS Analysis

Table 4.131: Critical Facilities Exposed to the Tornado - Town of Rhodhiss

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	8	\$223,100
Commercial Facilities	EF1	8	\$1,362,222
Commercial Facilities	EF2	8	\$3,687,932
Commercial Facilities	EF3	8	\$4,970,835
Commercial Facilities	EF4	8	\$5,246,810
Critical Manufacturing	EF0	8	\$486,088
Critical Manufacturing	EF1	8	\$3,507,990
Critical Manufacturing	EF2	8	\$7,926,970

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF3	8	\$8,498,038
Critical Manufacturing	EF4	8	\$8,498,038
Emergency Services	EF0	2	\$9,820
Emergency Services	EF1	2	\$79,176
Emergency Services	EF2	2	\$286,534
Emergency Services	EF3	2	\$455,792
Emergency Services	EF4	2	\$472,128
Government Facilities	EF0	4	\$525,562
Government Facilities	EF1	4	\$2,217,438
Government Facilities	EF2	4	\$5,938,170
Government Facilities	EF3	4	\$8,978,317
Government Facilities	EF4	4	\$10,150,819
Transportation Systems	EF0	3	\$59,910
Transportation Systems	EF1	3	\$342,721
Transportation Systems	EF2	3	\$736,810
Transportation Systems	EF3	3	\$1,084,149
Transportation Systems	EF4	3	\$1,130,322
All Categories	EF0	25	\$1,304,480
All Categories	EF1	25	\$7,509,547
All Categories	EF2	25	\$18,576,416
All Categories	EF3	25	\$23,987,131
All Categories	EF4	25	\$25,498,117

Source: GIS Analysis

Table 4.132: Critical Facilities Exposed to the Tornado - Town of Sawmills

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	91	\$7,370,532
Commercial Facilities	EF1	91	\$45,644,852
Commercial Facilities	EF2	91	\$118,088,689
Commercial Facilities	EF3	91	\$153,358,555
Commercial Facilities	EF4	91	\$161,457,393
Critical Manufacturing	EF0	61	\$5,035,654
Critical Manufacturing	EF1	61	\$36,341,225
Critical Manufacturing	EF2	61	\$82,119,900
Critical Manufacturing	EF3	61	\$88,035,914
Critical Manufacturing	EF4	61	\$88,035,914
Food and Agriculture	EF0	4	\$60,705
Food and Agriculture	EF1	4	\$393,746
Food and Agriculture	EF2	4	\$494,408
Food and Agriculture	EF3	4	\$498,607
Food and Agriculture	EF4	4	\$498,607
Government Facilities	EF0	4	\$976,870
Government Facilities	EF1	4	\$4,613,351
Government Facilities	EF2	4	\$13,325,055
Government Facilities	EF3	4	\$20,441,007
Government Facilities	EF4	4	\$22,547,746
Healthcare and Public Health	EF0	4	\$426,733
Healthcare and Public Health	EF1	4	\$1,727,574
Healthcare and Public Health	EF2	4	\$3,209,977
Healthcare and Public Health	EF3	4	\$4,040,695

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF4	4	\$4,183,501
Transportation Systems	EF0	25	\$2,113,013
Transportation Systems	EF1	25	\$12,222,252
Transportation Systems	EF2	25	\$26,142,374
Transportation Systems	EF3	25	\$37,780,895
Transportation Systems	EF4	25	\$39,323,591
All Categories	EF0	189	\$15,983,507
All Categories	EF1	189	\$100,943,000
All Categories	EF2	189	\$243,380,403
All Categories	EF3	189	\$304,155,673
All Categories	EF4	189	\$316,046,752

Source: GIS Analysis

Table 4.133: Critical Facilities Exposed to the Tornado - Village of Cedar Rock

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	1	\$22,791
Commercial Facilities	EF1	1	\$164,481
Commercial Facilities	EF2	1	\$371,676
Commercial Facilities	EF3	1	\$398,452
Commercial Facilities	EF4	1	\$398,452
Government Facilities	EF0	1	\$67,447
Government Facilities	EF1	1	\$282,376
Government Facilities	EF2	1	\$751,854
Government Facilities	EF3	1	\$1,135,466
Government Facilities	EF4	1	\$1,286,261
Healthcare and Public Health	EF0	1	\$190,434

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF1	1	\$770,949
Healthcare and Public Health	EF2	1	\$1,432,488
Healthcare and Public Health	EF3	1	\$1,803,205
Healthcare and Public Health	EF4	1	\$1,866,934
Transportation Systems	EF0	1	\$11,338
Transportation Systems	EF1	1	\$64,860
Transportation Systems	EF2	1	\$139,441
Transportation Systems	EF3	1	\$205,175
Transportation Systems	EF4	1	\$213,913
All Categories	EF0	4	\$292,010
All Categories	EF1	4	\$1,282,666
All Categories	EF2	4	\$2,695,459
All Categories	EF3	4	\$3,542,298
All Categories	EF4	4	\$3,765,560

Source: GIS Analysis

Table 4.134: Critical Facilities Exposed to the Tornado - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	7	\$208,163
Banking and Finance	EF1	7	\$1,293,717
Banking and Finance	EF2	7	\$3,669,691
Banking and Finance	EF3	7	\$4,663,880
Banking and Finance	EF4	7	\$4,709,562
Commercial Facilities	EF0	1,760	\$47,184,565
Commercial Facilities	EF1	1,760	\$272,384,031
Commercial Facilities	EF2	1,760	\$760,922,727

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF3	1,760	\$1,045,972,068
Commercial Facilities	EF4	1,760	\$1,118,833,599
Critical Manufacturing	EF0	623	\$22,925,079
Critical Manufacturing	EF1	623	\$165,311,219
Critical Manufacturing	EF2	623	\$373,802,878
Critical Manufacturing	EF3	623	\$401,058,589
Critical Manufacturing	EF4	623	\$401,177,758
Emergency Services	EF0	12	\$539,355
Emergency Services	EF1	12	\$4,348,547
Emergency Services	EF2	12	\$15,737,226
Emergency Services	EF3	12	\$25,033,314
Emergency Services	EF4	12	\$25,930,510
Energy	EF0	36	\$37,727,290
Energy	EF1	36	\$272,269,673
Energy	EF2	36	\$615,245,036
Energy	EF3	36	\$659,568,006
Energy	EF4	36	\$659,568,006
Food and Agriculture	EF0	141	\$4,738,998
Food and Agriculture	EF1	141	\$30,654,205
Food and Agriculture	EF2	141	\$37,660,327
Food and Agriculture	EF3	141	\$37,861,424
Food and Agriculture	EF4	141	\$37,861,424
Government Facilities	EF0	86	\$23,027,554
Government Facilities	EF1	86	\$97,408,702
Government Facilities	EF2	86	\$261,351,010

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	EF3	86	\$395,304,331
Government Facilities	EF4	86	\$446,640,586
Healthcare and Public Health	EF0	28	\$1,442,144
Healthcare and Public Health	EF1	28	\$6,052,796
Healthcare and Public Health	EF2	28	\$12,005,105
Healthcare and Public Health	EF3	28	\$15,629,354
Healthcare and Public Health	EF4	28	\$16,182,961
Postal and Shipping	EF0	1	\$152,225
Postal and Shipping	EF1	1	\$1,014,452
Postal and Shipping	EF2	1	\$2,037,845
Postal and Shipping	EF3	1	\$2,266,871
Postal and Shipping	EF4	1	\$2,292,547
Transportation Systems	EF0	290	\$23,376,790
Transportation Systems	EF1	290	\$146,910,408
Transportation Systems	EF2	290	\$322,692,750
Transportation Systems	EF3	290	\$417,375,041
Transportation Systems	EF4	290	\$428,591,736
Water	EF0	1	\$17,160
Water	EF1	1	\$123,840
Water	EF2	1	\$279,840
Water	EF3	1	\$300,000
Water	EF4	1	\$300,000
All Categories	EF0	2,985	\$161,339,323
All Categories	EF1	2,985	\$997,771,590
All Categories	EF2	2,985	\$2,405,404,435

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF3	2,985	\$3,005,032,878
All Categories	EF4	2,985	\$3,142,088,689

Source: GIS Analysis

Table 4.135: Critical Facilities Exposed to the Tornado - City of Claremont

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	120	\$6,259,205
Commercial Facilities	EF1	120	\$30,754,088
Commercial Facilities	EF2	120	\$95,713,192
Commercial Facilities	EF3	120	\$138,335,401
Commercial Facilities	EF4	120	\$151,159,962
Critical Manufacturing	EF0	104	\$19,478,743
Critical Manufacturing	EF1	104	\$140,573,865
Critical Manufacturing	EF2	104	\$317,653,345
Critical Manufacturing	EF3	104	\$340,537,463
Critical Manufacturing	EF4	104	\$340,537,463
Emergency Services	EF0	1	\$55,851
Emergency Services	EF1	1	\$450,300
Emergency Services	EF2	1	\$1,629,618
Emergency Services	EF3	1	\$2,592,245
Emergency Services	EF4	1	\$2,685,151
Food and Agriculture	EF0	1	\$1,177,697
Food and Agriculture	EF1	1	\$8,499,186
Food and Agriculture	EF2	1	\$19,205,526
Food and Agriculture	EF3	1	\$20,589,114
Food and Agriculture	EF4	1	\$20,589,114

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	EF0	7	\$639,951
Government Facilities	EF1	7	\$2,718,106
Government Facilities	EF2	7	\$7,314,543
Government Facilities	EF3	7	\$11,070,132
Government Facilities	EF4	7	\$12,495,167
Transportation Systems	EF0	7	\$331,098
Transportation Systems	EF1	7	\$2,044,926
Transportation Systems	EF2	7	\$4,246,059
Transportation Systems	EF3	7	\$5,479,334
Transportation Systems	EF4	7	\$5,638,271
All Categories	EF0	240	\$27,942,545
All Categories	EF1	240	\$185,040,471
All Categories	EF2	240	\$445,762,283
All Categories	EF3	240	\$518,603,689
All Categories	EF4	240	\$533,105,128

Source: GIS Analysis

Table 4.136: Critical Facilities Exposed to the Tornado - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$5,255
Banking and Finance	EF1	1	\$32,661
Banking and Finance	EF2	1	\$92,646
Banking and Finance	EF3	1	\$117,745
Banking and Finance	EF4	1	\$118,898
Commercial Facilities	EF0	592	\$28,401,813
Commercial Facilities	EF1	592	\$154,056,908

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF2	592	\$443,236,039
Commercial Facilities	EF3	592	\$602,550,369
Commercial Facilities	EF4	592	\$648,338,200
Critical Manufacturing	EF0	305	\$47,669,009
Critical Manufacturing	EF1	305	\$344,016,905
Critical Manufacturing	EF2	305	\$777,371,533
Critical Manufacturing	EF3	305	\$833,374,285
Critical Manufacturing	EF4	305	\$833,374,285
Emergency Services	EF0	2	\$131,947
Emergency Services	EF1	2	\$1,063,820
Emergency Services	EF2	2	\$3,849,926
Emergency Services	EF3	2	\$6,124,103
Emergency Services	EF4	2	\$6,343,592
Energy	EF0	6	\$3,052,844
Energy	EF1	6	\$22,031,716
Energy	EF2	6	\$49,784,846
Energy	EF3	6	\$53,371,404
Energy	EF4	6	\$53,371,404
Government Facilities	EF0	11	\$3,638,912
Government Facilities	EF1	11	\$15,392,183
Government Facilities	EF2	11	\$41,296,290
Government Facilities	EF3	11	\$62,461,916
Government Facilities	EF4	11	\$70,574,401
Healthcare and Public Health	EF0	3	\$196,624
Healthcare and Public Health	EF1	3	\$875,120

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	EF2	3	\$1,905,846
Healthcare and Public Health	EF3	3	\$2,589,930
Healthcare and Public Health	EF4	3	\$2,681,919
Transportation Systems	EF0	36	\$4,907,470
Transportation Systems	EF1	36	\$31,179,321
Transportation Systems	EF2	36	\$64,351,875
Transportation Systems	EF3	36	\$78,366,571
Transportation Systems	EF4	36	\$80,246,888
All Categories	EF0	956	\$88,003,874
All Categories	EF1	956	\$568,648,634
All Categories	EF2	956	\$1,381,889,001
All Categories	EF3	956	\$1,638,956,323
All Categories	EF4	956	\$1,695,049,587

Source: GIS Analysis

Table 4.137: Critical Facilities Exposed to the Tornado - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	17	\$429,376
Banking and Finance	EF1	17	\$2,608,165
Banking and Finance	EF2	17	\$6,918,371
Banking and Finance	EF3	17	\$9,093,876
Banking and Finance	EF4	17	\$9,255,440
Commercial Facilities	EF0	2,533	\$114,863,405
Commercial Facilities	EF1	2,533	\$625,575,072
Commercial Facilities	EF2	2,533	\$1,789,792,979
Commercial Facilities	EF3	2,533	\$2,503,154,165

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF4	2,533	\$2,698,849,063
Critical Manufacturing	EF0	567	\$59,958,733
Critical Manufacturing	EF1	567	\$432,595,533
Critical Manufacturing	EF2	567	\$977,458,410
Critical Manufacturing	EF3	567	\$1,048,067,249
Critical Manufacturing	EF4	567	\$1,048,134,170
Defense Industrial Base	EF0	1	\$241,816
Defense Industrial Base	EF1	1	\$1,745,131
Defense Industrial Base	EF2	1	\$3,943,454
Defense Industrial Base	EF3	1	\$4,227,545
Defense Industrial Base	EF4	1	\$4,227,545
Emergency Services	EF0	13	\$375,042
Emergency Services	EF1	13	\$3,023,776
Emergency Services	EF2	13	\$10,942,933
Emergency Services	EF3	13	\$17,406,999
Emergency Services	EF4	13	\$18,030,867
Energy	EF0	35	\$9,686,983
Energy	EF1	35	\$69,555,266
Energy	EF2	35	\$157,834,558
Energy	EF3	35	\$170,066,054
Energy	EF4	35	\$170,380,260
Food and Agriculture	EF0	1	\$6,818
Food and Agriculture	EF1	1	\$49,202
Food and Agriculture	EF2	1	\$111,180
Food and Agriculture	EF3	1	\$119,190

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	EF4	1	\$119,190
Government Facilities	EF0	90	\$12,074,058
Government Facilities	EF1	90	\$60,432,063
Government Facilities	EF2	90	\$180,566,385
Government Facilities	EF3	90	\$278,683,019
Government Facilities	EF4	90	\$304,218,486
Healthcare and Public Health	EF0	65	\$6,992,978
Healthcare and Public Health	EF1	65	\$39,409,630
Healthcare and Public Health	EF2	65	\$112,482,718
Healthcare and Public Health	EF3	65	\$168,371,163
Healthcare and Public Health	EF4	65	\$174,385,656
Transportation Systems	EF0	119	\$8,177,422
Transportation Systems	EF1	119	\$47,118,991
Transportation Systems	EF2	119	\$101,083,250
Transportation Systems	EF3	119	\$146,860,998
Transportation Systems	EF4	119	\$152,970,299
All Categories	EF0	3,441	\$212,806,631
All Categories	EF1	3,441	\$1,282,112,829
All Categories	EF2	3,441	\$3,341,134,238
All Categories	EF3	3,441	\$4,346,050,258
All Categories	EF4	3,441	\$4,580,570,976

Source: GIS Analysis

Table 4.138: Critical Facilities Exposed to the Tornado - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	4	\$509,609
Banking and Finance	EF1	4	\$3,167,184
Banking and Finance	EF2	4	\$8,983,872
Banking and Finance	EF3	4	\$11,417,772
Banking and Finance	EF4	4	\$11,529,610
Commercial Facilities	EF0	684	\$32,759,233
Commercial Facilities	EF1	684	\$168,056,713
Commercial Facilities	EF2	684	\$507,461,118
Commercial Facilities	EF3	684	\$716,698,832
Commercial Facilities	EF4	684	\$778,498,815
Critical Manufacturing	EF0	192	\$26,608,037
Critical Manufacturing	EF1	192	\$192,024,432
Critical Manufacturing	EF2	192	\$433,915,675
Critical Manufacturing	EF3	192	\$465,175,466
Critical Manufacturing	EF4	192	\$465,175,466
Defense Industrial Base	EF0	1	\$1,679,729
Defense Industrial Base	EF1	1	\$12,122,243
Defense Industrial Base	EF2	1	\$27,392,511
Defense Industrial Base	EF3	1	\$29,365,900
Defense Industrial Base	EF4	1	\$29,365,900
Emergency Services	EF0	7	\$337,139
Emergency Services	EF1	7	\$2,718,181
Emergency Services	EF2	7	\$9,836,995
Emergency Services	EF3	7	\$15,647,775

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	EF4	7	\$16,208,593
Energy	EF0	11	\$4,593,160
Energy	EF1	11	\$33,147,840
Energy	EF2	11	\$74,903,839
Energy	EF3	11	\$80,299,999
Energy	EF4	11	\$80,299,999
Food and Agriculture	EF0	1	\$1,605
Food and Agriculture	EF1	1	\$11,581
Food and Agriculture	EF2	1	\$26,170
Food and Agriculture	EF3	1	\$28,055
Food and Agriculture	EF4	1	\$28,055
Government Facilities	EF0	24	\$3,953,137
Government Facilities	EF1	24	\$16,838,810
Government Facilities	EF2	24	\$45,408,851
Government Facilities	EF3	24	\$68,752,219
Government Facilities	EF4	24	\$77,547,879
Healthcare and Public Health	EF0	9	\$1,069,806
Healthcare and Public Health	EF1	9	\$7,727,904
Healthcare and Public Health	EF2	9	\$26,373,285
Healthcare and Public Health	EF3	9	\$41,393,989
Healthcare and Public Health	EF4	9	\$42,876,498
Transportation Systems	EF0	26	\$637,406
Transportation Systems	EF1	26	\$3,646,355
Transportation Systems	EF2	26	\$7,839,234
Transportation Systems	EF3	26	\$11,534,714

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF4	26	\$12,025,971
All Categories	EF0	959	\$72,148,861
All Categories	EF1	959	\$439,461,243
All Categories	EF2	959	\$1,142,141,550
All Categories	EF3	959	\$1,440,314,721
All Categories	EF4	959	\$1,513,556,786

Source: GIS Analysis

Table 4.139: Critical Facilities Exposed to the Tornado - Town of Brookford

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	28	\$464,510
Commercial Facilities	EF1	28	\$2,249,237
Commercial Facilities	EF2	28	\$7,121,954
Commercial Facilities	EF3	28	\$10,337,601
Commercial Facilities	EF4	28	\$11,316,632
Critical Manufacturing	EF0	7	\$458,623
Critical Manufacturing	EF1	7	\$3,309,782
Critical Manufacturing	EF2	7	\$7,479,080
Critical Manufacturing	EF3	7	\$8,017,882
Critical Manufacturing	EF4	7	\$8,017,882
Transportation Systems	EF0	2	\$537,971
Transportation Systems	EF1	2	\$3,077,525
Transportation Systems	EF2	2	\$6,616,317
Transportation Systems	EF3	2	\$9,735,304
Transportation Systems	EF4	2	\$10,149,926
All Categories	EF0	37	\$1,461,104

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF1	37	\$8,636,544
All Categories	EF2	37	\$21,217,351
All Categories	EF3	37	\$28,090,787
All Categories	EF4	37	\$29,484,440

Source: GIS Analysis

Table 4.140: Critical Facilities Exposed to the Tornado - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$7,599
Banking and Finance	EF1	1	\$47,227
Banking and Finance	EF2	1	\$133,962
Banking and Finance	EF3	1	\$170,255
Banking and Finance	EF4	1	\$171,923
Commercial Facilities	EF0	77	\$2,615,392
Commercial Facilities	EF1	77	\$13,676,976
Commercial Facilities	EF2	77	\$39,540,927
Commercial Facilities	EF3	77	\$55,206,669
Commercial Facilities	EF4	77	\$59,763,625
Critical Manufacturing	EF0	25	\$2,080,873
Critical Manufacturing	EF1	25	\$15,017,212
Critical Manufacturing	EF2	25	\$33,934,241
Critical Manufacturing	EF3	25	\$36,378,904
Critical Manufacturing	EF4	25	\$36,378,904
Emergency Services	EF0	2	\$27,403
Emergency Services	EF1	2	\$220,938
Emergency Services	EF2	2	\$799,566

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	EF3	2	\$1,271,876
Emergency Services	EF4	2	\$1,317,460
Government Facilities	EF0	3	\$1,915,949
Government Facilities	EF1	3	\$8,021,390
Government Facilities	EF2	3	\$21,357,751
Government Facilities	EF3	3	\$32,254,947
Government Facilities	EF4	3	\$36,538,542
Transportation Systems	EF0	7	\$164,707
Transportation Systems	EF1	7	\$942,224
Transportation Systems	EF2	7	\$2,025,670
Transportation Systems	EF3	7	\$2,980,588
Transportation Systems	EF4	7	\$3,107,529
All Categories	EF0	115	\$6,811,923
All Categories	EF1	115	\$37,925,967
All Categories	EF2	115	\$97,792,117
All Categories	EF3	115	\$128,263,239
All Categories	EF4	115	\$137,277,983

Source: GIS Analysis

Table 4.141: Critical Facilities Exposed to the Tornado - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	3	\$45,875
Banking and Finance	EF1	3	\$285,108
Banking and Finance	EF2	3	\$808,722
Banking and Finance	EF3	3	\$1,027,820
Banking and Finance	EF4	3	\$1,037,888

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	EF0	215	\$7,476,377
Commercial Facilities	EF1	215	\$39,318,135
Commercial Facilities	EF2	215	\$117,372,873
Commercial Facilities	EF3	215	\$164,045,271
Commercial Facilities	EF4	215	\$177,542,795
Critical Manufacturing	EF0	86	\$13,243,156
Critical Manufacturing	EF1	86	\$95,572,989
Critical Manufacturing	EF2	86	\$215,965,320
Critical Manufacturing	EF3	86	\$231,523,714
Critical Manufacturing	EF4	86	\$231,523,714
Emergency Services	EF0	1	\$15,822
Emergency Services	EF1	1	\$127,564
Emergency Services	EF2	1	\$461,651
Emergency Services	EF3	1	\$734,352
Emergency Services	EF4	1	\$760,671
Government Facilities	EF0	8	\$1,704,027
Government Facilities	EF1	8	\$7,134,148
Government Facilities	EF2	8	\$18,995,381
Government Facilities	EF3	8	\$28,687,243
Government Facilities	EF4	8	\$32,497,032
Healthcare and Public Health	EF0	1	\$53,098
Healthcare and Public Health	EF1	1	\$214,960
Healthcare and Public Health	EF2	1	\$399,414
Healthcare and Public Health	EF3	1	\$502,779
Healthcare and Public Health	EF4	1	\$520,549

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF0	10	\$1,776,553
Transportation Systems	EF1	10	\$11,362,546
Transportation Systems	EF2	10	\$23,232,937
Transportation Systems	EF3	10	\$28,074,733
Transportation Systems	EF4	10	\$28,678,546
All Categories	EF0	324	\$24,314,908
All Categories	EF1	324	\$154,015,450
All Categories	EF2	324	\$377,236,298
All Categories	EF3	324	\$454,595,912
All Categories	EF4	324	\$472,561,195

Source: GIS Analysis

Table 4.142: Critical Facilities Exposed to the Tornado - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	1	\$23,639
Banking and Finance	EF1	1	\$146,916
Banking and Finance	EF2	1	\$416,733
Banking and Finance	EF3	1	\$529,634
Banking and Finance	EF4	1	\$534,822
Commercial Facilities	EF0	271	\$8,871,191
Commercial Facilities	EF1	271	\$52,224,683
Commercial Facilities	EF2	271	\$139,990,212
Commercial Facilities	EF3	271	\$181,194,398
Commercial Facilities	EF4	271	\$192,350,565
Critical Manufacturing	EF0	138	\$22,437,901
Critical Manufacturing	EF1	138	\$161,929,467

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	EF2	138	\$365,910,384
Critical Manufacturing	EF3	138	\$392,270,995
Critical Manufacturing	EF4	138	\$392,270,995
Emergency Services	EF0	1	\$12,311
Emergency Services	EF1	1	\$99,255
Emergency Services	EF2	1	\$359,201
Emergency Services	EF3	1	\$571,383
Emergency Services	EF4	1	\$591,861
Energy	EF0	5	\$6,087,433
Energy	EF1	5	\$43,931,684
Energy	EF2	5	\$99,271,984
Energy	EF3	5	\$106,423,653
Energy	EF4	5	\$106,423,653
Government Facilities	EF0	10	\$3,261,810
Government Facilities	EF1	10	\$13,737,739
Government Facilities	EF2	10	\$36,740,665
Government Facilities	EF3	10	\$55,536,073
Government Facilities	EF4	10	\$62,816,619
Healthcare and Public Health	EF0	1	\$40,093
Healthcare and Public Health	EF1	1	\$162,311
Healthcare and Public Health	EF2	1	\$301,587
Healthcare and Public Health	EF3	1	\$379,635
Healthcare and Public Health	EF4	1	\$393,052
Transportation Systems	EF0	13	\$380,549
Transportation Systems	EF1	13	\$2,176,973

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	EF2	13	\$4,680,236
Transportation Systems	EF3	13	\$6,886,539
Transportation Systems	EF4	13	\$7,179,833
Water	EF0	2	\$1,277,502
Water	EF1	2	\$9,219,457
Water	EF2	2	\$20,833,115
Water	EF3	2	\$22,333,957
Water	EF4	2	\$22,333,957
All Categories	EF0	442	\$42,392,429
All Categories	EF1	442	\$283,628,485
All Categories	EF2	442	\$668,504,117
All Categories	EF3	442	\$766,126,267
All Categories	EF4	442	\$784,895,357

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event.

Table 4.143: Critical Facilities Exposed to the Tornado (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	EF0	5,544	\$350,573,497
Banking and Finance	EF1	5,544	\$2,111,805,589
Banking and Finance	EF2	5,544	\$5,569,256,499
Banking and Finance	EF3	5,544	\$7,327,052,102
Banking and Finance	EF4	5,544	\$7,487,560,534
Banking and Finance	EF5	101	\$93,069,516
Chemical	EF0	64	\$52,248,200

Sector	Event	Number of Buildings At Risk	Estimated Damages
Chemical	EF1	64	\$375,386,311
Chemical	EF2	64	\$849,840,193
Chemical	EF3	64	\$911,997,818
Chemical	EF4	64	\$912,672,229
Chemical	EF5	2	\$1,197,745
Commercial Facilities	EF0	197,399	\$7,486,845,365
Commercial Facilities	EF1	197,399	\$49,975,675,199
Commercial Facilities	EF2	197,399	\$131,590,918,097
Commercial Facilities	EF3	197,399	\$173,250,078,023
Commercial Facilities	EF4	197,399	\$181,108,136,686
Commercial Facilities	EF5	1,499	\$1,372,855,116
Communications	EF0	227	\$26,653,380
Communications	EF1	227	\$171,513,609
Communications	EF2	227	\$437,992,982
Communications	EF3	227	\$554,391,378
Communications	EF4	227	\$575,302,188
Communications	EF5	11	\$9,005,944
Critical Manufacturing	EF0	61,961	\$4,802,309,590
Critical Manufacturing	EF1	61,961	\$34,381,179,869
Critical Manufacturing	EF2	61,961	\$78,446,928,602
Critical Manufacturing	EF3	61,961	\$84,449,240,372
Critical Manufacturing	EF4	61,961	\$84,658,019,831
Critical Manufacturing	EF5	607	\$588,296,844
Defense Industrial Base	EF0	77	\$45,170,103
Defense Industrial Base	EF1	77	\$309,569,899

Sector	Event	Number of Buildings At Risk	Estimated Damages
Defense Industrial Base	EF2	77	\$722,117,055
Defense Industrial Base	EF3	77	\$817,004,123
Defense Industrial Base	EF4	77	\$830,327,774
Defense Industrial Base	EF5	3	\$43,069,558
Emergency Services	EF0	2,499	\$70,412,482
Emergency Services	EF1	2,499	\$562,704,106
Emergency Services	EF2	2,499	\$2,018,392,661
Emergency Services	EF3	2,499	\$3,204,805,288
Emergency Services	EF4	2,499	\$3,320,261,049
Emergency Services	EF5	10	\$12,177,624
Energy	EF0	1,633	\$2,469,392,702
Energy	EF1	1,633	\$17,791,369,163
Energy	EF2	1,633	\$40,348,266,252
Energy	EF3	1,633	\$43,272,318,499
Energy	EF4	1,633	\$43,299,324,990
Energy	EF5	9	\$712,805,497
Food and Agriculture	EF0	152,146	\$1,290,795,515
Food and Agriculture	EF1	152,146	\$8,612,896,541
Food and Agriculture	EF2	152,146	\$13,136,408,053
Food and Agriculture	EF3	152,146	\$13,622,203,371
Food and Agriculture	EF4	152,146	\$13,638,416,365
Food and Agriculture	EF5	334	\$30,450,936
Government Facilities	EF0	38,920	\$2,579,707,666
Government Facilities	EF1	38,920	\$13,232,894,388
Government Facilities	EF2	38,920	\$41,102,295,816

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	EF3	38,920	\$61,645,214,821
Government Facilities	EF4	38,920	\$66,764,457,423
Government Facilities	EF5	269	\$337,870,107
Healthcare and Public Health	EF0	13,616	\$1,470,937,093
Healthcare and Public Health	EF1	13,616	\$7,380,339,745
Healthcare and Public Health	EF2	13,616	\$18,933,402,756
Healthcare and Public Health	EF3	13,616	\$26,471,900,591
Healthcare and Public Health	EF4	13,616	\$27,361,271,528
Healthcare and Public Health	EF5	121	\$155,593,667
Information Technology	EF0	3	\$187,766
Information Technology	EF1	3	\$1,560,026
Information Technology	EF2	3	\$3,309,102
Information Technology	EF3	3	\$4,063,873
Information Technology	EF4	3	\$4,199,497
National Monuments and Icons	EF0	2	\$56,764
National Monuments and Icons	EF1	2	\$430,920
National Monuments and Icons	EF2	2	\$2,327,004
National Monuments and Icons	EF3	2	\$2,540,176
National Monuments and Icons	EF4	2	\$2,581,687
Nuclear Reactors, Materials and Waste	EF0	64	\$7,743,525
Nuclear Reactors, Materials and Waste	EF1	64	\$55,300,325
Nuclear Reactors, Materials and Waste	EF2	64	\$135,239,470
Nuclear Reactors, Materials and Waste	EF3	64	\$157,669,531
Nuclear Reactors, Materials and Waste	EF4	64	\$159,829,516

Sector	Event	Number of Buildings At Risk	Estimated Damages
Other	EF0	12	\$831,598
Other	EF1	12	\$6,388,302
Other	EF2	12	\$23,109,655
Other	EF3	12	\$30,208,469
Other	EF4	12	\$30,873,333
Postal and Shipping	EF0	246	\$3,922,147
Postal and Shipping	EF1	246	\$24,843,393
Postal and Shipping	EF2	246	\$68,624,976
Postal and Shipping	EF3	246	\$79,276,009
Postal and Shipping	EF4	246	\$81,702,944
Transportation Systems	EF0	36,884	\$2,630,566,962
Transportation Systems	EF1	36,884	\$15,099,231,713
Transportation Systems	EF2	36,884	\$34,190,970,608
Transportation Systems	EF3	36,884	\$47,948,407,235
Transportation Systems	EF4	36,884	\$49,784,815,397
Transportation Systems	EF5	373	\$445,490,169
Water	EF0	1,279	\$1,659,128,602
Water	EF1	1,279	\$11,974,567,029
Water	EF2	1,279	\$27,143,178,697
Water	EF3	1,279	\$29,015,296,951
Water	EF4	1,279	\$29,015,727,669
Water	EF5	16	\$1,181,325,000
All Categories	EF0	512,576	\$24,947,482,957
All Categories	EF1	512,576	\$162,067,656,127
All Categories	EF2	512,576	\$394,722,578,478

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF3	512,576	\$492,763,668,630
All Categories	EF4	512,576	\$509,035,480,640
All Categories	EF5	3,355	\$4,983,207,723

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.144: High Potential Loss Properties Exposed to the Tornado - Alexander County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	172	\$26,932,096
Commercial	EF1	172	\$156,679,982
Commercial	EF2	172	\$382,315,047
Commercial	EF3	172	\$519,858,582
Commercial	EF4	172	\$549,484,472
Government	EF0	23	\$8,633,980
Government	EF1	23	\$36,884,977
Government	EF2	23	\$99,677,331
Government	EF3	23	\$150,981,820
Government	EF4	23	\$170,176,383
Industrial	EF0	62	\$15,370,085
Industrial	EF1	62	\$110,922,570
Industrial	EF2	62	\$250,650,613
Industrial	EF3	62	\$268,707,776
Industrial	EF4	62	\$268,707,776
Religious	EF0	28	\$3,476,302

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	EF1	28	\$28,027,684
Religious	EF2	28	\$101,431,135
Religious	EF3	28	\$161,347,204
Religious	EF4	28	\$167,129,898
Residential	EF0	17	\$1,557,468
Residential	EF1	17	\$10,325,219
Residential	EF2	17	\$26,332,954
Residential	EF3	17	\$44,914,654
Residential	EF4	17	\$48,083,618
Utilities	EF0	13	\$6,706,972
Utilities	EF1	13	\$48,402,765
Utilities	EF2	13	\$109,375,239
Utilities	EF3	13	\$117,254,759
Utilities	EF4	13	\$117,254,759
All Categories	EF0	315	\$62,676,903
All Categories	EF1	315	\$391,243,197
All Categories	EF2	315	\$969,782,319
All Categories	EF3	315	\$1,263,064,795
All Categories	EF4	315	\$1,320,836,906

Source: GIS Analysis

Table 4.145: High Potential Loss Properties Exposed to the Tornado - Town of Taylorsville

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	53	\$9,979,204
Commercial	EF1	53	\$61,710,255
Commercial	EF2	53	\$138,040,063

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF3	53	\$173,938,428
Commercial	EF4	53	\$179,651,936
Government	EF0	5	\$1,457,092
Government	EF1	5	\$6,874,127
Government	EF2	5	\$19,842,468
Government	EF3	5	\$30,435,382
Government	EF4	5	\$33,578,827
Industrial	EF0	17	\$8,041,506
Industrial	EF1	17	\$58,033,807
Industrial	EF2	17	\$131,138,408
Industrial	EF3	17	\$140,585,772
Industrial	EF4	17	\$140,585,772
Religious	EF0	7	\$447,580
Religious	EF1	7	\$3,608,618
Religious	EF2	7	\$13,059,452
Religious	EF3	7	\$20,773,760
Religious	EF4	7	\$21,518,293
Residential	EF0	8	\$537,395
Residential	EF1	8	\$3,346,630
Residential	EF2	8	\$9,792,596
Residential	EF3	8	\$18,769,510
Residential	EF4	8	\$20,418,073
Utilities	EF0	2	\$2,857,555
Utilities	EF1	2	\$20,622,353
Utilities	EF2	2	\$46,600,123

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	EF3	2	\$49,957,250
Utilities	EF4	2	\$49,957,250
All Categories	EF0	92	\$23,320,332
All Categories	EF1	92	\$154,195,790
All Categories	EF2	92	\$358,473,110
All Categories	EF3	92	\$434,460,102
All Categories	EF4	92	\$445,710,151

Source: GIS Analysis

Table 4.146: High Potential Loss Properties Exposed to the Tornado - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	54	\$10,172,476
Commercial	EF1	54	\$54,369,138
Commercial	EF2	54	\$118,897,692
Commercial	EF3	54	\$162,392,709
Commercial	EF4	54	\$169,698,481
Government	EF0	11	\$7,675,275
Government	EF1	11	\$32,274,802
Government	EF2	11	\$86,215,757
Government	EF3	11	\$130,290,483
Government	EF4	11	\$147,429,681
Industrial	EF0	14	\$2,028,482
Industrial	EF1	14	\$14,639,114
Industrial	EF2	14	\$33,079,859
Industrial	EF3	14	\$35,462,971

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF4	14	\$35,462,971
Religious	EF0	5	\$406,856
Religious	EF1	5	\$3,280,278
Religious	EF2	5	\$11,871,204
Religious	EF3	5	\$18,883,606
Religious	EF4	5	\$19,560,396
Residential	EF0	15	\$1,826,177
Residential	EF1	15	\$11,912,706
Residential	EF2	15	\$29,949,785
Residential	EF3	15	\$51,985,815
Residential	EF4	15	\$55,895,090
Utilities	EF0	7	\$9,152,000
Utilities	EF1	7	\$66,048,000
Utilities	EF2	7	\$149,248,000
Utilities	EF3	7	\$160,000,000
Utilities	EF4	7	\$160,000,000
All Categories	EF0	106	\$31,261,266
All Categories	EF1	106	\$182,524,038
All Categories	EF2	106	\$429,262,297
All Categories	EF3	106	\$559,015,584
All Categories	EF4	106	\$588,046,619

Source: GIS Analysis

Table 4.147: High Potential Loss Properties Exposed to the Tornado - City of Morganton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	72	\$22,776,370

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF1	72	\$125,074,368
Commercial	EF2	72	\$340,501,042
Commercial	EF3	72	\$498,700,571
Commercial	EF4	72	\$530,616,826
Government	EF0	49	\$11,263,501
Government	EF1	49	\$55,205,208
Government	EF2	49	\$163,002,097
Government	EF3	49	\$251,046,227
Government	EF4	49	\$275,040,188
Industrial	EF0	25	\$15,522,908
Industrial	EF1	25	\$112,025,460
Industrial	EF2	25	\$253,142,803
Industrial	EF3	25	\$271,379,506
Industrial	EF4	25	\$271,379,506
Religious	EF0	3	\$169,889
Religious	EF1	3	\$1,369,730
Religious	EF2	3	\$4,957,000
Religious	EF3	3	\$7,885,134
Religious	EF4	3	\$8,167,738
Residential	EF0	42	\$3,112,939
Residential	EF1	42	\$22,332,077
Residential	EF2	42	\$71,232,965
Residential	EF3	42	\$119,854,074
Residential	EF4	42	\$126,467,296
Utilities	EF0	18	\$10,046,724

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	EF1	18	\$72,505,032
Utilities	EF2	18	\$163,838,890
Utilities	EF3	18	\$175,642,035
Utilities	EF4	18	\$175,642,035
All Categories	EF0	209	\$62,892,331
All Categories	EF1	209	\$388,511,875
All Categories	EF2	209	\$996,674,797
All Categories	EF3	209	\$1,324,507,547
All Categories	EF4	209	\$1,387,313,589

Source: GIS Analysis

Table 4.148: High Potential Loss Properties Exposed to the Tornado - Town of Connelly Springs

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	EF0	1	\$247,361
Religious	EF1	1	\$1,994,346
Religious	EF2	1	\$7,217,463
Religious	EF3	1	\$11,480,867
Religious	EF4	1	\$11,892,343
Residential	EF0	2	\$105,498
Residential	EF1	2	\$722,480
Residential	EF2	2	\$1,597,867
Residential	EF3	2	\$2,437,157
Residential	EF4	2	\$2,570,949
All Categories	EF0	3	\$352,859
All Categories	EF1	3	\$2,716,826
All Categories	EF2	3	\$8,815,330

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF3	3	\$13,918,024
All Categories	EF4	3	\$14,463,292

Source: GIS Analysis

Table 4.149: High Potential Loss Properties Exposed to the Tornado - Town of Drexel

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	6	\$1,463,082
Commercial	EF1	6	\$8,097,442
Commercial	EF2	6	\$24,366,656
Commercial	EF3	6	\$35,263,305
Commercial	EF4	6	\$37,961,630
Government	EF0	1	\$516,764
Government	EF1	1	\$2,163,504
Government	EF2	1	\$5,760,545
Government	EF3	1	\$8,699,703
Government	EF4	1	\$9,855,061
Religious	EF0	1	\$38,844
Religious	EF1	1	\$313,177
Religious	EF2	1	\$1,133,377
Religious	EF3	1	\$1,802,870
Religious	EF4	1	\$1,867,485
Residential	EF0	2	\$117,174
Residential	EF1	2	\$819,450
Residential	EF2	2	\$1,739,681
Residential	EF3	2	\$2,497,006
Residential	EF4	2	\$2,605,924

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	EF0	1	\$3,432,000
Utilities	EF1	1	\$24,768,000
Utilities	EF2	1	\$55,968,000
Utilities	EF3	1	\$60,000,000
Utilities	EF4	1	\$60,000,000
All Categories	EF0	11	\$5,567,864
All Categories	EF1	11	\$36,161,573
All Categories	EF2	11	\$88,968,259
All Categories	EF3	11	\$108,262,884
All Categories	EF4	11	\$112,290,100

Source: GIS Analysis

Table 4.150: High Potential Loss Properties Exposed to the Tornado - Town of Glen Alpine

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	1	\$69,186
Commercial	EF1	1	\$395,788
Commercial	EF2	1	\$850,899
Commercial	EF3	1	\$1,252,019
Commercial	EF4	1	\$1,305,342
Government	EF0	1	\$488,725
Government	EF1	1	\$2,046,116
Government	EF2	1	\$5,447,988
Government	EF3	1	\$8,227,671
Government	EF4	1	\$9,320,342
Residential	EF0	1	\$46,004
Residential	EF1	1	\$370,911

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	EF2	1	\$1,342,314
Residential	EF3	1	\$2,135,228
Residential	EF4	1	\$2,211,754
All Categories	EF0	3	\$603,915
All Categories	EF1	3	\$2,812,815
All Categories	EF2	3	\$7,641,201
All Categories	EF3	3	\$11,614,918
All Categories	EF4	3	\$12,837,438

Source: GIS Analysis

Table 4.151: High Potential Loss Properties Exposed to the Tornado - Town of Hildebran

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	3	\$1,034,446
Commercial	EF1	3	\$5,602,697
Commercial	EF2	3	\$13,723,485
Commercial	EF3	3	\$20,143,647
Commercial	EF4	3	\$21,404,116
Government	EF0	2	\$754,951
Government	EF1	2	\$3,160,706
Government	EF2	2	\$8,415,696
Government	EF3	2	\$12,709,570
Government	EF4	2	\$14,397,455
Industrial	EF0	6	\$2,725,609
Industrial	EF1	6	\$19,670,131
Industrial	EF2	6	\$44,448,396
Industrial	EF3	6	\$47,650,511

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF4	6	\$47,650,511
Utilities	EF0	2	\$1,144,000
Utilities	EF1	2	\$8,256,000
Utilities	EF2	2	\$18,656,000
Utilities	EF3	2	\$20,000,000
Utilities	EF4	2	\$20,000,000
All Categories	EF0	13	\$5,659,006
All Categories	EF1	13	\$36,689,534
All Categories	EF2	13	\$85,243,577
All Categories	EF3	13	\$100,503,728
All Categories	EF4	13	\$103,452,082

Source: GIS Analysis

Table 4.152: High Potential Loss Properties Exposed to the Tornado - Town of Rutherford College

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	2	\$348,605
Commercial	EF1	2	\$1,515,305
Commercial	EF2	2	\$3,765,818
Commercial	EF3	2	\$5,195,233
Commercial	EF4	2	\$5,581,851
Government	EF0	1	\$269,688
Government	EF1	1	\$1,129,086
Government	EF2	1	\$3,006,305
Government	EF3	1	\$4,540,188
Government	EF4	1	\$5,143,144
Industrial	EF0	2	\$1,145,143

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF1	2	\$8,264,251
Industrial	EF2	2	\$18,674,645
Industrial	EF3	2	\$20,019,988
Industrial	EF4	2	\$20,019,988
Residential	EF0	3	\$611,438
Residential	EF1	3	\$3,799,813
Residential	EF2	3	\$10,059,120
Residential	EF3	3	\$18,907,546
Residential	EF4	3	\$20,587,119
All Categories	EF0	8	\$2,374,874
All Categories	EF1	8	\$14,708,455
All Categories	EF2	8	\$35,505,888
All Categories	EF3	8	\$48,662,955
All Categories	EF4	8	\$51,332,102

Source: GIS Analysis

Table 4.153: High Potential Loss Properties Exposed to the Tornado - Town of Valdese

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	9	\$1,585,363
Commercial	EF1	9	\$9,944,221
Commercial	EF2	9	\$27,199,979
Commercial	EF3	9	\$41,501,545
Commercial	EF4	9	\$43,305,819
Government	EF0	5	\$2,333,352
Government	EF1	5	\$9,867,670
Government	EF2	5	\$26,470,138

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	EF3	5	\$40,035,627
Government	EF4	5	\$45,237,851
Industrial	EF0	4	\$4,606,887
Industrial	EF1	4	\$33,246,905
Industrial	EF2	4	\$75,127,695
Industrial	EF3	4	\$80,539,982
Industrial	EF4	4	\$80,539,982
Residential	EF0	3	\$420,548
Residential	EF1	3	\$2,524,836
Residential	EF2	3	\$7,101,391
Residential	EF3	3	\$14,099,191
Residential	EF4	3	\$15,461,335
Utilities	EF0	9	\$6,810,928
Utilities	EF1	9	\$49,152,994
Utilities	EF2	9	\$111,070,525
Utilities	EF3	9	\$119,072,175
Utilities	EF4	9	\$119,072,175
All Categories	EF0	30	\$15,757,078
All Categories	EF1	30	\$104,736,626
All Categories	EF2	30	\$246,969,728
All Categories	EF3	30	\$295,248,520
All Categories	EF4	30	\$303,617,162

Source: GIS Analysis

Table 4.154: High Potential Loss Properties Exposed to the Tornado - Caldwell County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	34	\$7,097,340
Commercial	EF1	34	\$44,040,673
Commercial	EF2	34	\$106,092,050
Commercial	EF3	34	\$136,501,490
Commercial	EF4	34	\$143,064,979
Government	EF0	12	\$6,391,534
Government	EF1	12	\$26,950,510
Government	EF2	12	\$72,139,303
Government	EF3	12	\$109,062,370
Government	EF4	12	\$123,324,014
Industrial	EF0	9	\$1,653,772
Industrial	EF1	9	\$11,934,917
Industrial	EF2	9	\$26,969,211
Industrial	EF3	9	\$28,912,104
Industrial	EF4	9	\$28,912,104
Religious	EF0	3	\$263,753
Religious	EF1	3	\$2,126,509
Religious	EF2	3	\$7,695,757
Religious	EF3	3	\$12,241,693
Religious	EF4	3	\$12,680,436
Residential	EF0	8	\$359,613
Residential	EF1	8	\$2,205,540
Residential	EF2	8	\$6,350,298
Residential	EF3	8	\$12,347,618

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	EF4	8	\$13,476,777
Utilities	EF0	1	\$572,000
Utilities	EF1	1	\$4,128,000
Utilities	EF2	1	\$9,328,000
Utilities	EF3	1	\$10,000,000
Utilities	EF4	1	\$10,000,000
All Categories	EF0	67	\$16,338,012
All Categories	EF1	67	\$91,386,149
All Categories	EF2	67	\$228,574,619
All Categories	EF3	67	\$309,065,275
All Categories	EF4	67	\$331,458,310

Source: GIS Analysis

Table 4.155: High Potential Loss Properties Exposed to the Tornado - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	52	\$26,022,216
Commercial	EF1	52	\$130,993,110
Commercial	EF2	52	\$345,255,117
Commercial	EF3	52	\$497,784,799
Commercial	EF4	52	\$532,861,322
Government	EF0	14	\$6,930,703
Government	EF1	14	\$30,589,958
Government	EF2	14	\$84,579,345
Government	EF3	14	\$128,687,034
Government	EF4	14	\$143,950,045
Industrial	EF0	19	\$19,389,437

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF1	19	\$139,929,360
Industrial	EF2	19	\$316,196,965
Industrial	EF3	19	\$338,976,163
Industrial	EF4	19	\$338,976,163
Religious	EF0	8	\$773,909
Religious	EF1	8	\$6,239,640
Religious	EF2	8	\$22,581,023
Religious	EF3	8	\$35,919,788
Religious	EF4	8	\$37,207,156
Residential	EF0	29	\$13,289,796
Residential	EF1	29	\$92,766,392
Residential	EF2	29	\$197,673,219
Residential	EF3	29	\$285,366,036
Residential	EF4	29	\$298,127,448
Utilities	EF0	14	\$5,562,745
Utilities	EF1	14	\$40,145,126
Utilities	EF2	14	\$90,715,537
Utilities	EF3	14	\$97,250,790
Utilities	EF4	14	\$97,250,790
All Categories	EF0	136	\$71,968,806
All Categories	EF1	136	\$440,663,586
All Categories	EF2	136	\$1,057,001,206
All Categories	EF3	136	\$1,383,984,610
All Categories	EF4	136	\$1,448,372,924

Source: GIS Analysis

Table 4.156: High Potential Loss Properties Exposed to the Tornado - Town of Cahaj's Mountain

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	3	\$359,471
Commercial	EF1	3	\$2,324,932
Commercial	EF2	3	\$7,022,661
Commercial	EF3	3	\$10,230,420
Commercial	EF4	3	\$10,734,698
Residential	EF0	1	\$337,708
Residential	EF1	1	\$2,027,492
Residential	EF2	1	\$5,702,554
Residential	EF3	1	\$11,321,922
Residential	EF4	1	\$12,415,749
All Categories	EF0	4	\$697,179
All Categories	EF1	4	\$4,352,424
All Categories	EF2	4	\$12,725,215
All Categories	EF3	4	\$21,552,342
All Categories	EF4	4	\$23,150,447

Source: GIS Analysis

Table 4.157: High Potential Loss Properties Exposed to the Tornado - Town of Gamewell

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	1	\$97,591
Commercial	EF1	1	\$704,296
Commercial	EF2	1	\$1,591,491
Commercial	EF3	1	\$1,706,144
Commercial	EF4	1	\$1,706,144
Government	EF0	2	\$2,740,302

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	EF1	2	\$11,472,658
Government	EF2	2	\$30,547,097
Government	EF3	2	\$46,132,899
Government	EF4	2	\$52,259,546
Industrial	EF0	3	\$714,180
Industrial	EF1	3	\$5,154,085
Industrial	EF2	3	\$11,646,633
Industrial	EF3	3	\$12,485,670
Industrial	EF4	3	\$12,485,670
All Categories	EF0	6	\$3,552,073
All Categories	EF1	6	\$17,331,039
All Categories	EF2	6	\$43,785,221
All Categories	EF3	6	\$60,324,713
All Categories	EF4	6	\$66,451,360

Source: GIS Analysis

Table 4.158: High Potential Loss Properties Exposed to the Tornado - Town of Granite Falls

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	12	\$4,752,505
Commercial	EF1	12	\$23,546,263
Commercial	EF2	12	\$72,577,669
Commercial	EF3	12	\$104,533,148
Commercial	EF4	12	\$113,962,821
Government	EF0	5	\$3,173,002
Government	EF1	5	\$13,529,695
Government	EF2	5	\$36,512,519

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	EF3	5	\$55,290,747
Government	EF4	5	\$62,348,559
Industrial	EF0	2	\$1,606,091
Industrial	EF1	2	\$11,590,812
Industrial	EF2	2	\$26,191,640
Industrial	EF3	2	\$28,078,517
Industrial	EF4	2	\$28,078,517
Religious	EF0	2	\$77,812
Religious	EF1	2	\$627,358
Religious	EF2	2	\$2,270,386
Religious	EF3	2	\$3,611,518
Religious	EF4	2	\$3,740,955
Residential	EF0	7	\$515,425
Residential	EF1	7	\$3,094,444
Residential	EF2	7	\$8,703,480
Residential	EF3	7	\$17,279,998
Residential	EF4	7	\$18,949,444
Utilities	EF0	9	\$10,268,127
Utilities	EF1	9	\$74,102,848
Utilities	EF2	9	\$167,449,460
Utilities	EF3	9	\$179,512,714
Utilities	EF4	9	\$179,512,714
All Categories	EF0	37	\$20,392,962
All Categories	EF1	37	\$126,491,420
All Categories	EF2	37	\$313,705,154

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF3	37	\$388,306,642
All Categories	EF4	37	\$406,593,010

Source: GIS Analysis

Table 4.159: High Potential Loss Properties Exposed to the Tornado - Town of Hudson

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	8	\$1,716,786
Commercial	EF1	8	\$7,911,381
Commercial	EF2	8	\$20,214,651
Commercial	EF3	8	\$28,521,538
Commercial	EF4	8	\$30,653,554
Government	EF0	9	\$2,197,710
Government	EF1	9	\$12,003,174
Government	EF2	9	\$37,534,281
Government	EF3	9	\$58,382,919
Government	EF4	9	\$62,882,708
Industrial	EF0	7	\$2,951,216
Industrial	EF1	7	\$21,298,286
Industrial	EF2	7	\$48,127,522
Industrial	EF3	7	\$51,594,684
Industrial	EF4	7	\$51,594,684
Religious	EF0	1	\$122,637
Religious	EF1	1	\$988,759
Religious	EF2	1	\$3,578,283
Religious	EF3	1	\$5,691,999
Religious	EF4	1	\$5,896,000

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	EF0	5	\$550,494
Residential	EF1	5	\$3,571,296
Residential	EF2	5	\$8,747,028
Residential	EF3	5	\$15,168,987
Residential	EF4	5	\$16,330,642
All Categories	EF0	30	\$7,538,843
All Categories	EF1	30	\$45,772,896
All Categories	EF2	30	\$118,201,765
All Categories	EF3	30	\$159,360,127
All Categories	EF4	30	\$167,357,588

Source: GIS Analysis

Table 4.160: High Potential Loss Properties Exposed to the Tornado - Town of Rhodhiss

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	1	\$103,430
Commercial	EF1	1	\$492,379
Commercial	EF2	1	\$1,587,719
Commercial	EF3	1	\$2,320,669
Commercial	EF4	1	\$2,546,428
Government	EF0	1	\$514,437
Government	EF1	1	\$2,153,764
Government	EF2	1	\$5,734,613
Government	EF3	1	\$8,660,538
Government	EF4	1	\$9,810,695
Residential	EF0	1	\$55,234
Residential	EF1	1	\$331,605

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	EF2	1	\$932,677
Residential	EF3	1	\$1,851,748
Residential	EF4	1	\$2,030,648
All Categories	EF0	3	\$673,101
All Categories	EF1	3	\$2,977,748
All Categories	EF2	3	\$8,255,009
All Categories	EF3	3	\$12,832,955
All Categories	EF4	3	\$14,387,771

Source: GIS Analysis

Table 4.161: High Potential Loss Properties Exposed to the Tornado - Town of Sawmills

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	8	\$1,221,936
Commercial	EF1	8	\$6,501,265
Commercial	EF2	8	\$17,179,262
Commercial	EF3	8	\$24,478,068
Commercial	EF4	8	\$26,253,621
Government	EF0	2	\$853,156
Government	EF1	2	\$3,935,037
Government	EF2	2	\$11,199,938
Government	EF3	2	\$17,134,443
Government	EF4	2	\$18,988,267
Industrial	EF0	2	\$188,908
Industrial	EF1	2	\$1,363,308
Industrial	EF2	2	\$3,080,653
Industrial	EF3	2	\$3,302,587

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF4	2	\$3,302,587
Residential	EF0	1	\$28,642
Residential	EF1	1	\$171,959
Residential	EF2	1	\$483,654
Residential	EF3	1	\$960,254
Residential	EF4	1	\$1,053,025
All Categories	EF0	13	\$2,292,642
All Categories	EF1	13	\$11,971,569
All Categories	EF2	13	\$31,943,507
All Categories	EF3	13	\$45,875,352
All Categories	EF4	13	\$49,597,500

Source: GIS Analysis

Table 4.162: High Potential Loss Properties Exposed to the Tornado - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	41	\$5,569,534
Commercial	EF1	41	\$30,856,659
Commercial	EF2	41	\$83,357,285
Commercial	EF3	41	\$118,987,306
Commercial	EF4	41	\$127,888,576
Government	EF0	22	\$22,040,456
Government	EF1	22	\$93,492,938
Government	EF2	22	\$251,356,325
Government	EF3	22	\$380,341,533
Government	EF4	22	\$429,438,856

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	EF0	8	\$9,955,528
Industrial	EF1	8	\$71,846,890
Industrial	EF2	8	\$162,351,694
Industrial	EF3	8	\$174,047,700
Industrial	EF4	8	\$174,047,700
Religious	EF0	4	\$98,846
Religious	EF1	4	\$796,943
Religious	EF2	4	\$2,884,105
Religious	EF3	4	\$4,587,766
Religious	EF4	4	\$4,752,192
Residential	EF0	20	\$1,477,910
Residential	EF1	20	\$10,831,922
Residential	EF2	20	\$22,285,187
Residential	EF3	20	\$28,531,798
Residential	EF4	20	\$29,014,193
Utilities	EF0	24	\$37,264,675
Utilities	EF1	24	\$268,931,083
Utilities	EF2	24	\$607,700,858
Utilities	EF3	24	\$651,480,337
Utilities	EF4	24	\$651,480,337
All Categories	EF0	119	\$76,406,949
All Categories	EF1	119	\$476,756,435
All Categories	EF2	119	\$1,129,935,454
All Categories	EF3	119	\$1,357,976,440
All Categories	EF4	119	\$1,416,621,854

Source: GIS Analysis

Table 4.163: High Potential Loss Properties Exposed to the Tornado - City of Claremont

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	10	\$3,646,301
Commercial	EF1	10	\$17,573,790
Commercial	EF2	10	\$55,750,592
Commercial	EF3	10	\$80,957,645
Commercial	EF4	10	\$88,688,388
Government	EF0	2	\$532,885
Government	EF1	2	\$2,447,471
Government	EF2	2	\$6,947,286
Government	EF3	2	\$10,623,104
Government	EF4	2	\$11,782,542
Industrial	EF0	12	\$14,473,783
Industrial	EF1	12	\$104,454,152
Industrial	EF2	12	\$236,033,996
Industrial	EF3	12	\$253,038,160
Industrial	EF4	12	\$253,038,160
All Categories	EF0	24	\$18,652,969
All Categories	EF1	24	\$124,475,413
All Categories	EF2	24	\$298,731,874
All Categories	EF3	24	\$344,618,909
All Categories	EF4	24	\$353,509,090

Source: GIS Analysis

Table 4.164: High Potential Loss Properties Exposed to the Tornado - City of Conover

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	35	\$10,800,644

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF1	35	\$57,630,981
Commercial	EF2	35	\$158,026,383
Commercial	EF3	35	\$217,348,964
Commercial	EF4	35	\$234,087,412
Government	EF0	5	\$3,609,940
Government	EF1	5	\$15,538,508
Government	EF2	5	\$42,218,304
Government	EF3	5	\$64,016,514
Government	EF4	5	\$72,024,708
Industrial	EF0	23	\$21,109,745
Industrial	EF1	23	\$152,344,451
Industrial	EF2	23	\$344,251,222
Industrial	EF3	23	\$369,051,481
Industrial	EF4	23	\$369,051,481
Residential	EF0	6	\$881,259
Residential	EF1	6	\$6,201,429
Residential	EF2	6	\$13,004,900
Residential	EF3	6	\$18,305,826
Residential	EF4	6	\$19,035,386
Utilities	EF0	6	\$3,052,844
Utilities	EF1	6	\$22,031,716
Utilities	EF2	6	\$49,784,846
Utilities	EF3	6	\$53,371,404
Utilities	EF4	6	\$53,371,404
All Categories	EF0	75	\$39,454,432

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF1	75	\$253,747,085
All Categories	EF2	75	\$607,285,655
All Categories	EF3	75	\$722,094,189
All Categories	EF4	75	\$747,570,391

Source: GIS Analysis

Table 4.165: High Potential Loss Properties Exposed to the Tornado - City of Hickory

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	207	\$58,225,233
Commercial	EF1	207	\$341,378,655
Commercial	EF2	207	\$918,257,480
Commercial	EF3	207	\$1,272,845,579
Commercial	EF4	207	\$1,352,962,810
Government	EF0	35	\$10,896,363
Government	EF1	35	\$53,202,055
Government	EF2	35	\$156,741,276
Government	EF3	35	\$241,308,599
Government	EF4	35	\$264,550,550
Industrial	EF0	33	\$22,213,047
Industrial	EF1	33	\$160,306,746
Industrial	EF2	33	\$362,243,538
Industrial	EF3	33	\$388,339,985
Industrial	EF4	33	\$388,339,985
Religious	EF0	4	\$729,949
Religious	EF1	4	\$5,885,210
Religious	EF2	4	\$21,298,354

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	EF3	4	\$33,879,438
Religious	EF4	4	\$35,093,679
Residential	EF0	40	\$5,408,189
Residential	EF1	40	\$34,713,059
Residential	EF2	40	\$87,244,010
Residential	EF3	40	\$154,878,356
Residential	EF4	40	\$167,265,501
Utilities	EF0	26	\$9,236,118
Utilities	EF1	26	\$66,655,058
Utilities	EF2	26	\$150,619,763
Utilities	EF3	26	\$161,470,586
Utilities	EF4	26	\$161,470,586
All Categories	EF0	345	\$106,708,899
All Categories	EF1	345	\$662,140,783
All Categories	EF2	345	\$1,696,404,421
All Categories	EF3	345	\$2,252,722,543
All Categories	EF4	345	\$2,369,683,111

Source: GIS Analysis

Table 4.166: High Potential Loss Properties Exposed to the Tornado - City of Newton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	26	\$14,918,853
Commercial	EF1	26	\$76,544,565
Commercial	EF2	26	\$240,141,990
Commercial	EF3	26	\$345,257,420
Commercial	EF4	26	\$374,216,161

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	EF0	9	\$3,893,893
Government	EF1	9	\$17,273,216
Government	EF2	9	\$47,923,147
Government	EF3	9	\$72,962,851
Government	EF4	9	\$81,525,291
Industrial	EF0	17	\$15,523,567
Industrial	EF1	17	\$112,030,219
Industrial	EF2	17	\$253,153,558
Industrial	EF3	17	\$271,391,035
Industrial	EF4	17	\$271,391,035
Religious	EF0	1	\$35,650
Religious	EF1	1	\$287,426
Religious	EF2	1	\$1,040,183
Religious	EF3	1	\$1,654,626
Religious	EF4	1	\$1,713,928
Residential	EF0	3	\$217,726
Residential	EF1	3	\$1,494,566
Residential	EF2	3	\$3,290,416
Residential	EF3	3	\$4,986,363
Residential	EF4	3	\$5,254,273
Utilities	EF0	10	\$4,576,000
Utilities	EF1	10	\$33,024,000
Utilities	EF2	10	\$74,623,999
Utilities	EF3	10	\$79,999,999
Utilities	EF4	10	\$79,999,999

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF0	66	\$39,165,689
All Categories	EF1	66	\$240,653,992
All Categories	EF2	66	\$620,173,293
All Categories	EF3	66	\$776,252,294
All Categories	EF4	66	\$814,100,687

Source: GIS Analysis

Table 4.167: High Potential Loss Properties Exposed to the Tornado - Town of Catawba

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	1	\$806,815
Commercial	EF1	1	\$3,840,838
Commercial	EF2	1	\$12,385,108
Commercial	EF3	1	\$18,102,537
Commercial	EF4	1	\$19,863,585
Government	EF0	2	\$1,886,204
Government	EF1	2	\$7,896,858
Government	EF2	2	\$21,026,173
Government	EF3	2	\$31,754,190
Government	EF4	2	\$35,971,283
All Categories	EF0	3	\$2,693,019
All Categories	EF1	3	\$11,737,696
All Categories	EF2	3	\$33,411,281
All Categories	EF3	3	\$49,856,727
All Categories	EF4	3	\$55,834,868

Source: GIS Analysis

Table 4.168: High Potential Loss Properties Exposed to the Tornado - Town of Long View

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	5	\$2,140,137
Commercial	EF1	5	\$12,608,322
Commercial	EF2	5	\$30,356,041
Commercial	EF3	5	\$38,425,418
Commercial	EF4	5	\$40,536,184
Government	EF0	2	\$1,653,707
Government	EF1	2	\$6,923,475
Government	EF2	2	\$18,434,442
Government	EF3	2	\$27,840,101
Government	EF4	2	\$31,537,386
Industrial	EF0	2	\$790,961
Industrial	EF1	2	\$5,708,191
Industrial	EF2	2	\$12,898,741
Industrial	EF3	2	\$13,827,981
Industrial	EF4	2	\$13,827,981
Residential	EF0	1	\$45,580
Residential	EF1	1	\$273,645
Residential	EF2	1	\$769,658
Residential	EF3	1	\$1,528,088
Residential	EF4	1	\$1,675,719
All Categories	EF0	10	\$4,630,385
All Categories	EF1	10	\$25,513,633
All Categories	EF2	10	\$62,458,882
All Categories	EF3	10	\$81,621,588

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF4	10	\$87,577,270

Source: GIS Analysis

Table 4.169: High Potential Loss Properties Exposed to the Tornado - Town of Maiden

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	EF0	7	\$1,507,721
Commercial	EF1	7	\$10,360,771
Commercial	EF2	7	\$24,181,130
Commercial	EF3	7	\$27,788,710
Commercial	EF4	7	\$28,358,901
Government	EF0	4	\$3,028,131
Government	EF1	4	\$12,759,410
Government	EF2	4	\$34,135,766
Government	EF3	4	\$51,602,097
Government	EF4	4	\$58,360,194
Industrial	EF0	7	\$11,780,241
Industrial	EF1	7	\$85,015,446
Industrial	EF2	7	\$192,108,546
Industrial	EF3	7	\$205,948,270
Industrial	EF4	7	\$205,948,270
Utilities	EF0	7	\$7,364,935
Utilities	EF1	7	\$53,151,141
Utilities	EF2	7	\$120,105,099
Utilities	EF3	7	\$128,757,610
Utilities	EF4	7	\$128,757,610
All Categories	EF0	25	\$23,681,028

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	EF1	25	\$161,286,768
All Categories	EF2	25	\$370,530,541
All Categories	EF3	25	\$414,096,687
All Categories	EF4	25	\$421,424,975

Source: GIS Analysis

4.5.5 Earthquake

An earthquake is the motion or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles; cause damage to property measured in the tens of billions of dollars; result in loss of life and injury to hundreds of thousands of persons; and disrupt the social and economic functioning of the affected area.

Most property damage and earthquake-related death(s) are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site and regional geology. Other damaging earthquake effects include landslides, the down-slope movement of soil and rock (mountain regions and along hillsides), and liquefaction, in which ground soil loses the ability to resist shear and flows much like quick sand. In the case of liquefaction, anything relying on the substrata for support can shift, tilt, rupture or collapse.

Most earthquakes are caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's 10 tectonic plates. These plate borders generally follow the outlines of the continents, with the North American plate following the continental border with the Pacific Ocean in the west, but following the mid-Atlantic trench in the east. As earthquakes occurring in the mid-Atlantic trench usually pose little danger to humans, the greatest earthquake threat in North America is along the Pacific Coast.

The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength, a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

Earthquakes are measured in terms of their magnitude and intensity. Magnitude is measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude (see **Table 4.170**). Each unit increase in magnitude on the Richter Scale corresponds to a 10-fold increase in wave amplitude, or a 32-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect

measurements of seismic effects. The scale levels are typically described using roman numerals, with a I corresponding to imperceptible (instrumental) events, IV corresponding to moderate (felt by people awake), to XII for catastrophic (total destruction). A detailed description of the Modified Mercalli Intensity Scale of earthquake intensity and its correspondence to the Richter Scale is given in **Table 4.170**.

Table 4.170: Richter Scale

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
Less than 3.5	Generally not felt, but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0-7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Source: North Carolina Division of Emergency Management

Table 4.171: Modified Mercalli Intensity Scale for Earthquakes

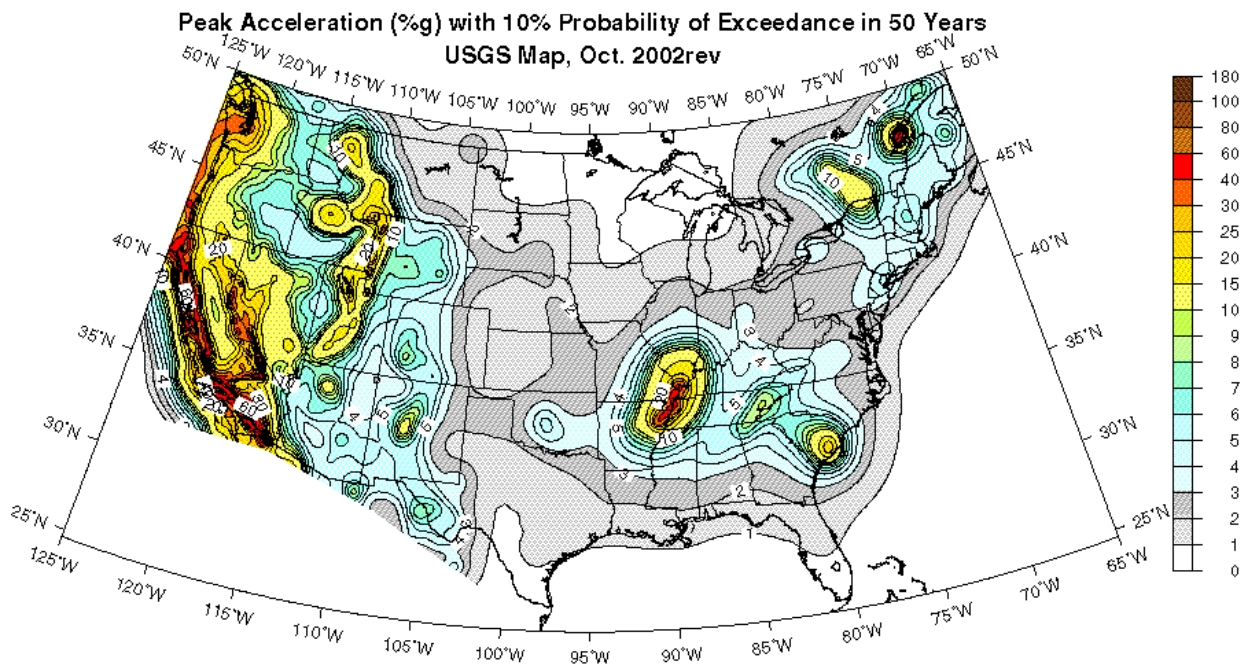
SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	Instrumental	Detected only on seismographs	
II	Feeble	Some people feel it	<4.2
III	Slight	Felt by people resting; like a truck rumbling by	
IV	Moderate	Felt by people walking	
V	Slightly Strong	Sleepers awake; church bells ring	<4.8
VI	Strong	Trees sway; suspended objects swing, objects fall off shelves	<5.4
VII	Very Strong	Mild Alarm; walls crack; plaster falls	<6.1
VIII	Destructive	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged	
IX	Ruinous	Some houses collapse; ground cracks; pipes break open	<6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread	<7.3

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards	<8.1
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves	>8.1

Source: North Carolina Division of Emergency Management

Figure 4.54 shows the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards.

Figure 4.54: Peak Acceleration with 10 Percent Probability of Exceedance in 50 Years



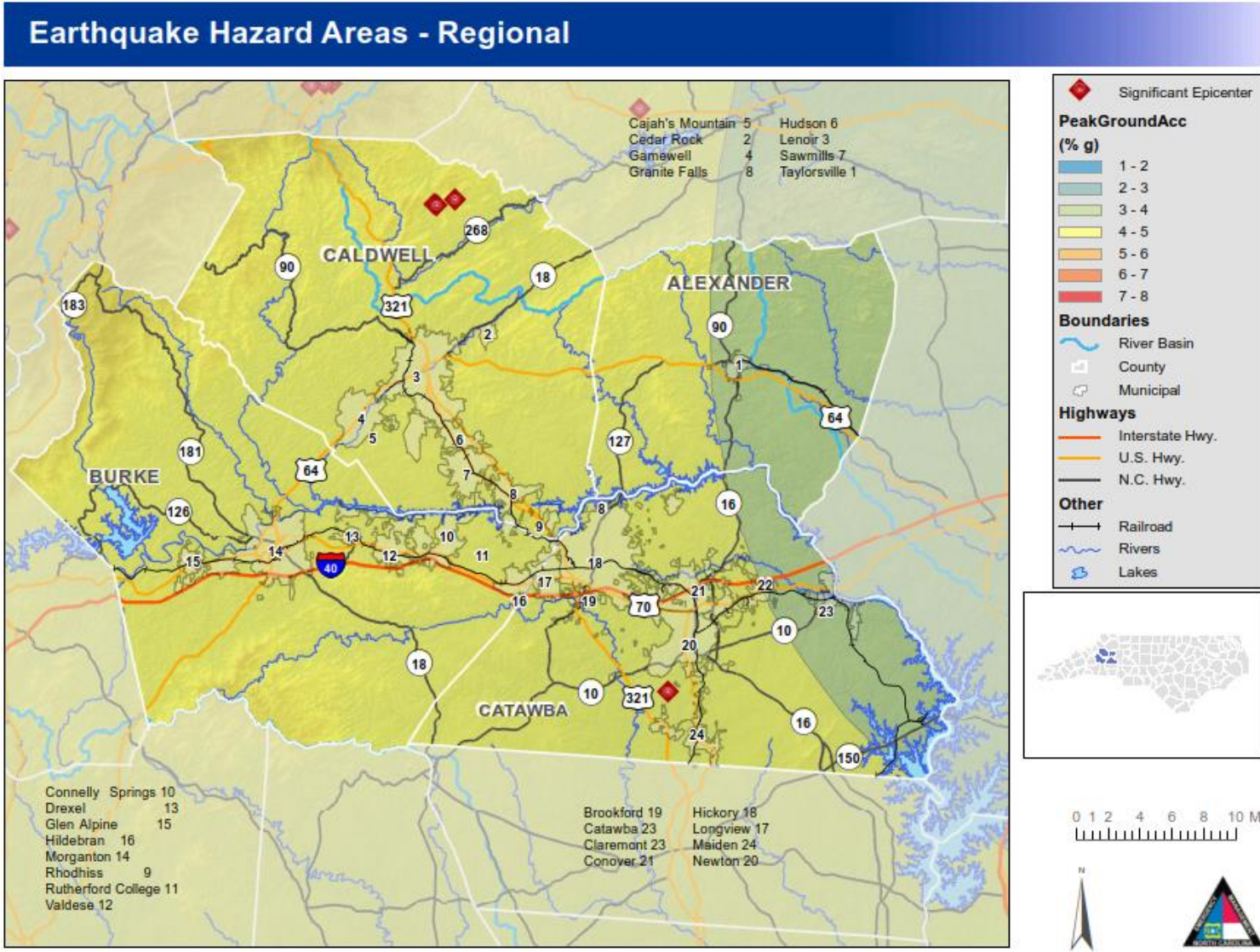
Source: United States Geological Survey

Earthquake Hazard Analysis

Location within the Planning Area

The below figures show peak ground acceleration and historic earthquake epicenters for the state of North Carolina and relevant surrounding areas.

Figure 4.55: Earthquake Hazard Areas



Earthquake Hazard Areas

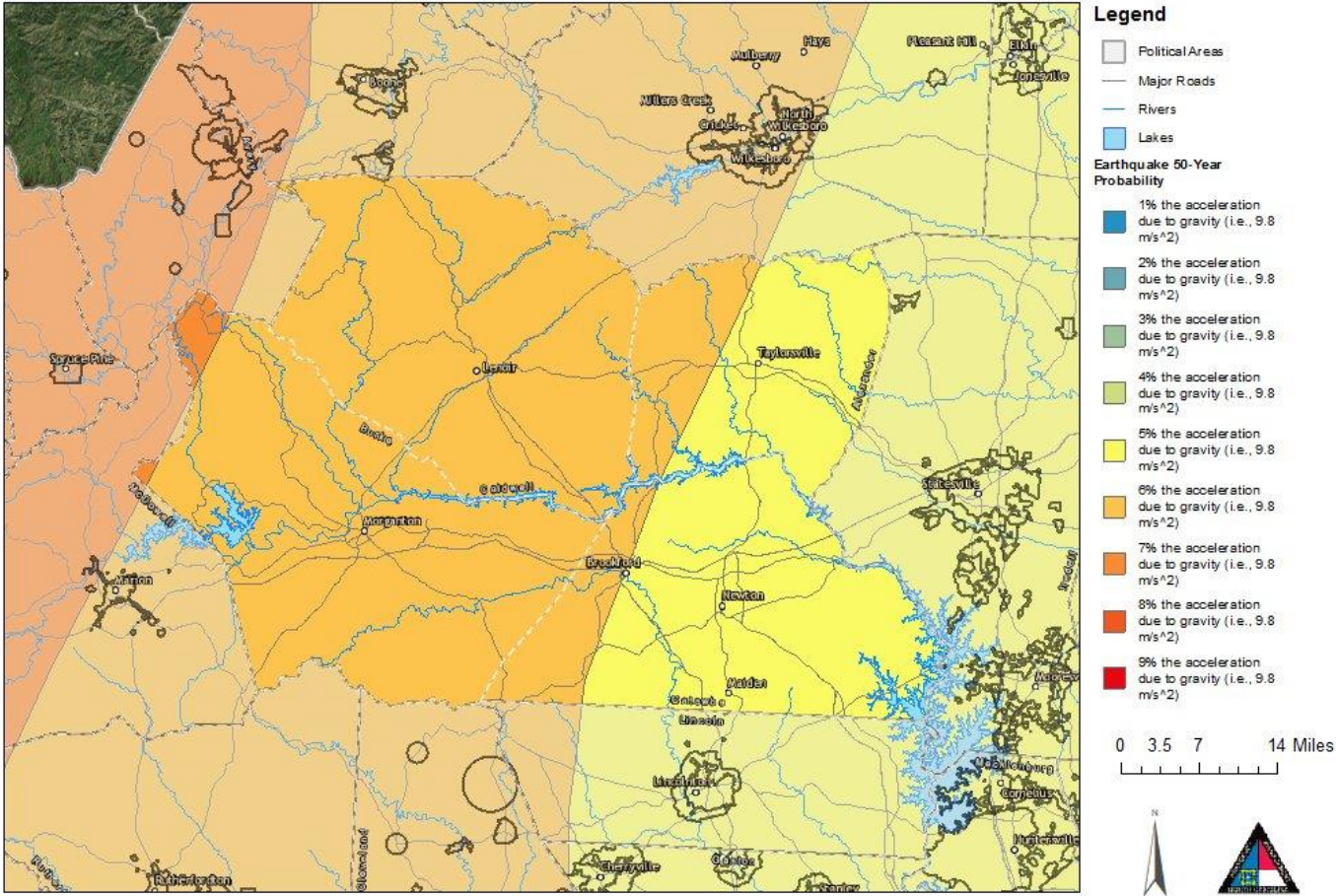
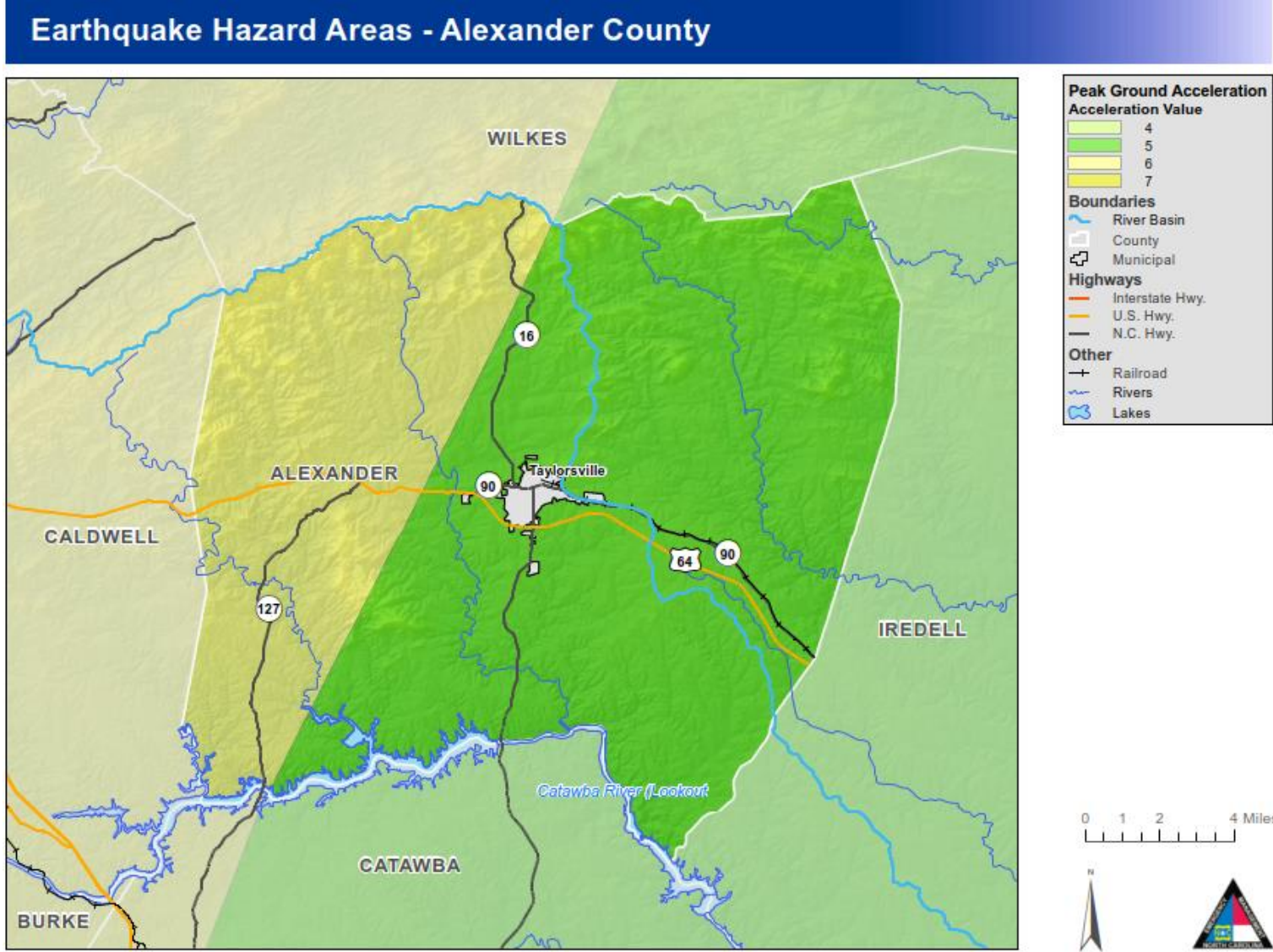


Figure 4.56: Earthquake Hazard Areas



ALEXANDER COUNTY

Earthquake Hazard Areas

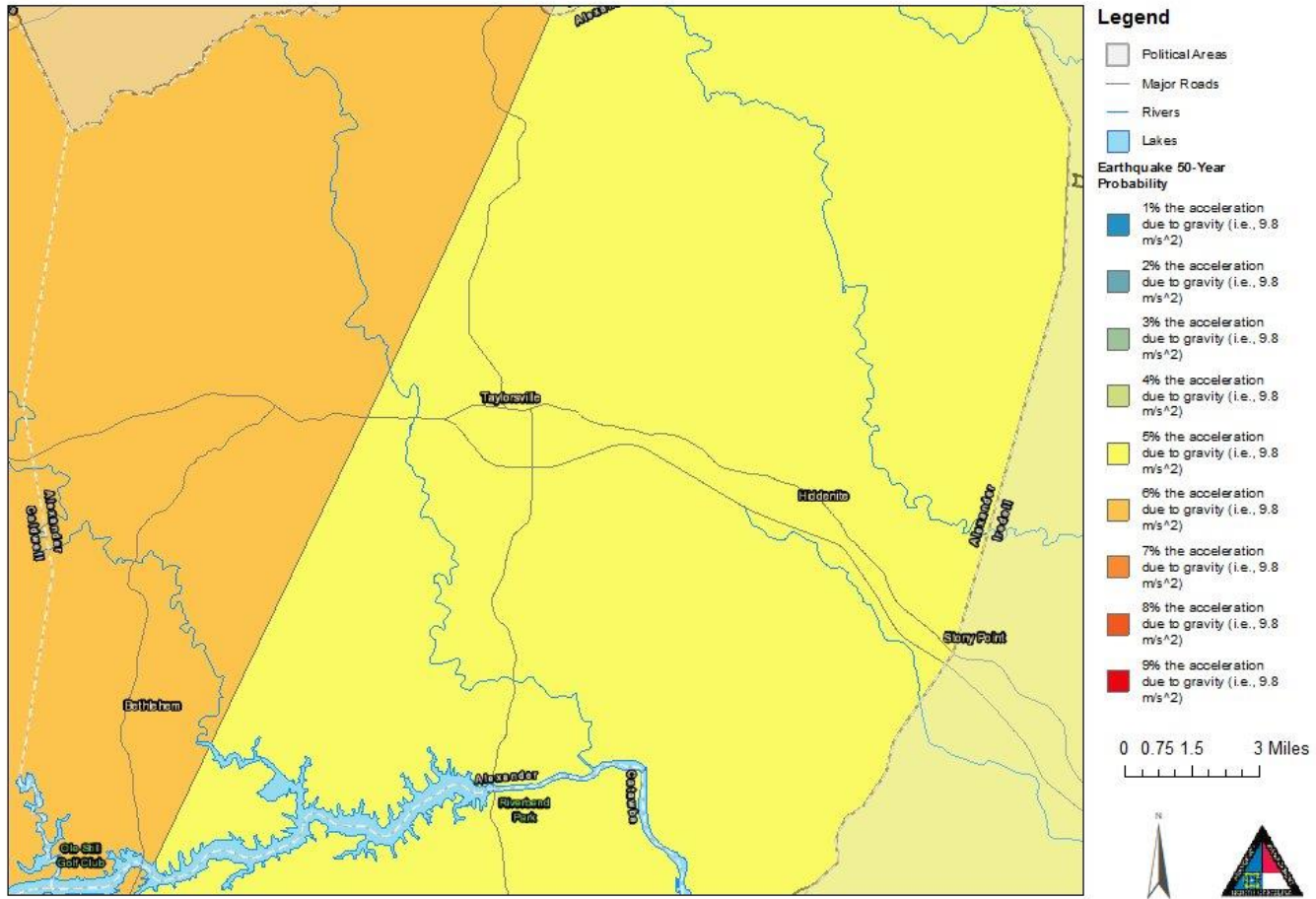
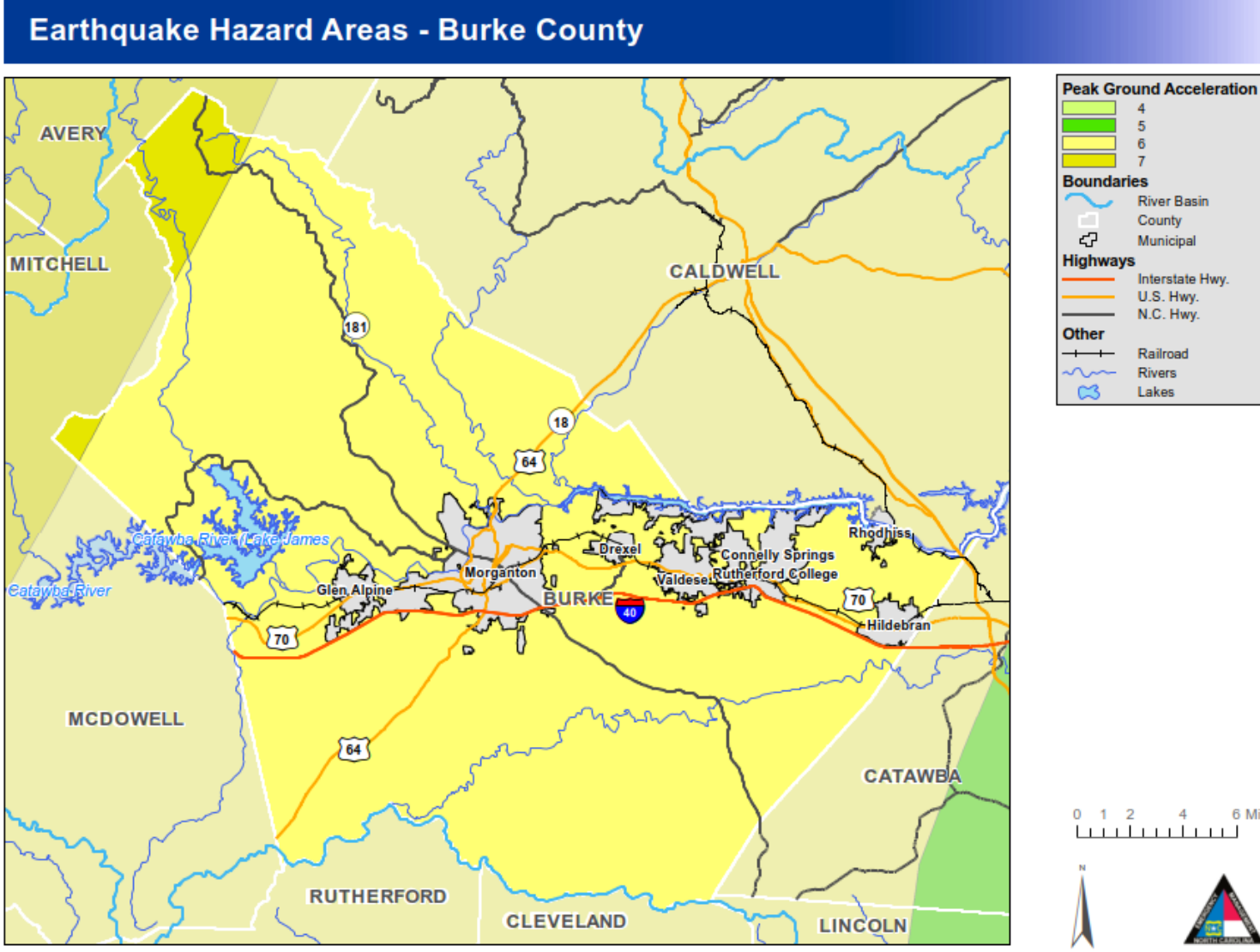


Figure 4.57: Earthquake Hazard Areas



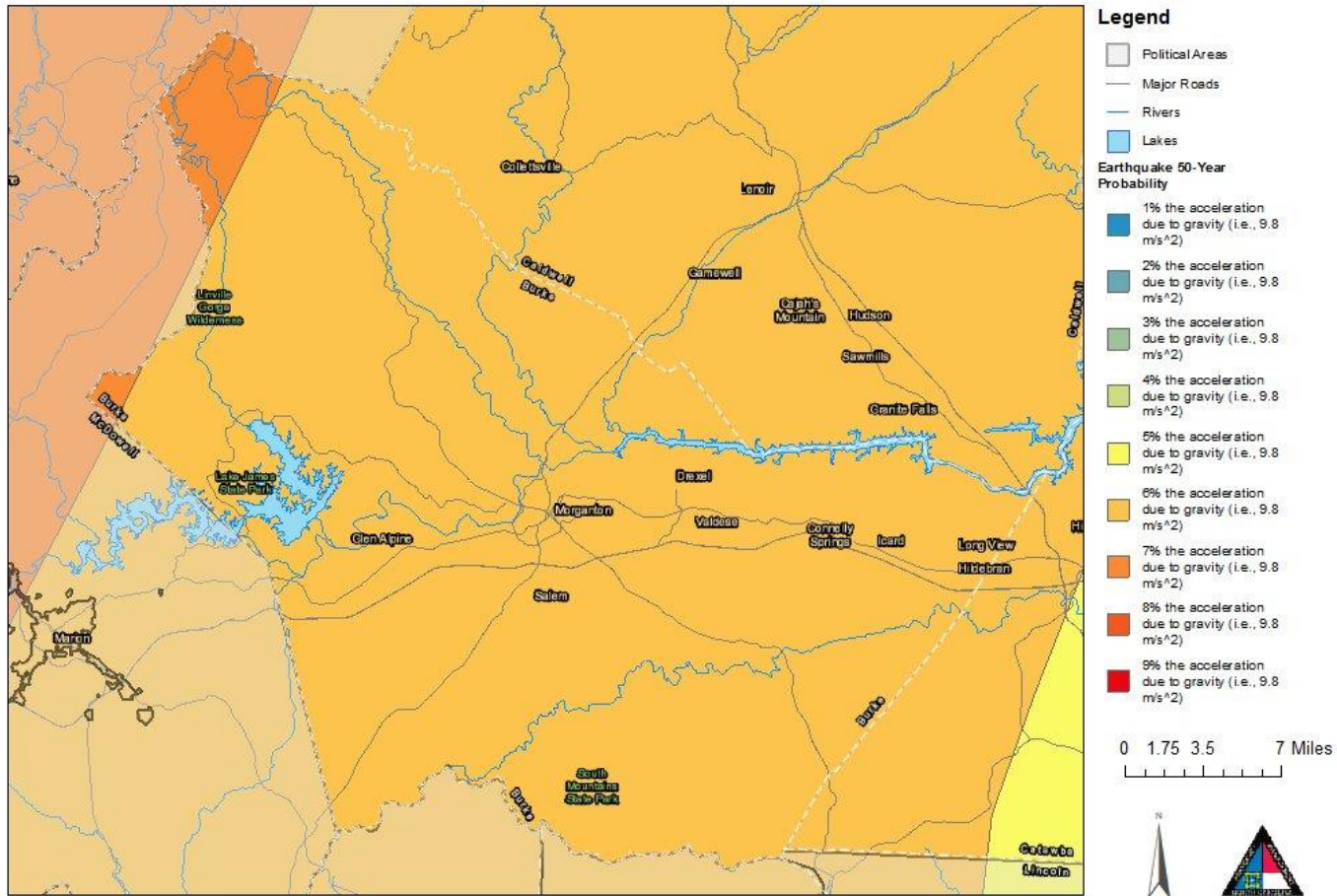
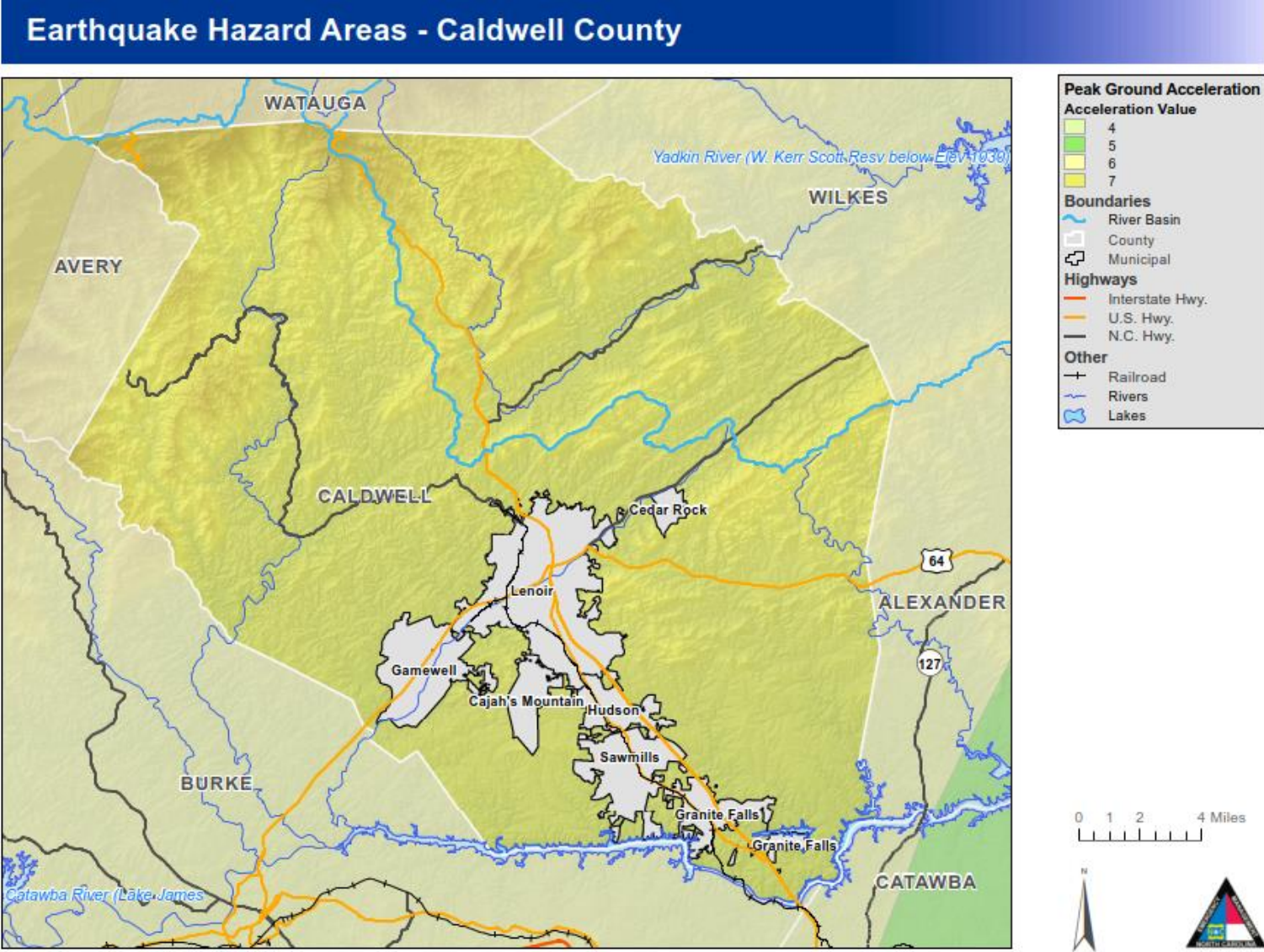


Figure 4.58: Earthquake Hazard Areas



CALDWELL COUNTY

Earthquake Hazard Areas

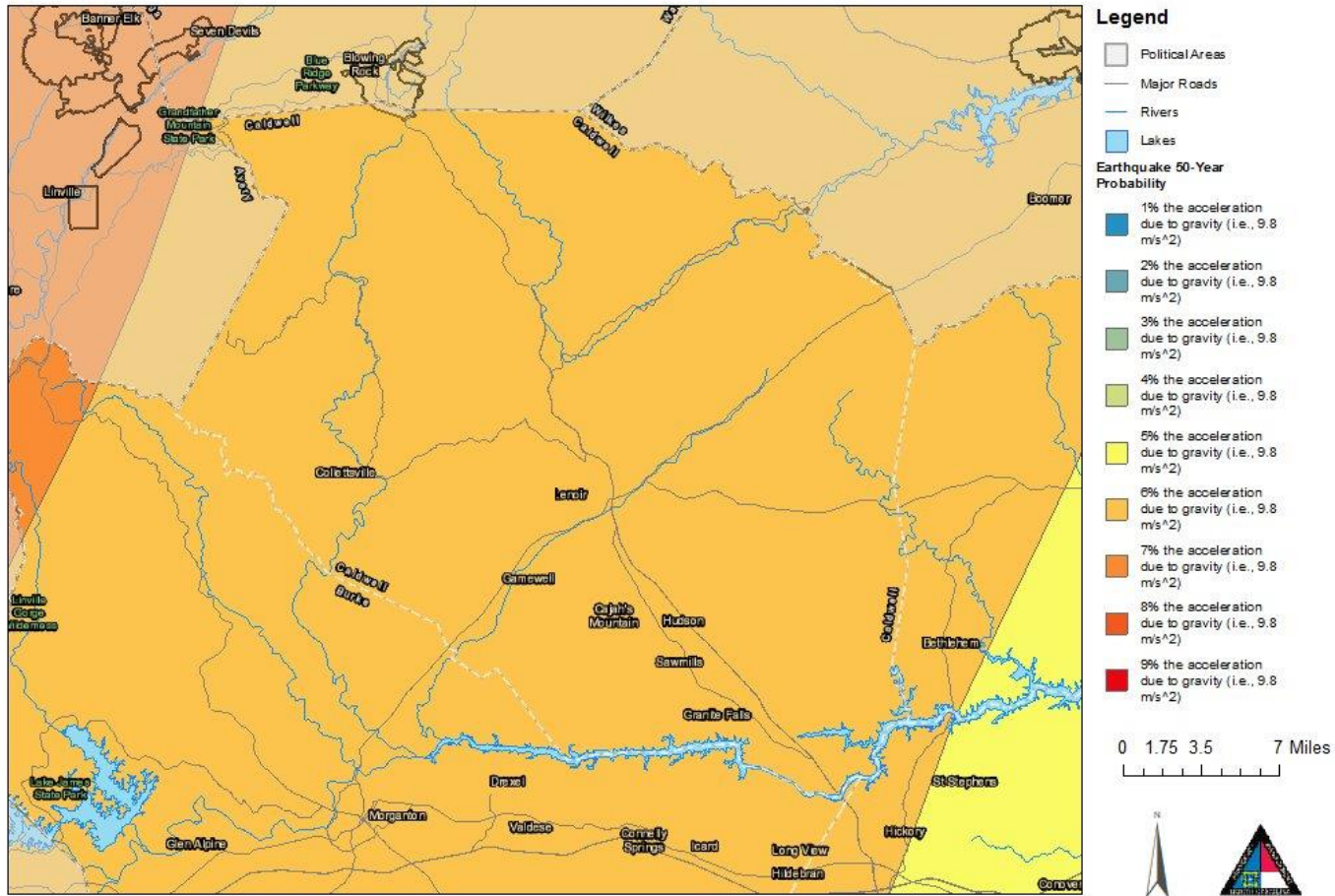
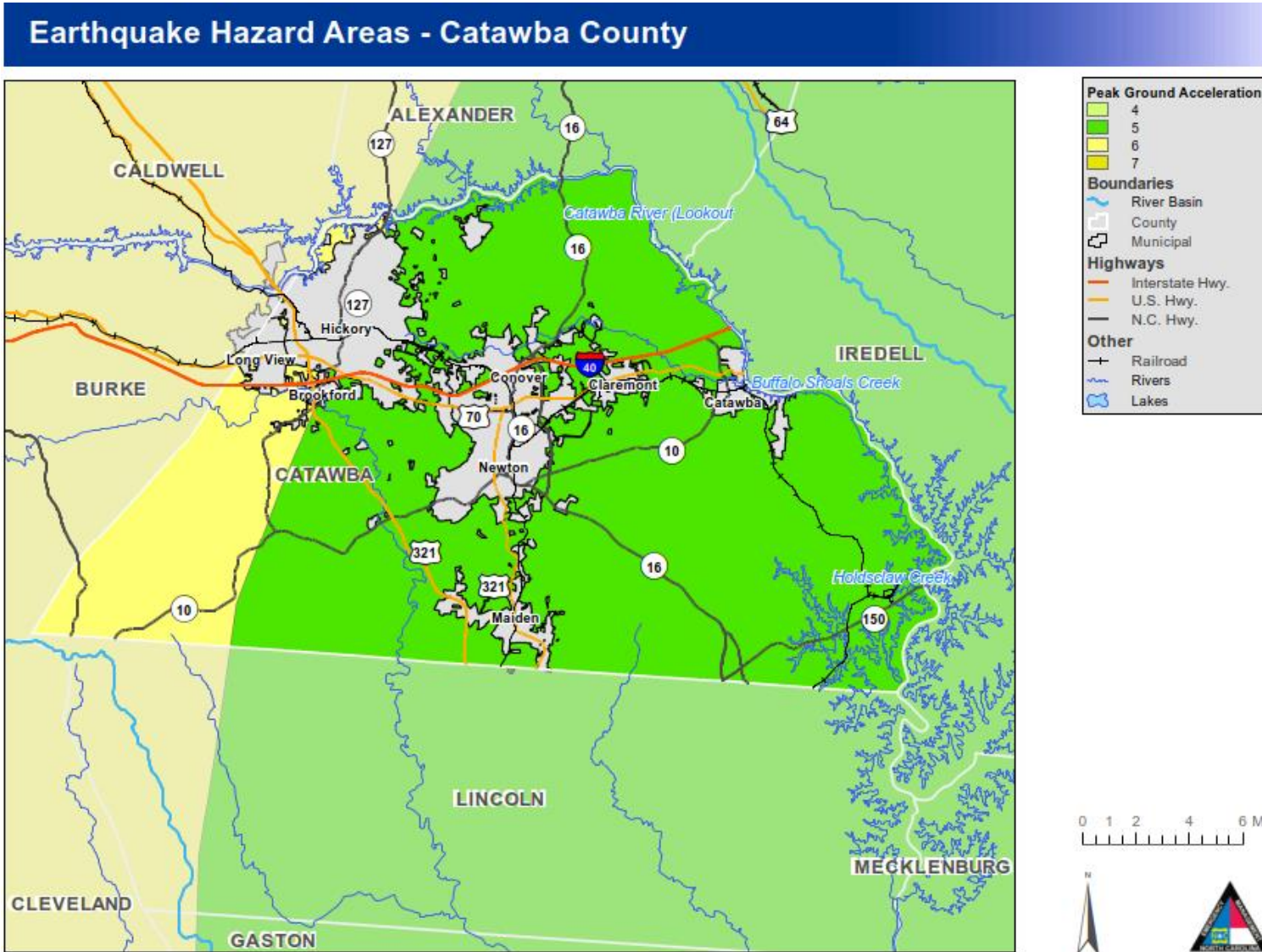
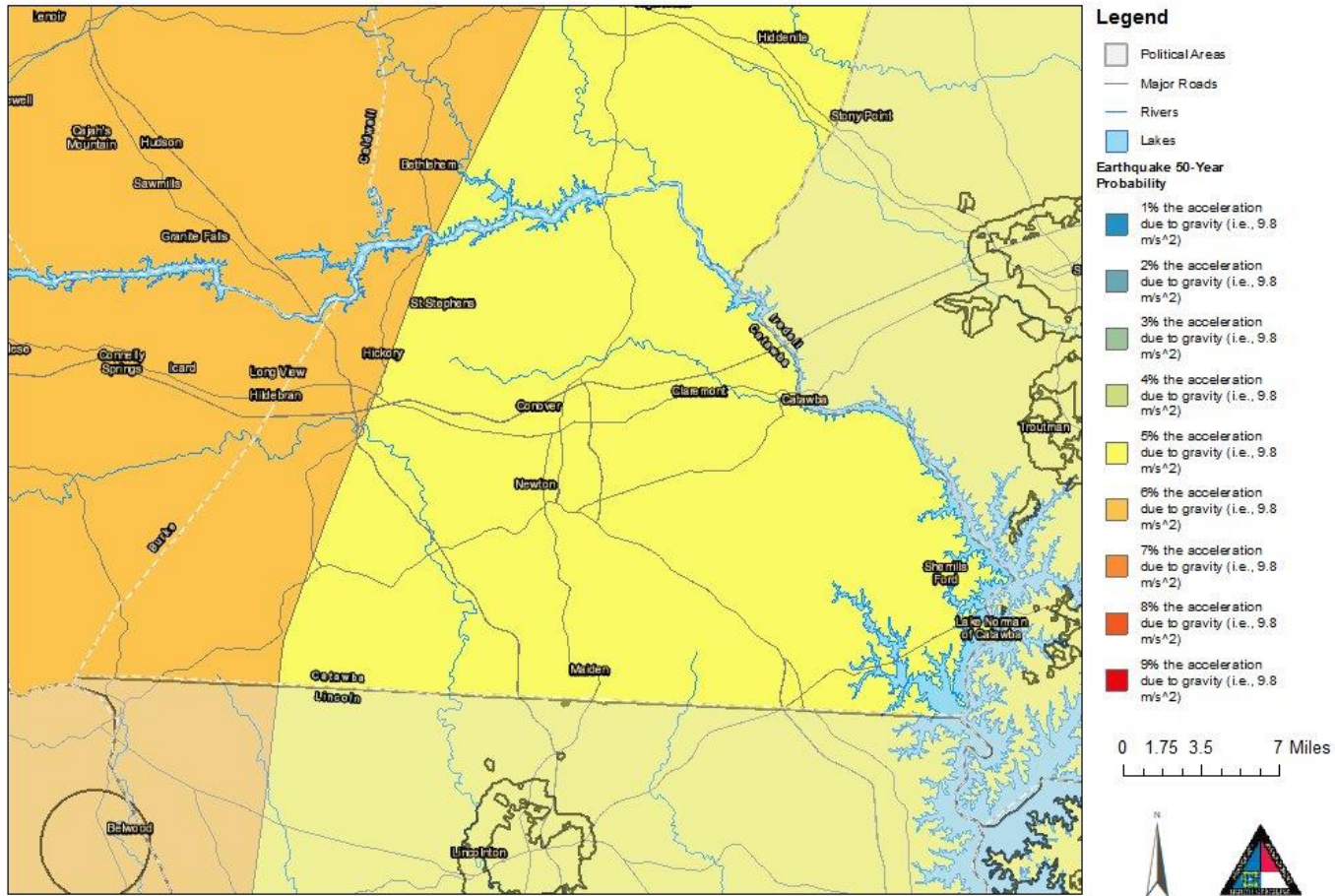


Figure 4.59: Earthquake Hazard Areas





Extent (Magnitude and Severity)

Definition:

Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale.

Extent Event:

The most severe earthquake felt in the Unifour Region since the mid-1800s was a six (VI) on the Modified Mercalli Intensity Scale. This event occurred in 1886, the effects of which were reported specifically in the City of Hickory which was 337 miles from the epicenter of the earthquake. The affects of this magnitude earthquake typically include trees swaying, suspended objects swinging, and objects falling off of shelves. Earthquakes of greater magnitude may be possible within the region, however this is known to be the greatest severity currently on record.

Historical Occurrences

Table 4.172: Modified Mercalli Intensity Scale for Earthquakes

Date	Location	Intensity (MMI)	Details
09/01/1886	Hickory	VI	337 miles from epicenter
02/21/1916	Hickory	V	107 miles from epicenter
08/26/1916	Newton	IV	42 miles from epicenter
11/03/1928	Newton	III	130 miles from epicenter
05/13/1957	Claremont	IV	76 miles from epicenter
05/13/1957	Conover	IV	70 miles from epicenter
05/13/1957	Hickory	V	59 miles from epicenter
05/13/1957	Maiden	IV	73 miles from epicenter
05/13/1957	Newton	IV	71 miles from epicenter
09/13/1976	Long View	II	109 miles from epicenter

Source: National Geophysical Data Center/World Data Service (NGDC/WDS) Significant Earthquake Database.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Earthquake is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low - Less Than 1% Annual Probability Of 500-Year Earthquake
- Medium - Between 1% And 10% Annual Probability Of 500-Year Earthquake
- High - More Than 10% Annual Probability Of 500-Year Earthquake

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low

Jurisdiction	IRISK Probability of Future Occurrence
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cajah's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Earthquake Hazard Vulnerability

Vulnerability for earthquake for the area is considered, in relative terms, to be limited should a significant earthquake event occur. The following tables provide loss estimates for the 500-, 1,000- and 2,500- year return periods based on probabilistic scenarios. Loss data was provided by NCEM's IHRM Program. These estimates include structural, contents and inventory losses for agricultural, commercial, education, government, industrial, religious and residential building occupancy types. The loss ratio is the loss estimate divided by the total potential exposure (i.e., total of improved and contents value for all buildings located within the 100-year floodplain) and displayed as a percentage of loss. FEMA considers loss ratios greater than 10% to be significant and an indicator a community may have more difficulties recovering from an event. These loss estimates do not include income losses, such as lost wages, rental expenses, relocation costs, etc. that can occur following an earthquake. All future structures and infrastructure built in the Unifour region will be vulnerable to seismic events and may also experience damage not accounted for in these estimated losses. Contents value for all buildings located within the 100-year floodplain) and displayed as a percentage of loss. FEMA considers loss ratios greater than 10% to be significant and an indicator a community may have more difficulties recovering from an event. These loss estimates do not include income losses, such as lost wages, rental expenses, relocation costs, etc. that can occur following an earthquake. All future structures and infrastructure built in the Unifour will be vulnerable to seismic events and may also experience damage not accounted for in these estimated losses.

The following tables provide counts and values by jurisdiction relevant to Earthquake hazard vulnerability in the Unifour Regional HMP Area.

Table 4.173: Population Impacted by the 250 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.174: Population Impacted by the 500 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.175: Population Impacted by the 750 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.176: Population Impacted by the 1000 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.177: Population Impacted by the 1500 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.178: Population Impacted by the 2000 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.179: Population Impacted by the 2500 Year Earthquake

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.180: Buildings Impacted by the 250 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$423,852	1,814	7.4%	\$845,599	218	0.9%	\$164,013	24,650	99.9%	\$1,433,464
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$54,634	309	10.9%	\$239,891	76	2.7%	\$38,280	2,821	99.9%	\$332,805
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$478,486	2,123	7.7%	\$1,085,490	294	1.1%	\$202,293	27,471	99.9%	\$1,766,269
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$778,982	1,102	3.9%	\$762,600	229	0.8%	\$205,815	28,084	100%	\$1,747,396
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$407,968	1,134	10.6%	\$1,497,421	301	2.8%	\$337,995	10,704	99.8%	\$2,243,384
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$28,680	38	4.3%	\$21,654	8	0.9%	\$6,866	889	100%	\$57,200
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$100,481	98	3.3%	\$89,470	26	0.9%	\$30,056	2,948	100%	\$220,007

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$30,198	44	4.1%	\$24,458	9	0.8%	\$13,261	1,086	100%	\$67,917
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$43,688	121	11.3%	\$297,844	16	1.5%	\$26,298	1,067	99.8%	\$367,830
Town of Rutherford College	827	682	82.5%	755	91.3%	\$30,247	49	5.9%	\$47,832	23	2.8%	\$13,210	827	100%	\$91,289
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$104,657	175	8.2%	\$306,451	32	1.5%	\$37,604	2,121	99.5%	\$448,713
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$1,524,901	2,761	5.8%	\$3,047,730	644	1.3%	\$671,105	47,726	99.9%	\$5,243,736
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$538,638	887	4.3%	\$484,787	166	0.8%	\$123,935	20,772	100%	\$1,147,359
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$374,816	938	9.1%	\$1,175,843	160	1.6%	\$150,563	10,299	99.8%	\$1,701,223
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$45,785	87	6.4%	\$54,749	13	1%	\$9,575	1,350	100%	\$110,110
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$53,565	78	3.8%	\$49,606	13	0.6%	\$36,506	2,062	100%	\$139,677
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$131,705	262	7.7%	\$272,087	60	1.8%	\$58,310	3,385	99.7%	\$462,103
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$94,340	231	7.4%	\$223,443	37	1.2%	\$40,326	3,116	100%	\$358,109
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$14,328	17	3.5%	\$10,290	8	1.6%	\$5,340	490	100%	\$29,958
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$99,091	175	5.4%	\$187,482	14	0.4%	\$16,138	3,234	100%	\$302,712
Village of Cedar Rock	135	135	100%	131	97%	\$10,130	3	2.2%	\$2,371	1	0.7%	\$530	135	100%	\$13,032
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$1,362,398	2,678	6%	\$2,460,658	472	1.1%	\$441,223	44,843	99.9%	\$4,264,283

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$991,419	2,695	5.4%	\$919,761	271	0.5%	\$202,659	50,023	99.9%	\$2,113,839
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$26,327	230	17%	\$448,689	14	1%	\$7,086	1,351	100%	\$482,103
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$101,315	931	18.3%	\$1,223,105	21	0.4%	\$19,725	5,083	99.9%	\$1,344,144
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$609,599	3,248	14.4%	\$2,470,284	184	0.8%	\$163,641	22,473	99.8%	\$3,243,524
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$161,257	903	11.8%	\$865,943	48	0.6%	\$46,307	7,646	99.9%	\$1,073,507
Town of Brookford	304	274	90.1%	267	87.8%	\$5,777	36	11.8%	\$18,603	1	0.3%	\$18	304	100%	\$24,399
Town of Catawba	1,016	706	69.5%	901	88.7%	\$15,929	107	10.5%	\$52,618	8	0.8%	\$9,518	1,016	100%	\$78,065
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$60,388	305	11.2%	\$277,319	19	0.7%	\$9,579	2,716	100%	\$347,287
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$60,406	417	12.9%	\$394,897	18	0.6%	\$23,094	3,223	99.8%	\$478,396
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$2,032,417	8,872	9.4%	\$6,671,219	584	0.6%	\$481,627	93,835	99.9%	\$9,185,264
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$5,398,202	16,434	7.7%	\$13,265,097	1,994	0.9%	\$1,796,248	213,875	99.9%	\$20,459,552

Source: GIS Analysis

Table 4.181: Buildings Impacted by the 500 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$2,519,648	1,814	7.4%	\$3,803,415	218	0.9%	\$832,526	24,650	99.9%	\$7,155,589
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$314,733	309	10.9%	\$1,003,619	76	2.7%	\$161,098	2,821	99.9%	\$1,479,450
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$2,834,381	2,123	7.7%	\$4,807,034	294	1.1%	\$993,624	27,471	99.9%	\$8,635,039
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$4,708,008	1,102	3.9%	\$3,485,642	229	0.8%	\$991,874	28,084	100%	\$9,185,524
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$2,474,068	1,134	10.6%	\$6,071,969	301	2.8%	\$1,573,619	10,704	99.8%	\$10,119,656
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$169,930	38	4.3%	\$89,206	8	0.9%	\$41,400	889	100%	\$300,536
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$608,810	98	3.3%	\$408,777	26	0.9%	\$147,651	2,948	100%	\$1,165,238
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$182,504	44	4.1%	\$109,643	9	0.8%	\$67,576	1,086	100%	\$359,723
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$251,974	121	11.3%	\$1,252,700	16	1.5%	\$151,926	1,067	99.8%	\$1,656,600
Town of Rutherford College	827	682	82.5%	755	91.3%	\$195,013	49	5.9%	\$201,553	23	2.8%	\$71,283	827	100%	\$467,849
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$627,361	175	8.2%	\$1,294,248	32	1.5%	\$162,629	2,121	99.5%	\$2,084,239
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$9,217,668	2,761	5.8%	\$12,913,738	644	1.3%	\$3,207,958	47,726	99.9%	\$25,339,365
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$3,344,776	887	4.3%	\$2,241,157	166	0.8%	\$657,777	20,772	100%	\$6,243,710

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$2,363,989	938	9.1%	\$5,218,502	160	1.6%	\$732,535	10,299	99.8%	\$8,315,027
Town of Cahah's Mountain	1,350	1,350	100%	1,250	92.6%	\$288,918	87	6.4%	\$252,100	13	1%	\$42,191	1,350	100%	\$583,210
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$343,225	78	3.8%	\$232,124	13	0.6%	\$160,236	2,062	100%	\$735,585
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$821,587	262	7.7%	\$1,271,232	60	1.8%	\$257,851	3,385	99.7%	\$2,350,670
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$578,342	231	7.4%	\$941,398	37	1.2%	\$195,052	3,116	100%	\$1,714,791
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$86,060	17	3.5%	\$53,639	8	1.6%	\$28,516	490	100%	\$168,215
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$612,479	175	5.4%	\$824,704	14	0.4%	\$82,570	3,234	100%	\$1,519,753
Village of Cedar Rock	135	135	100%	131	97%	\$59,640	3	2.2%	\$8,794	1	0.7%	\$2,830	135	100%	\$71,264
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$8,499,016	2,678	6%	\$11,043,650	472	1.1%	\$2,159,558	44,843	99.9%	\$21,702,225
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$6,214,982	2,695	5.4%	\$4,510,354	271	0.5%	\$1,048,316	50,023	99.9%	\$11,773,652
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$162,577	230	17%	\$1,702,128	14	1%	\$35,576	1,351	100%	\$1,900,281
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$637,163	931	18.3%	\$4,725,063	21	0.4%	\$130,675	5,083	99.9%	\$5,492,902
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$3,732,011	3,248	14.4%	\$10,637,725	184	0.8%	\$769,296	22,473	99.8%	\$15,139,033
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$993,734	903	11.8%	\$3,663,780	48	0.6%	\$209,396	7,646	99.9%	\$4,866,911
Town of Brookford	304	274	90.1%	267	87.8%	\$36,285	36	11.8%	\$92,410	1	0.3%	\$120	304	100%	\$128,815

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Catawba	1,016	706	69.5%	901	88.7%	\$93,930	107	10.5%	\$240,258	8	0.8%	\$63,487	1,016	100%	\$397,676
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$366,989	305	11.2%	\$1,194,546	19	0.7%	\$64,396	2,716	100%	\$1,625,931
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$391,857	417	12.9%	\$1,908,631	18	0.6%	\$113,711	3,223	99.8%	\$2,414,198
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$12,629,528	8,872	9.4%	\$28,674,895	584	0.6%	\$2,434,973	93,835	99.9%	\$43,739,399
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$33,180,593	16,434	7.7%	\$57,439,317	1,994	0.9%	\$8,796,113	213,875	99.9%	\$99,416,028

Source: GIS Analysis

Table 4.182: Buildings Impacted by the 750 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$6,001,839	1,814	7.4%	\$7,374,829	218	0.9%	\$1,774,913	24,650	99.9%	\$15,151,580
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$775,818	309	10.9%	\$1,965,248	76	2.7%	\$353,755	2,821	99.9%	\$3,094,821
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$6,777,657	2,123	7.7%	\$9,340,077	294	1.1%	\$2,128,668	27,471	99.9%	\$18,246,401
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$9,425,050	1,102	3.9%	\$6,309,612	229	0.8%	\$1,892,405	28,084	100%	\$17,627,068
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$4,959,858	1,134	10.6%	\$10,473,916	301	2.8%	\$2,902,247	10,704	99.8%	\$18,336,020

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$357,236	38	4.3%	\$154,551	8	0.9%	\$83,606	889	100%	\$595,394
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$1,244,368	98	3.3%	\$736,442	26	0.9%	\$280,452	2,948	100%	\$2,261,263
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$356,609	44	4.1%	\$189,239	9	0.8%	\$127,100	1,086	100%	\$672,948
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$516,328	121	11.3%	\$2,138,176	16	1.5%	\$318,463	1,067	99.8%	\$2,972,967
Town of Rutherford College	827	682	82.5%	755	91.3%	\$414,570	49	5.9%	\$349,261	23	2.8%	\$140,607	827	100%	\$904,438
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$1,281,831	175	8.2%	\$2,264,800	32	1.5%	\$312,378	2,121	99.5%	\$3,859,009
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$18,555,850	2,761	5.8%	\$22,615,997	644	1.3%	\$6,057,258	47,726	99.9%	\$47,229,107
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$7,136,016	887	4.3%	\$4,137,884	166	0.8%	\$1,300,570	20,772	100%	\$12,574,469
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$5,070,354	938	9.1%	\$9,557,200	160	1.6%	\$1,397,542	10,299	99.8%	\$16,025,095
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$600,901	87	6.4%	\$464,788	13	1%	\$78,705	1,350	100%	\$1,144,395
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$708,845	78	3.8%	\$412,269	13	0.6%	\$271,534	2,062	100%	\$1,392,647
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$1,808,933	262	7.7%	\$2,351,789	60	1.8%	\$508,577	3,385	99.7%	\$4,669,299
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$1,235,635	231	7.4%	\$1,748,402	37	1.2%	\$367,422	3,116	100%	\$3,351,458
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$185,638	17	3.5%	\$106,957	8	1.6%	\$58,673	490	100%	\$351,268
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$1,300,237	175	5.4%	\$1,499,617	14	0.4%	\$161,074	3,234	100%	\$2,960,928

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Village of Cedar Rock	135	135	100%	131	97%	\$127,976	3	2.2%	\$16,152	1	0.7%	\$6,058	135	100%	\$150,186
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$18,174,535	2,678	6%	\$20,295,058	472	1.1%	\$4,150,155	44,843	99.9%	\$42,619,745
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$14,050,671	2,695	5.4%	\$8,577,470	271	0.5%	\$2,132,212	50,023	99.9%	\$24,760,352
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$388,457	230	17%	\$3,017,451	14	1%	\$75,749	1,351	100%	\$3,481,657
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$1,492,638	931	18.3%	\$8,566,034	21	0.4%	\$268,949	5,083	99.9%	\$10,327,621
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$8,415,095	3,248	14.4%	\$20,020,835	184	0.8%	\$1,518,763	22,473	99.8%	\$29,954,694
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$2,255,839	903	11.8%	\$6,532,483	48	0.6%	\$447,105	7,646	99.9%	\$9,235,428
Town of Brookford	304	274	90.1%	267	87.8%	\$80,597	36	11.8%	\$185,141	1	0.3%	\$274	304	100%	\$266,012
Town of Catawba	1,016	706	69.5%	901	88.7%	\$222,416	107	10.5%	\$503,289	8	0.8%	\$118,093	1,016	100%	\$843,798
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$799,064	305	11.2%	\$2,191,753	19	0.7%	\$142,333	2,716	100%	\$3,133,150
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$869,924	417	12.9%	\$3,630,017	18	0.6%	\$209,501	3,223	99.8%	\$4,709,442
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$28,574,701	8,872	9.4%	\$53,224,473	584	0.6%	\$4,912,979	93,835	99.9%	\$86,712,154
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$72,082,743	16,434	7.7%	\$105,475,605	1,994	0.9%	\$17,249,060	213,875	99.9%	\$194,807,407

Source: GIS Analysis

Table 4.183: Buildings Impacted by the 1000 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$8,404,617	1,814	7.4%	\$10,249,807	218	0.9%	\$2,520,466	24,650	99.9%	\$21,174,891
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$1,064,092	309	10.9%	\$2,598,252	76	2.7%	\$493,487	2,821	99.9%	\$4,155,831
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$9,468,709	2,123	7.7%	\$12,848,059	294	1.1%	\$3,013,953	27,471	99.9%	\$25,330,722
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$15,423,814	1,102	3.9%	\$9,609,864	229	0.8%	\$2,921,338	28,084	100%	\$27,955,016
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$8,172,767	1,134	10.6%	\$15,584,744	301	2.8%	\$4,503,961	10,704	99.8%	\$28,261,472
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$555,314	38	4.3%	\$216,513	8	0.9%	\$127,277	889	100%	\$899,104
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$1,991,456	98	3.3%	\$1,105,778	26	0.9%	\$431,665	2,948	100%	\$3,528,899
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$606,711	44	4.1%	\$288,967	9	0.8%	\$203,987	1,086	100%	\$1,099,666
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$770,739	121	11.3%	\$2,910,716	16	1.5%	\$496,271	1,067	99.8%	\$4,177,726
Town of Rutherford College	827	682	82.5%	755	91.3%	\$653,299	49	5.9%	\$501,924	23	2.8%	\$219,911	827	100%	\$1,375,134
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$1,992,469	175	8.2%	\$3,238,064	32	1.5%	\$467,012	2,121	99.5%	\$5,697,545
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$30,166,569	2,761	5.8%	\$33,456,570	644	1.3%	\$9,371,422	47,726	99.9%	\$72,994,562
Caldwell															

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$10,891,542	887	4.3%	\$6,004,748	166	0.8%	\$1,914,582	20,772	100%	\$18,810,873			
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$7,852,175	938	9.1%	\$13,598,255	160	1.6%	\$2,049,172	10,299	99.8%	\$23,499,602			
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$928,713	87	6.4%	\$682,067	13	1%	\$114,507	1,350	100%	\$1,725,287			
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$1,122,187	78	3.8%	\$602,671	13	0.6%	\$385,309	2,062	100%	\$2,110,167			
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$2,740,406	262	7.7%	\$3,331,374	60	1.8%	\$749,550	3,385	99.7%	\$6,821,331			
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$1,877,559	231	7.4%	\$2,492,682	37	1.2%	\$525,572	3,116	100%	\$4,895,814			
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$284,266	17	3.5%	\$159,924	8	1.6%	\$86,465	490	100%	\$530,654			
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$1,976,965	175	5.4%	\$2,143,989	14	0.4%	\$238,443	3,234	100%	\$4,359,396			
Village of Cedar Rock	135	135	100%	131	97%	\$188,109	3	2.2%	\$23,293	1	0.7%	\$8,764	135	100%	\$220,165			
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$27,861,922	2,678	6%	\$29,039,003	472	1.1%	\$6,072,364	44,843	99.9%	\$62,973,289			
Catawba																		
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$20,932,915	2,695	5.4%	\$12,370,468	271	0.5%	\$3,217,503	50,023	99.9%	\$36,520,886			
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$565,410	230	17%	\$3,961,032	14	1%	\$105,937	1,351	100%	\$4,632,380			
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$2,198,920	931	18.3%	\$11,595,617	21	0.4%	\$423,171	5,083	99.9%	\$14,217,708			
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$12,554,741	3,248	14.4%	\$28,244,023	184	0.8%	\$2,222,131	22,473	99.8%	\$43,020,895			
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$3,379,890	903	11.8%	\$8,877,703	48	0.6%	\$699,441	7,646	99.9%	\$12,957,033			

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Brookford	304	274	90.1%	267	87.8%	\$122,340	36	11.8%	\$266,055	1	0.3%	\$420	304	100%	\$388,815
Town of Catawba	1,016	706	69.5%	901	88.7%	\$316,309	107	10.5%	\$705,726	8	0.8%	\$183,616	1,016	100%	\$1,205,652
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$1,210,415	305	11.2%	\$3,140,293	19	0.7%	\$235,657	2,716	100%	\$4,586,366
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$1,344,813	417	12.9%	\$5,150,993	18	0.6%	\$292,177	3,223	99.8%	\$6,787,983
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$42,625,753	8,872	9.4%	\$74,311,910	584	0.6%	\$7,380,053	93,835	99.9%	\$124,317,718
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$110,122,953	16,434	7.7%	\$149,655,542	1,994	0.9%	\$25,837,792	213,875	99.9%	\$285,616,291

Source: GIS Analysis

Table 4.184: Buildings Impacted by the 1500 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$17,031,480	1,814	7.4%	\$17,327,444	218	0.9%	\$4,559,521	24,650	99.9%	\$38,918,446
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$2,199,352	309	10.9%	\$4,479,828	76	2.7%	\$900,401	2,821	99.9%	\$7,579,581
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$19,230,832	2,123	7.7%	\$21,807,272	294	1.1%	\$5,459,922	27,471	99.9%	\$46,498,027
Burke															

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$27,649,593	1,102	3.9%	\$15,942,685	229	0.8%	\$4,897,004	28,084	100%	\$48,489,281
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$14,241,623	1,134	10.6%	\$25,424,070	301	2.8%	\$7,712,879	10,704	99.8%	\$47,378,572
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$1,033,877	38	4.3%	\$362,156	8	0.9%	\$215,850	889	100%	\$1,611,882
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$3,545,181	98	3.3%	\$1,810,551	26	0.9%	\$710,774	2,948	100%	\$6,066,507
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$1,047,902	44	4.1%	\$469,034	9	0.8%	\$358,967	1,086	100%	\$1,875,903
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$1,392,017	121	11.3%	\$4,724,207	16	1.5%	\$847,049	1,067	99.8%	\$6,963,273
Town of Rutherford College	827	682	82.5%	755	91.3%	\$1,189,282	49	5.9%	\$851,641	23	2.8%	\$368,125	827	100%	\$2,409,047
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$3,525,528	175	8.2%	\$5,262,120	32	1.5%	\$784,292	2,121	99.5%	\$9,571,939
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$53,625,003	2,761	5.8%	\$54,846,464	644	1.3%	\$15,894,940	47,726	99.9%	\$124,366,404
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$20,307,089	887	4.3%	\$9,953,612	166	0.8%	\$3,341,234	20,772	100%	\$33,601,935
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$14,496,894	938	9.1%	\$22,352,720	160	1.6%	\$3,530,706	10,299	99.8%	\$40,380,320
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$1,681,196	87	6.4%	\$1,153,666	13	1%	\$190,657	1,350	100%	\$3,025,519
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$2,034,396	78	3.8%	\$1,001,839	13	0.6%	\$585,232	2,062	100%	\$3,621,467
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$5,140,018	262	7.7%	\$5,621,384	60	1.8%	\$1,226,065	3,385	99.7%	\$11,987,467
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$3,467,375	231	7.4%	\$4,143,586	37	1.2%	\$917,470	3,116	100%	\$8,528,431

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$537,616	17	3.5%	\$268,963	8	1.6%	\$150,587	490	100%	\$957,166
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$3,638,394	175	5.4%	\$3,610,325	14	0.4%	\$399,036	3,234	100%	\$7,647,756
Village of Cedar Rock	135	135	100%	131	97%	\$353,421	3	2.2%	\$47,303	1	0.7%	\$15,913	135	100%	\$416,637
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$51,656,399	2,678	6%	\$48,153,398	472	1.1%	\$10,356,900	44,843	99.9%	\$110,166,698
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$39,974,666	2,695	5.4%	\$20,666,814	271	0.5%	\$5,461,728	50,023	99.9%	\$66,103,208
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$1,123,888	230	17%	\$6,531,613	14	1%	\$198,924	1,351	100%	\$7,854,425
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$4,328,061	931	18.3%	\$18,956,124	21	0.4%	\$697,606	5,083	99.9%	\$23,981,792
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$24,247,320	3,248	14.4%	\$48,641,367	184	0.8%	\$3,870,559	22,473	99.8%	\$76,759,246
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$6,481,989	903	11.8%	\$15,066,178	48	0.6%	\$1,230,568	7,646	99.9%	\$22,778,735
Town of Brookford	304	274	90.1%	267	87.8%	\$230,046	36	11.8%	\$468,790	1	0.3%	\$788	304	100%	\$699,624
Town of Catawba	1,016	706	69.5%	901	88.7%	\$624,246	107	10.5%	\$1,134,496	8	0.8%	\$287,900	1,016	100%	\$2,046,642
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$2,263,970	305	11.2%	\$5,311,299	19	0.7%	\$409,004	2,716	100%	\$7,984,273
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$2,497,761	417	12.9%	\$8,563,714	18	0.6%	\$520,718	3,223	99.8%	\$11,582,193
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$81,771,947	8,872	9.4%	\$125,340,395	584	0.6%	\$12,677,795	93,835	99.9%	\$219,790,138
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$206,284,181	16,434	7.7%	\$250,147,529	1,994	0.9%	\$44,389,557	213,875	99.9%	\$500,821,267

Source: GIS Analysis

Table 4.185: Buildings Impacted by the 2000 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$22,524,945	1,814	7.4%	\$24,028,605	218	0.9%	\$6,182,033	24,650	99.9%	\$52,735,583
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$2,907,418	309	10.9%	\$5,906,704	76	2.7%	\$1,236,153	2,821	99.9%	\$10,050,276
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$25,432,363	2,123	7.7%	\$29,935,309	294	1.1%	\$7,418,186	27,471	99.9%	\$62,785,859
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$38,005,732	1,102	3.9%	\$22,953,118	229	0.8%	\$6,994,550	28,084	100%	\$67,953,401
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$19,496,697	1,134	10.6%	\$36,055,223	301	2.8%	\$11,252,843	10,704	99.8%	\$66,804,763
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$1,351,445	38	4.3%	\$482,529	8	0.9%	\$293,182	889	100%	\$2,127,155
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$4,718,734	98	3.3%	\$2,601,519	26	0.9%	\$994,861	2,948	100%	\$8,315,114
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$1,486,002	44	4.1%	\$673,934	9	0.8%	\$550,513	1,086	100%	\$2,710,449
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$1,769,663	121	11.3%	\$6,176,306	16	1.5%	\$1,206,183	1,067	99.8%	\$9,152,152
Town of Rutherford College	827	682	82.5%	755	91.3%	\$1,545,748	49	5.9%	\$1,164,805	23	2.8%	\$533,589	827	100%	\$3,244,142
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$4,600,039	175	8.2%	\$7,166,018	32	1.5%	\$1,135,148	2,121	99.5%	\$12,901,205
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$72,974,060	2,761	5.8%	\$77,273,452	644	1.3%	\$22,960,869	47,726	99.9%	\$173,208,381
Caldwell															

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$26,648,301	887	4.3%	\$13,768,285	166	0.8%	\$4,464,776	20,772	100%	\$44,881,362			
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$18,768,054	938	9.1%	\$29,580,568	160	1.6%	\$4,789,351	10,299	99.8%	\$53,137,973			
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$2,192,007	87	6.4%	\$1,582,805	13	1%	\$257,782	1,350	100%	\$4,032,595			
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$2,706,050	78	3.8%	\$1,417,238	13	0.6%	\$816,414	2,062	100%	\$4,939,702			
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$6,537,612	262	7.7%	\$7,535,800	60	1.8%	\$1,725,613	3,385	99.7%	\$15,799,024			
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$4,425,937	231	7.4%	\$5,444,492	37	1.2%	\$1,188,813	3,116	100%	\$11,059,242			
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$692,423	17	3.5%	\$351,918	8	1.6%	\$183,657	490	100%	\$1,227,998			
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$4,649,666	175	5.4%	\$4,892,943	14	0.4%	\$557,491	3,234	100%	\$10,100,100			
Village of Cedar Rock	135	135	100%	131	97%	\$451,932	3	2.2%	\$66,375	1	0.7%	\$19,509	135	100%	\$537,816			
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$67,071,982	2,678	6%	\$64,640,424	472	1.1%	\$14,003,406	44,843	99.9%	\$145,715,812			
Catawba																		
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$51,737,749	2,695	5.4%	\$28,258,482	271	0.5%	\$7,819,116	50,023	99.9%	\$87,815,347			
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$1,465,237	230	17%	\$8,382,151	14	1%	\$256,363	1,351	100%	\$10,103,751			
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$5,617,657	931	18.3%	\$24,763,559	21	0.4%	\$1,023,489	5,083	99.9%	\$31,404,705			
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$31,296,707	3,248	14.4%	\$65,254,670	184	0.8%	\$5,371,159	22,473	99.8%	\$101,922,536			
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$8,356,063	903	11.8%	\$19,690,210	48	0.6%	\$1,828,248	7,646	99.9%	\$29,874,521			

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Brookford	304	274	90.1%	267	87.8%	\$294,365	36	11.8%	\$589,981	1	0.3%	\$1,005	304	100%	\$885,350
Town of Catawba	1,016	706	69.5%	901	88.7%	\$817,613	107	10.5%	\$1,528,873	8	0.8%	\$446,804	1,016	100%	\$2,793,290
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$2,886,211	305	11.2%	\$7,160,028	19	0.7%	\$611,279	2,716	100%	\$10,657,518
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$3,202,735	417	12.9%	\$10,751,196	18	0.6%	\$697,276	3,223	99.8%	\$14,651,207
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$105,674,337	8,872	9.4%	\$166,379,150	584	0.6%	\$18,054,739	93,835	99.9%	\$290,108,225
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$271,152,742	16,434	7.7%	\$338,228,335	1,994	0.9%	\$62,437,200	213,875	99.9%	\$671,818,277

Source: GIS Analysis

Table 4.186: Buildings Impacted by the 2500 Year Earthquake

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$29,956,322	1,814	7.4%	\$32,180,961	218	0.9%	\$8,058,115	24,650	99.9%	\$70,195,398
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$3,811,307	309	10.9%	\$7,772,885	76	2.7%	\$1,639,261	2,821	99.9%	\$13,223,453
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$33,767,629	2,123	7.7%	\$39,953,846	294	1.1%	\$9,697,376	27,471	99.9%	\$83,418,851
Burke															

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$51,622,826	1,102	3.9%	\$29,641,973	229	0.8%	\$9,369,244	28,084	100%	\$90,634,043
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$26,181,188	1,134	10.6%	\$46,461,825	301	2.8%	\$15,591,662	10,704	99.8%	\$88,234,676
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$1,866,350	38	4.3%	\$657,484	8	0.9%	\$385,677	889	100%	\$2,909,511
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$6,425,354	98	3.3%	\$3,374,860	26	0.9%	\$1,294,267	2,948	100%	\$11,094,481
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$1,971,661	44	4.1%	\$862,744	9	0.8%	\$706,429	1,086	100%	\$3,540,834
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$2,488,280	121	11.3%	\$8,528,118	16	1.5%	\$1,587,956	1,067	99.8%	\$12,604,354
Town of Rutherford College	827	682	82.5%	755	91.3%	\$2,138,208	49	5.9%	\$1,571,769	23	2.8%	\$690,092	827	100%	\$4,400,069
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$6,365,036	175	8.2%	\$9,448,125	32	1.5%	\$1,508,284	2,121	99.5%	\$17,321,445
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$99,058,903	2,761	5.8%	\$100,546,898	644	1.3%	\$31,133,611	47,726	99.9%	\$230,739,413
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$37,250,937	887	4.3%	\$18,658,325	166	0.8%	\$6,198,099	20,772	100%	\$62,107,361
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$26,296,168	938	9.1%	\$40,202,760	160	1.6%	\$6,707,671	10,299	99.8%	\$73,206,600
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$3,080,475	87	6.4%	\$2,117,151	13	1%	\$339,818	1,350	100%	\$5,537,443
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$3,767,542	78	3.8%	\$1,953,714	13	0.6%	\$1,105,202	2,062	100%	\$6,826,457
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$9,124,768	262	7.7%	\$10,535,083	60	1.8%	\$2,298,295	3,385	99.7%	\$21,958,146
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$6,238,594	231	7.4%	\$7,336,828	37	1.2%	\$1,771,429	3,116	100%	\$15,346,851

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$961,485	17	3.5%	\$461,420	8	1.6%	\$250,715	490	100%	\$1,673,619
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$6,556,310	175	5.4%	\$6,728,133	14	0.4%	\$765,767	3,234	100%	\$14,050,209
Village of Cedar Rock	135	135	100%	131	97%	\$641,339	3	2.2%	\$99,399	1	0.7%	\$26,602	135	100%	\$767,340
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$93,917,618	2,678	6%	\$88,092,813	472	1.1%	\$19,463,598	44,843	99.9%	\$201,474,026
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$71,649,632	2,695	5.4%	\$38,436,176	271	0.5%	\$10,799,643	50,023	99.9%	\$120,885,451
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$1,986,442	230	17%	\$11,199,413	14	1%	\$356,274	1,351	100%	\$13,542,129
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$7,663,457	931	18.3%	\$33,144,650	21	0.4%	\$1,377,234	5,083	99.9%	\$42,185,341
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$43,233,815	3,248	14.4%	\$90,591,087	184	0.8%	\$7,653,682	22,473	99.8%	\$141,478,584
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$11,546,729	903	11.8%	\$28,453,428	48	0.6%	\$2,422,380	7,646	99.9%	\$42,422,537
Town of Brookford	304	274	90.1%	267	87.8%	\$413,010	36	11.8%	\$806,733	1	0.3%	\$1,370	304	100%	\$1,221,113
Town of Catawba	1,016	706	69.5%	901	88.7%	\$1,104,606	107	10.5%	\$2,009,999	8	0.8%	\$591,964	1,016	100%	\$3,706,568
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$4,031,449	305	11.2%	\$9,850,435	19	0.7%	\$801,473	2,716	100%	\$14,683,357
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$4,488,398	417	12.9%	\$14,391,511	18	0.6%	\$1,110,617	3,223	99.8%	\$19,990,526
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$146,117,538	8,872	9.4%	\$228,883,432	584	0.6%	\$25,114,637	93,835	99.9%	\$400,115,606
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$372,861,688	16,434	7.7%	\$457,476,989	1,994	0.9%	\$85,409,222	213,875	99.9%	\$915,747,896

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.187: Critical Facilities Exposed to the Earthquake - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	19	\$8,202
Banking and Finance	500 Year	19	\$33,225
Banking and Finance	750 Year	19	\$64,237
Banking and Finance	1000 Year	19	\$89,829
Banking and Finance	1500 Year	19	\$159,822
Banking and Finance	2000 Year	19	\$222,244
Banking and Finance	2500 Year	19	\$312,055
Commercial Facilities	250 Year	680	\$384,433
Commercial Facilities	500 Year	680	\$1,889,586
Commercial Facilities	750 Year	680	\$3,922,158
Commercial Facilities	1000 Year	680	\$5,676,816
Commercial Facilities	1500 Year	680	\$10,011,397
Commercial Facilities	2000 Year	680	\$14,053,783
Commercial Facilities	2500 Year	680	\$18,753,187
Critical Manufacturing	250 Year	384	\$319,663
Critical Manufacturing	500 Year	384	\$1,326,588
Critical Manufacturing	750 Year	384	\$2,477,227
Critical Manufacturing	1000 Year	384	\$3,329,770
Critical Manufacturing	1500 Year	384	\$5,437,805
Critical Manufacturing	2000 Year	384	\$7,276,991
Critical Manufacturing	2500 Year	384	\$9,458,934
Defense Industrial Base	250 Year	1	\$650

Sector	Event	Number of Buildings At Risk	Estimated Damages
Defense IndustrialBase	500 Year	1	\$1,778
Defense IndustrialBase	750 Year	1	\$2,669
Defense IndustrialBase	1000 Year	1	\$3,265
Defense IndustrialBase	1500 Year	1	\$5,281
Defense IndustrialBase	2000 Year	1	\$6,823
Defense IndustrialBase	2500 Year	1	\$8,778
Emergency Services	250 Year	7	\$6,461
Emergency Services	500 Year	7	\$28,502
Emergency Services	750 Year	7	\$53,037
Emergency Services	1000 Year	7	\$69,115
Emergency Services	1500 Year	7	\$109,502
Emergency Services	2000 Year	7	\$146,256
Emergency Services	2500 Year	7	\$191,586
Energy	250 Year	14	\$133,426
Energy	500 Year	14	\$350,880
Energy	750 Year	14	\$639,003
Energy	1000 Year	14	\$885,696
Energy	1500 Year	14	\$1,221,919
Energy	2000 Year	14	\$1,741,319
Energy	2500 Year	14	\$2,127,877
Food and Agriculture	250 Year	617	\$68,288
Food and Agriculture	500 Year	617	\$302,161
Food and Agriculture	750 Year	617	\$553,799
Food and Agriculture	1000 Year	617	\$695,977
Food and Agriculture	1500 Year	617	\$1,179,200

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	2000 Year	617	\$1,511,519
Food and Agriculture	2500 Year	617	\$2,053,826
Government Facilities	250 Year	76	\$60,343
Government Facilities	500 Year	76	\$297,004
Government Facilities	750 Year	76	\$569,304
Government Facilities	1000 Year	76	\$840,856
Government Facilities	1500 Year	76	\$1,454,306
Government Facilities	2000 Year	76	\$2,188,110
Government Facilities	2500 Year	76	\$3,017,908
Healthcare and Public Health	250 Year	35	\$20,034
Healthcare and Public Health	500 Year	35	\$86,060
Healthcare and Public Health	750 Year	35	\$168,292
Healthcare and Public Health	1000 Year	35	\$228,118
Healthcare and Public Health	1500 Year	35	\$412,732
Healthcare and Public Health	2000 Year	35	\$561,304
Healthcare and Public Health	2500 Year	35	\$797,056
Transportation Systems	250 Year	207	\$137,786
Transportation Systems	500 Year	207	\$651,107
Transportation Systems	750 Year	207	\$1,295,709
Transportation Systems	1000 Year	207	\$1,776,327
Transportation Systems	1500 Year	207	\$3,013,624
Transportation Systems	2000 Year	207	\$4,105,230
Transportation Systems	2500 Year	207	\$5,462,866
All Categories	250 Year	2,040	\$1,139,286

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	500 Year	2,040	\$4,966,891
All Categories	750 Year	2,040	\$9,745,435
All Categories	1000 Year	2,040	\$13,595,769
All Categories	1500 Year	2,040	\$23,005,588
All Categories	2000 Year	2,040	\$31,813,579
All Categories	2500 Year	2,040	\$42,184,073

Source: GIS Analysis

Table 4.188: Critical Facilities Exposed to the Earthquake - Town of Taylorsville

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	14	\$8,026
Banking and Finance	500 Year	14	\$33,231
Banking and Finance	750 Year	14	\$62,914
Banking and Finance	1000 Year	14	\$80,321
Banking and Finance	1500 Year	14	\$142,866
Banking and Finance	2000 Year	14	\$186,164
Banking and Finance	2500 Year	14	\$249,632
Commercial Facilities	250 Year	195	\$100,360
Commercial Facilities	500 Year	195	\$426,154
Commercial Facilities	750 Year	195	\$871,512
Commercial Facilities	1000 Year	195	\$1,191,697
Commercial Facilities	1500 Year	195	\$2,086,636
Commercial Facilities	2000 Year	195	\$2,835,763
Commercial Facilities	2500 Year	195	\$3,753,854
Critical Manufacturing	250 Year	62	\$107,204
Critical Manufacturing	500 Year	62	\$442,088

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	750 Year	62	\$824,958
Critical Manufacturing	1000 Year	62	\$1,054,984
Critical Manufacturing	1500 Year	62	\$1,740,483
Critical Manufacturing	2000 Year	62	\$2,192,407
Critical Manufacturing	2500 Year	62	\$2,786,425
Emergency Services	250 Year	4	\$1,378
Emergency Services	500 Year	4	\$5,816
Emergency Services	750 Year	4	\$12,502
Emergency Services	1000 Year	4	\$17,336
Emergency Services	1500 Year	4	\$29,690
Emergency Services	2000 Year	4	\$39,343
Emergency Services	2500 Year	4	\$50,014
Energy	250 Year	2	\$57,940
Energy	500 Year	2	\$151,090
Energy	750 Year	2	\$276,813
Energy	1000 Year	2	\$383,750
Energy	1500 Year	2	\$523,092
Energy	2000 Year	2	\$750,617
Energy	2500 Year	2	\$913,248
Food and Agriculture	250 Year	7	\$734
Food and Agriculture	500 Year	7	\$3,225
Food and Agriculture	750 Year	7	\$5,941
Food and Agriculture	1000 Year	7	\$7,414
Food and Agriculture	1500 Year	7	\$12,599
Food and Agriculture	2000 Year	7	\$16,120

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	2500 Year	7	\$21,818
Government Facilities	250 Year	35	\$21,276
Government Facilities	500 Year	35	\$82,116
Government Facilities	750 Year	35	\$175,607
Government Facilities	1000 Year	35	\$250,610
Government Facilities	1500 Year	35	\$434,559
Government Facilities	2000 Year	35	\$625,489
Government Facilities	2500 Year	35	\$842,016
Healthcare and Public Health	250 Year	16	\$14,873
Healthcare and Public Health	500 Year	16	\$67,265
Healthcare and Public Health	750 Year	16	\$143,197
Healthcare and Public Health	1000 Year	16	\$194,843
Healthcare and Public Health	1500 Year	16	\$392,568
Healthcare and Public Health	2000 Year	16	\$537,441
Healthcare and Public Health	2500 Year	16	\$764,241
Transportation Systems	250 Year	44	\$20,755
Transportation Systems	500 Year	44	\$91,961
Transportation Systems	750 Year	44	\$195,547
Transportation Systems	1000 Year	44	\$257,948
Transportation Systems	1500 Year	44	\$466,395
Transportation Systems	2000 Year	44	\$603,561
Transportation Systems	2500 Year	44	\$795,904
All Categories	250 Year	379	\$332,546
All Categories	500 Year	379	\$1,302,946

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	750 Year	379	\$2,568,991
All Categories	1000 Year	379	\$3,438,903
All Categories	1500 Year	379	\$5,828,888
All Categories	2000 Year	379	\$7,786,905
All Categories	2500 Year	379	\$10,177,152

Table 4.189: Critical Facilities Exposed to the Earthquake - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	4	\$1,928
Banking and Finance	500 Year	4	\$6,024
Banking and Finance	750 Year	4	\$9,991
Banking and Finance	1000 Year	4	\$15,047
Banking and Finance	1500 Year	4	\$24,645
Banking and Finance	2000 Year	4	\$34,003
Banking and Finance	2500 Year	4	\$40,962
Commercial Facilities	250 Year	599	\$392,685
Commercial Facilities	500 Year	599	\$1,883,418
Commercial Facilities	750 Year	599	\$3,522,431
Commercial Facilities	1000 Year	599	\$5,549,565
Commercial Facilities	1500 Year	599	\$9,482,818
Commercial Facilities	2000 Year	599	\$13,976,574
Commercial Facilities	2500 Year	599	\$17,911,095
Critical Manufacturing	250 Year	316	\$190,630
Critical Manufacturing	500 Year	316	\$795,058
Critical Manufacturing	750 Year	316	\$1,376,485
Critical Manufacturing	1000 Year	316	\$2,007,756

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	1500 Year	316	\$3,130,946
Critical Manufacturing	2000 Year	316	\$4,361,481
Critical Manufacturing	2500 Year	316	\$5,402,414
Emergency Services	250 Year	13	\$10,368
Emergency Services	500 Year	13	\$43,851
Emergency Services	750 Year	13	\$74,750
Emergency Services	1000 Year	13	\$110,030
Emergency Services	1500 Year	13	\$176,437
Emergency Services	2000 Year	13	\$250,939
Emergency Services	2500 Year	13	\$309,921
Energy	250 Year	7	\$250,180
Energy	500 Year	7	\$769,390
Energy	750 Year	7	\$1,245,730
Energy	1000 Year	7	\$1,717,440
Energy	1500 Year	7	\$2,541,410
Energy	2000 Year	7	\$3,543,330
Energy	2500 Year	7	\$4,243,960
Food and Agriculture	250 Year	59	\$8,062
Food and Agriculture	500 Year	59	\$35,058
Food and Agriculture	750 Year	59	\$57,570
Food and Agriculture	1000 Year	59	\$85,507
Food and Agriculture	1500 Year	59	\$143,646
Food and Agriculture	2000 Year	59	\$211,853
Food and Agriculture	2500 Year	59	\$310,579
Government Facilities	250 Year	81	\$107,006

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	500 Year	81	\$482,704
Government Facilities	750 Year	81	\$918,423
Government Facilities	1000 Year	81	\$1,400,604
Government Facilities	1500 Year	81	\$2,363,863
Government Facilities	2000 Year	81	\$3,502,326
Government Facilities	2500 Year	81	\$4,859,421
Healthcare and Public Health	250 Year	22	\$28,310
Healthcare and Public Health	500 Year	22	\$147,093
Healthcare and Public Health	750 Year	22	\$288,080
Healthcare and Public Health	1000 Year	22	\$429,737
Healthcare and Public Health	1500 Year	22	\$726,763
Healthcare and Public Health	2000 Year	22	\$922,352
Healthcare and Public Health	2500 Year	22	\$1,217,020
Transportation Systems	250 Year	206	\$214,036
Transportation Systems	500 Year	206	\$1,013,214
Transportation Systems	750 Year	206	\$1,817,302
Transportation Systems	1000 Year	206	\$2,710,294
Transportation Systems	1500 Year	206	\$4,413,643
Transportation Systems	2000 Year	206	\$6,122,764
Transportation Systems	2500 Year	206	\$8,215,131
All Categories	250 Year	1,307	\$1,203,205
All Categories	500 Year	1,307	\$5,175,810
All Categories	750 Year	1,307	\$9,310,762
All Categories	1000 Year	1,307	\$14,025,980

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1500 Year	1,307	\$23,004,171
All Categories	2000 Year	1,307	\$32,925,622
All Categories	2500 Year	1,307	\$42,510,503

Source: GIS Analysis

Table 4.190: Critical Facilities Exposed to the Earthquake - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	36	\$25,701
Banking and Finance	500 Year	36	\$118,457
Banking and Finance	750 Year	36	\$210,497
Banking and Finance	1000 Year	36	\$317,037
Banking and Finance	1500 Year	36	\$519,702
Banking and Finance	2000 Year	36	\$722,226
Banking and Finance	2500 Year	36	\$951,306
Commercial Facilities	250 Year	622	\$461,990
Commercial Facilities	500 Year	622	\$2,022,237
Commercial Facilities	750 Year	622	\$3,709,499
Commercial Facilities	1000 Year	622	\$5,707,897
Commercial Facilities	1500 Year	622	\$9,569,199
Commercial Facilities	2000 Year	622	\$13,948,803
Commercial Facilities	2500 Year	622	\$18,200,453
Communications	250 Year	2	\$5,359
Communications	500 Year	2	\$35,068
Communications	750 Year	2	\$77,756
Communications	1000 Year	2	\$135,076
Communications	1500 Year	2	\$237,673

Sector	Event	Number of Buildings At Risk	Estimated Damages
Communications	2000 Year	2	\$381,698
Communications	2500 Year	2	\$491,207
Critical Manufacturing	250 Year	274	\$564,454
Critical Manufacturing	500 Year	274	\$2,150,283
Critical Manufacturing	750 Year	274	\$3,507,198
Critical Manufacturing	1000 Year	274	\$5,046,940
Critical Manufacturing	1500 Year	274	\$7,759,973
Critical Manufacturing	2000 Year	274	\$10,542,066
Critical Manufacturing	2500 Year	274	\$12,969,958
Emergency Services	250 Year	6	\$6,694
Emergency Services	500 Year	6	\$29,094
Emergency Services	750 Year	6	\$52,428
Emergency Services	1000 Year	6	\$79,780
Emergency Services	1500 Year	6	\$126,807
Emergency Services	2000 Year	6	\$171,933
Emergency Services	2500 Year	6	\$219,157
Energy	250 Year	25	\$248,959
Energy	500 Year	25	\$707,213
Energy	750 Year	25	\$1,139,677
Energy	1000 Year	25	\$1,545,340
Energy	1500 Year	25	\$2,189,939
Energy	2000 Year	25	\$3,034,365
Energy	2500 Year	25	\$3,585,114
Food and Agriculture	250 Year	5	\$12,690
Food and Agriculture	500 Year	5	\$54,036

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	750 Year	5	\$85,490
Food and Agriculture	1000 Year	5	\$119,057
Food and Agriculture	1500 Year	5	\$184,371
Food and Agriculture	2000 Year	5	\$250,250
Food and Agriculture	2500 Year	5	\$343,712
Government Facilities	250 Year	152	\$213,815
Government Facilities	500 Year	152	\$988,677
Government Facilities	750 Year	152	\$1,836,007
Government Facilities	1000 Year	152	\$2,856,722
Government Facilities	1500 Year	152	\$4,925,648
Government Facilities	2000 Year	152	\$7,247,447
Government Facilities	2500 Year	152	\$10,010,195
Healthcare and Public Health	250 Year	81	\$125,702
Healthcare and Public Health	500 Year	81	\$445,530
Healthcare and Public Health	750 Year	81	\$748,956
Healthcare and Public Health	1000 Year	81	\$1,105,271
Healthcare and Public Health	1500 Year	81	\$1,884,425
Healthcare and Public Health	2000 Year	81	\$2,674,912
Healthcare and Public Health	2500 Year	81	\$3,404,283
Nuclear Reactors, Materials and Waste	250 Year	1	\$1,740
Nuclear Reactors, Materials and Waste	500 Year	1	\$8,156
Nuclear Reactors, Materials and Waste	750 Year	1	\$13,044
Nuclear Reactors, Materials and Waste	1000 Year	1	\$17,895
Nuclear Reactors, Materials and Waste	1500 Year	1	\$28,826

Sector	Event	Number of Buildings At Risk	Estimated Damages
Nuclear Reactors, Materials and Waste	2000 Year	1	\$39,557
Nuclear Reactors, Materials and Waste	2500 Year	1	\$57,819
Transportation Systems	250 Year	201	\$336,520
Transportation Systems	500 Year	201	\$1,427,763
Transportation Systems	750 Year	201	\$2,471,092
Transportation Systems	1000 Year	201	\$3,680,301
Transportation Systems	1500 Year	201	\$6,156,605
Transportation Systems	2000 Year	201	\$8,765,797
Transportation Systems	2500 Year	201	\$11,699,219
All Categories	250 Year	1,405	\$2,003,624
All Categories	500 Year	1,405	\$7,986,514
All Categories	750 Year	1,405	\$13,851,644
All Categories	1000 Year	1,405	\$20,611,316
All Categories	1500 Year	1,405	\$33,583,168
All Categories	2000 Year	1,405	\$47,779,054
All Categories	2500 Year	1,405	\$61,932,423

Source: GIS Analysis

Table 4.191: Critical Facilities Exposed to the Earthquake - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	29	\$11,510
Commercial Facilities	500 Year	29	\$62,695
Commercial Facilities	750 Year	29	\$122,631
Commercial Facilities	1000 Year	29	\$182,506
Commercial Facilities	1500 Year	29	\$308,767
Commercial Facilities	2000 Year	29	\$409,119

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	2500 Year	29	\$545,520
Critical Manufacturing	250 Year	13	\$13,454
Critical Manufacturing	500 Year	13	\$49,677
Critical Manufacturing	750 Year	13	\$81,625
Critical Manufacturing	1000 Year	13	\$114,337
Critical Manufacturing	1500 Year	13	\$196,912
Critical Manufacturing	2000 Year	13	\$269,629
Critical Manufacturing	2500 Year	13	\$370,912
Government Facilities	250 Year	2	\$284
Government Facilities	500 Year	2	\$1,881
Government Facilities	750 Year	2	\$4,050
Government Facilities	1000 Year	2	\$6,471
Government Facilities	1500 Year	2	\$10,696
Government Facilities	2000 Year	2	\$16,407
Government Facilities	2500 Year	2	\$22,189
Transportation Systems	250 Year	2	\$3,272
Transportation Systems	500 Year	2	\$16,353
Transportation Systems	750 Year	2	\$29,850
Transportation Systems	1000 Year	2	\$40,477
Transportation Systems	1500 Year	2	\$61,630
Transportation Systems	2000 Year	2	\$80,556
Transportation Systems	2500 Year	2	\$104,540
All Categories	250 Year	46	\$28,520
All Categories	500 Year	46	\$130,606
All Categories	750 Year	46	\$238,156

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1000 Year	46	\$343,791
All Categories	1500 Year	46	\$578,005
All Categories	2000 Year	46	\$775,711
All Categories	2500 Year	46	\$1,043,161

Source: GIS Analysis

Table 4.192: Critical Facilities Exposed to the Earthquake - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	64	\$59,147
Commercial Facilities	500 Year	64	\$276,303
Commercial Facilities	750 Year	64	\$507,001
Commercial Facilities	1000 Year	64	\$776,963
Commercial Facilities	1500 Year	64	\$1,270,880
Commercial Facilities	2000 Year	64	\$1,842,653
Commercial Facilities	2500 Year	64	\$2,379,164
Critical Manufacturing	250 Year	17	\$10,717
Critical Manufacturing	500 Year	17	\$37,044
Critical Manufacturing	750 Year	17	\$58,925
Critical Manufacturing	1000 Year	17	\$82,119
Critical Manufacturing	1500 Year	17	\$125,618
Critical Manufacturing	2000 Year	17	\$175,550
Critical Manufacturing	2500 Year	17	\$211,542
Emergency Services	250 Year	2	\$2,553
Emergency Services	500 Year	2	\$10,622
Emergency Services	750 Year	2	\$17,573
Emergency Services	1000 Year	2	\$25,402

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	1500 Year	2	\$46,109
Emergency Services	2000 Year	2	\$67,316
Emergency Services	2500 Year	2	\$99,912
Energy	250 Year	2	\$79,402
Energy	500 Year	2	\$226,737
Energy	750 Year	2	\$373,443
Energy	1000 Year	2	\$508,019
Energy	1500 Year	2	\$715,153
Energy	2000 Year	2	\$993,193
Energy	2500 Year	2	\$1,176,443
Government Facilities	250 Year	10	\$17,948
Government Facilities	500 Year	10	\$90,953
Government Facilities	750 Year	10	\$174,202
Government Facilities	1000 Year	10	\$271,497
Government Facilities	1500 Year	10	\$440,999
Government Facilities	2000 Year	10	\$636,091
Government Facilities	2500 Year	10	\$818,475
Healthcare and Public Health	250 Year	8	\$7,670
Healthcare and Public Health	500 Year	8	\$37,653
Healthcare and Public Health	750 Year	8	\$69,104
Healthcare and Public Health	1000 Year	8	\$101,315
Healthcare and Public Health	1500 Year	8	\$169,919
Healthcare and Public Health	2000 Year	8	\$233,041
Healthcare and Public Health	2500 Year	8	\$319,843

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	250 Year	20	\$21,067
Transportation Systems	500 Year	20	\$101,807
Transportation Systems	750 Year	20	\$186,030
Transportation Systems	1000 Year	20	\$273,807
Transportation Systems	1500 Year	20	\$456,539
Transportation Systems	2000 Year	20	\$626,722
Transportation Systems	2500 Year	20	\$821,102
All Categories	250 Year	123	\$198,504
All Categories	500 Year	123	\$781,119
All Categories	750 Year	123	\$1,386,278
All Categories	1000 Year	123	\$2,039,122
All Categories	1500 Year	123	\$3,225,217
All Categories	2000 Year	123	\$4,574,566
All Categories	2500 Year	123	\$5,826,481

Source: GIS Analysis

Table 4.193: Critical Facilities Exposed to the Earthquake - Town of Glen Alpine

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	19	\$13,949
Commercial Facilities	500 Year	19	\$60,837
Commercial Facilities	750 Year	19	\$103,763
Commercial Facilities	1000 Year	19	\$158,433
Commercial Facilities	1500 Year	19	\$262,812
Commercial Facilities	2000 Year	19	\$390,494
Commercial Facilities	2500 Year	19	\$496,836
Critical Manufacturing	250 Year	5	\$2,130

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	500 Year	5	\$7,373
Critical Manufacturing	750 Year	5	\$12,311
Critical Manufacturing	1000 Year	5	\$17,867
Critical Manufacturing	1500 Year	5	\$26,866
Critical Manufacturing	2000 Year	5	\$36,947
Critical Manufacturing	2500 Year	5	\$44,898
Emergency Services	250 Year	1	\$332
Emergency Services	500 Year	1	\$1,458
Emergency Services	750 Year	1	\$2,273
Emergency Services	1000 Year	1	\$3,271
Emergency Services	1500 Year	1	\$5,127
Emergency Services	2000 Year	1	\$7,445
Emergency Services	2500 Year	1	\$10,791
Government Facilities	250 Year	5	\$10,536
Government Facilities	500 Year	5	\$53,576
Government Facilities	750 Year	5	\$101,549
Government Facilities	1000 Year	5	\$164,679
Government Facilities	1500 Year	5	\$294,267
Government Facilities	2000 Year	5	\$452,728
Government Facilities	2500 Year	5	\$579,974
Healthcare and Public Health	250 Year	1	\$400
Healthcare and Public Health	500 Year	1	\$2,647
Healthcare and Public Health	750 Year	1	\$5,272
Healthcare and Public Health	1000 Year	1	\$9,039
Healthcare and Public Health	1500 Year	1	\$15,398

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	2000 Year	1	\$21,553
Healthcare and Public Health	2500 Year	1	\$27,911
Transportation Systems	250 Year	21	\$9,691
Transportation Systems	500 Year	21	\$46,691
Transportation Systems	750 Year	21	\$81,100
Transportation Systems	1000 Year	21	\$123,552
Transportation Systems	1500 Year	21	\$196,805
Transportation Systems	2000 Year	21	\$275,155
Transportation Systems	2500 Year	21	\$358,988
All Categories	250 Year	52	\$37,038
All Categories	500 Year	52	\$172,582
All Categories	750 Year	52	\$306,268
All Categories	1000 Year	52	\$476,841
All Categories	1500 Year	52	\$801,275
All Categories	2000 Year	52	\$1,184,322
All Categories	2500 Year	52	\$1,519,398

Source: GIS Analysis

Table 4.194: Critical Facilities Exposed to the Earthquake - Town of Hildebran

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$671
Banking and Finance	500 Year	1	\$2,635
Banking and Finance	750 Year	1	\$4,811
Banking and Finance	1000 Year	1	\$7,140
Banking and Finance	1500 Year	1	\$14,374
Banking and Finance	2000 Year	1	\$20,052

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	2500 Year	1	\$31,032
Commercial Facilities	250 Year	63	\$97,575
Commercial Facilities	500 Year	63	\$491,908
Commercial Facilities	750 Year	63	\$886,614
Commercial Facilities	1000 Year	63	\$1,230,886
Commercial Facilities	1500 Year	63	\$1,909,185
Commercial Facilities	2000 Year	63	\$2,522,262
Commercial Facilities	2500 Year	63	\$3,371,887
Critical Manufacturing	250 Year	45	\$196,869
Critical Manufacturing	500 Year	45	\$769,999
Critical Manufacturing	750 Year	45	\$1,292,184
Critical Manufacturing	1000 Year	45	\$1,767,202
Critical Manufacturing	1500 Year	45	\$2,937,356
Critical Manufacturing	2000 Year	45	\$3,885,665
Critical Manufacturing	2500 Year	45	\$5,389,092
Emergency Services	250 Year	1	\$1,266
Emergency Services	500 Year	1	\$6,667
Emergency Services	750 Year	1	\$13,014
Emergency Services	1000 Year	1	\$17,382
Emergency Services	1500 Year	1	\$25,805
Emergency Services	2000 Year	1	\$31,034
Emergency Services	2500 Year	1	\$43,027
Energy	250 Year	2	\$24,880
Energy	500 Year	2	\$69,820
Energy	750 Year	2	\$120,480

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	1000 Year	2	\$165,420
Energy	1500 Year	2	\$230,380
Energy	2000 Year	2	\$322,960
Energy	2500 Year	2	\$384,220
Government Facilities	250 Year	5	\$10,474
Government Facilities	500 Year	5	\$48,628
Government Facilities	750 Year	5	\$99,906
Government Facilities	1000 Year	5	\$156,721
Government Facilities	1500 Year	5	\$296,807
Government Facilities	2000 Year	5	\$425,358
Government Facilities	2500 Year	5	\$603,181
Healthcare and Public Health	250 Year	8	\$3,615
Healthcare and Public Health	500 Year	8	\$18,764
Healthcare and Public Health	750 Year	8	\$38,228
Healthcare and Public Health	1000 Year	8	\$58,711
Healthcare and Public Health	1500 Year	8	\$109,290
Healthcare and Public Health	2000 Year	8	\$147,397
Healthcare and Public Health	2500 Year	8	\$186,744
Transportation Systems	250 Year	13	\$11,972
Transportation Systems	500 Year	13	\$60,143
Transportation Systems	750 Year	13	\$111,475
Transportation Systems	1000 Year	13	\$154,499
Transportation Systems	1500 Year	13	\$258,317
Transportation Systems	2000 Year	13	\$322,425

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	2500 Year	13	\$456,754
All Categories	250 Year	138	\$347,322
All Categories	500 Year	138	\$1,468,564
All Categories	750 Year	138	\$2,566,712
All Categories	1000 Year	138	\$3,557,961
All Categories	1500 Year	138	\$5,781,514
All Categories	2000 Year	138	\$7,677,153
All Categories	2500 Year	138	\$10,465,937

Source: GIS Analysis

Table 4.195: Critical Facilities Exposed to the Earthquake - Town of Rutherford College

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$365
Banking and Finance	500 Year	1	\$2,048
Banking and Finance	750 Year	1	\$4,178
Banking and Finance	1000 Year	1	\$6,341
Banking and Finance	1500 Year	1	\$10,601
Banking and Finance	2000 Year	1	\$12,917
Banking and Finance	2500 Year	1	\$16,655
Commercial Facilities	250 Year	26	\$10,103
Commercial Facilities	500 Year	26	\$47,142
Commercial Facilities	750 Year	26	\$84,371
Commercial Facilities	1000 Year	26	\$123,415
Commercial Facilities	1500 Year	26	\$202,126
Commercial Facilities	2000 Year	26	\$287,076
Commercial Facilities	2500 Year	26	\$383,386

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	250 Year	14	\$28,456
Critical Manufacturing	500 Year	14	\$109,668
Critical Manufacturing	750 Year	14	\$181,653
Critical Manufacturing	1000 Year	14	\$257,357
Critical Manufacturing	1500 Year	14	\$442,168
Critical Manufacturing	2000 Year	14	\$610,002
Critical Manufacturing	2500 Year	14	\$833,080
Government Facilities	250 Year	13	\$8,420
Government Facilities	500 Year	13	\$47,788
Government Facilities	750 Year	13	\$94,637
Government Facilities	1000 Year	13	\$149,191
Government Facilities	1500 Year	13	\$249,317
Government Facilities	2000 Year	13	\$366,992
Government Facilities	2500 Year	13	\$471,450
Healthcare and Public Health	250 Year	10	\$8,418
Healthcare and Public Health	500 Year	10	\$42,594
Healthcare and Public Health	750 Year	10	\$78,900
Healthcare and Public Health	1000 Year	10	\$113,268
Healthcare and Public Health	1500 Year	10	\$189,173
Healthcare and Public Health	2000 Year	10	\$243,074
Healthcare and Public Health	2500 Year	10	\$323,398
Transportation Systems	250 Year	4	\$2,860
Transportation Systems	500 Year	4	\$12,611
Transportation Systems	750 Year	4	\$23,565

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	1000 Year	4	\$35,020
Transportation Systems	1500 Year	4	\$60,788
Transportation Systems	2000 Year	4	\$79,858
Transportation Systems	2500 Year	4	\$106,698
All Categories	250 Year	68	\$58,622
All Categories	500 Year	68	\$261,851
All Categories	750 Year	68	\$467,304
All Categories	1000 Year	68	\$684,592
All Categories	1500 Year	68	\$1,154,173
All Categories	2000 Year	68	\$1,599,919
All Categories	2500 Year	68	\$2,134,667

Source: GIS Analysis

Table 4.196: Critical Facilities Exposed to the Earthquake - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	2	\$2,609
Banking and Finance	500 Year	2	\$10,235
Banking and Finance	750 Year	2	\$18,075
Banking and Finance	1000 Year	2	\$27,339
Banking and Finance	1500 Year	2	\$53,565
Banking and Finance	2000 Year	2	\$78,259
Banking and Finance	2500 Year	2	\$112,700
Commercial Facilities	250 Year	85	\$48,935
Commercial Facilities	500 Year	85	\$218,462
Commercial Facilities	750 Year	85	\$403,989
Commercial Facilities	1000 Year	85	\$612,500

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	1500 Year	85	\$1,078,700
Commercial Facilities	2000 Year	85	\$1,526,357
Commercial Facilities	2500 Year	85	\$2,162,411
Critical Manufacturing	250 Year	50	\$180,003
Critical Manufacturing	500 Year	50	\$770,789
Critical Manufacturing	750 Year	50	\$1,311,057
Critical Manufacturing	1000 Year	50	\$1,809,655
Critical Manufacturing	1500 Year	50	\$2,719,064
Critical Manufacturing	2000 Year	50	\$3,561,583
Critical Manufacturing	2500 Year	50	\$4,572,550
Emergency Services	250 Year	3	\$2,962
Emergency Services	500 Year	3	\$11,692
Emergency Services	750 Year	3	\$19,891
Emergency Services	1000 Year	3	\$28,818
Emergency Services	1500 Year	3	\$49,030
Emergency Services	2000 Year	3	\$67,909
Emergency Services	2500 Year	3	\$95,444
Energy	250 Year	11	\$157,141
Energy	500 Year	11	\$472,812
Energy	750 Year	11	\$780,850
Energy	1000 Year	11	\$1,079,662
Energy	1500 Year	11	\$1,519,304
Energy	2000 Year	11	\$2,143,088
Energy	2500 Year	11	\$2,566,070
Government Facilities	250 Year	9	\$28,318

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	500 Year	9	\$116,689
Government Facilities	750 Year	9	\$226,389
Government Facilities	1000 Year	9	\$339,500
Government Facilities	1500 Year	9	\$569,377
Government Facilities	2000 Year	9	\$848,114
Government Facilities	2500 Year	9	\$1,115,761
Healthcare and Public Health	250 Year	20	\$41,720
Healthcare and Public Health	500 Year	20	\$162,888
Healthcare and Public Health	750 Year	20	\$283,045
Healthcare and Public Health	1000 Year	20	\$405,828
Healthcare and Public Health	1500 Year	20	\$684,432
Healthcare and Public Health	2000 Year	20	\$922,741
Healthcare and Public Health	2500 Year	20	\$1,212,795
Transportation Systems	250 Year	31	\$38,728
Transportation Systems	500 Year	31	\$162,421
Transportation Systems	750 Year	31	\$307,184
Transportation Systems	1000 Year	31	\$469,682
Transportation Systems	1500 Year	31	\$870,910
Transportation Systems	2000 Year	31	\$1,266,902
Transportation Systems	2500 Year	31	\$1,643,602
All Categories	250 Year	211	\$500,416
All Categories	500 Year	211	\$1,925,988
All Categories	750 Year	211	\$3,350,480
All Categories	1000 Year	211	\$4,772,984

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1500 Year	211	\$7,544,382
All Categories	2000 Year	211	\$10,414,953
All Categories	2500 Year	211	\$13,481,333

Source: GIS Analysis

Table 4.197: Critical Facilities Exposed to the Earthquake - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$570
Banking and Finance	500 Year	1	\$3,177
Banking and Finance	750 Year	1	\$6,524
Banking and Finance	1000 Year	1	\$9,853
Banking and Finance	1500 Year	1	\$16,600
Banking and Finance	2000 Year	1	\$20,190
Banking and Finance	2500 Year	1	\$26,109
Commercial Facilities	250 Year	484	\$227,246
Commercial Facilities	500 Year	484	\$1,148,739
Commercial Facilities	750 Year	484	\$2,247,235
Commercial Facilities	1000 Year	484	\$3,402,879
Commercial Facilities	1500 Year	484	\$5,800,528
Commercial Facilities	2000 Year	484	\$8,220,319
Commercial Facilities	2500 Year	484	\$11,121,915
Critical Manufacturing	250 Year	275	\$182,667
Critical Manufacturing	500 Year	275	\$760,075
Critical Manufacturing	750 Year	275	\$1,314,788
Critical Manufacturing	1000 Year	275	\$1,823,506
Critical Manufacturing	1500 Year	275	\$2,907,213

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	2000 Year	275	\$3,879,995
Critical Manufacturing	2500 Year	275	\$5,155,711
Energy	250 Year	1	\$12,220
Energy	500 Year	1	\$32,910
Energy	750 Year	1	\$57,010
Energy	1000 Year	1	\$79,380
Energy	1500 Year	1	\$105,730
Energy	2000 Year	1	\$153,150
Energy	2500 Year	1	\$185,390
Food and Agriculture	250 Year	63	\$5,411
Food and Agriculture	500 Year	63	\$23,918
Food and Agriculture	750 Year	63	\$40,725
Food and Agriculture	1000 Year	63	\$53,499
Food and Agriculture	1500 Year	63	\$88,546
Food and Agriculture	2000 Year	63	\$112,840
Food and Agriculture	2500 Year	63	\$167,352
Government Facilities	250 Year	49	\$67,115
Government Facilities	500 Year	49	\$353,543
Government Facilities	750 Year	49	\$687,359
Government Facilities	1000 Year	49	\$1,012,831
Government Facilities	1500 Year	49	\$1,763,434
Government Facilities	2000 Year	49	\$2,404,884
Government Facilities	2500 Year	49	\$3,406,910
Healthcare and Public Health	250 Year	19	\$14,272
Healthcare and Public Health	500 Year	19	\$65,645

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	750 Year	19	\$116,355
Healthcare and Public Health	1000 Year	19	\$159,486
Healthcare and Public Health	1500 Year	19	\$267,968
Healthcare and Public Health	2000 Year	19	\$355,413
Healthcare and Public Health	2500 Year	19	\$513,779
Transportation Systems	250 Year	156	\$108,878
Transportation Systems	500 Year	156	\$533,244
Transportation Systems	750 Year	156	\$1,003,872
Transportation Systems	1000 Year	156	\$1,425,926
Transportation Systems	1500 Year	156	\$2,388,821
Transportation Systems	2000 Year	156	\$3,153,913
Transportation Systems	2500 Year	156	\$4,349,340
All Categories	250 Year	1,048	\$618,379
All Categories	500 Year	1,048	\$2,921,251
All Categories	750 Year	1,048	\$5,473,868
All Categories	1000 Year	1,048	\$7,967,360
All Categories	1500 Year	1,048	\$13,338,840
All Categories	2000 Year	1,048	\$18,300,704
All Categories	2500 Year	1,048	\$24,926,506

Source: GIS Analysis

Table 4.198: Critical Facilities Exposed to the Earthquake - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	24	\$12,461
Banking and Finance	500 Year	24	\$55,817

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	750 Year	24	\$102,942
Banking and Finance	1000 Year	24	\$148,054
Banking and Finance	1500 Year	24	\$247,705
Banking and Finance	2000 Year	24	\$330,452
Banking and Finance	2500 Year	24	\$460,112
Commercial Facilities	250 Year	617	\$393,879
Commercial Facilities	500 Year	617	\$1,881,369
Commercial Facilities	750 Year	617	\$3,538,367
Commercial Facilities	1000 Year	617	\$5,173,320
Commercial Facilities	1500 Year	617	\$8,687,796
Commercial Facilities	2000 Year	617	\$11,800,633
Commercial Facilities	2500 Year	617	\$16,477,376
Communications	250 Year	1	\$780
Communications	500 Year	1	\$4,298
Communications	750 Year	1	\$8,859
Communications	1000 Year	1	\$13,187
Communications	1500 Year	1	\$22,418
Communications	2000 Year	1	\$27,377
Communications	2500 Year	1	\$35,679
Critical Manufacturing	250 Year	207	\$492,502
Critical Manufacturing	500 Year	207	\$2,070,154
Critical Manufacturing	750 Year	207	\$3,712,650
Critical Manufacturing	1000 Year	207	\$5,220,534
Critical Manufacturing	1500 Year	207	\$8,301,460
Critical Manufacturing	2000 Year	207	\$10,656,698

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	2500 Year	207	\$13,867,716
Energy	250 Year	4	\$12,760
Energy	500 Year	4	\$35,870
Energy	750 Year	4	\$59,950
Energy	1000 Year	4	\$82,210
Energy	1500 Year	4	\$113,130
Energy	2000 Year	4	\$159,870
Energy	2500 Year	4	\$190,980
Food and Agriculture	250 Year	3	\$13,981
Food and Agriculture	500 Year	3	\$40,703
Food and Agriculture	750 Year	3	\$68,291
Food and Agriculture	1000 Year	3	\$93,858
Food and Agriculture	1500 Year	3	\$130,868
Food and Agriculture	2000 Year	3	\$182,903
Food and Agriculture	2500 Year	3	\$222,206
Government Facilities	250 Year	53	\$77,917
Government Facilities	500 Year	53	\$363,690
Government Facilities	750 Year	53	\$671,928
Government Facilities	1000 Year	53	\$979,358
Government Facilities	1500 Year	53	\$1,675,818
Government Facilities	2000 Year	53	\$2,349,037
Government Facilities	2500 Year	53	\$3,375,055
Healthcare and Public Health	250 Year	57	\$107,247
Healthcare and Public Health	500 Year	57	\$453,274
Healthcare and Public Health	750 Year	57	\$808,299

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	1000 Year	57	\$1,147,179
Healthcare and Public Health	1500 Year	57	\$2,032,092
Healthcare and Public Health	2000 Year	57	\$2,795,009
Healthcare and Public Health	2500 Year	57	\$3,809,547
Transportation Systems	250 Year	115	\$213,346
Transportation Systems	500 Year	115	\$1,024,975
Transportation Systems	750 Year	115	\$1,937,723
Transportation Systems	1000 Year	115	\$2,716,507
Transportation Systems	1500 Year	115	\$4,499,243
Transportation Systems	2000 Year	115	\$5,817,291
Transportation Systems	2500 Year	115	\$8,093,434
Water	250 Year	13	\$111,906
Water	500 Year	13	\$323,141
Water	750 Year	13	\$543,143
Water	1000 Year	13	\$747,644
Water	1500 Year	13	\$1,047,686
Water	2000 Year	13	\$1,458,623
Water	2500 Year	13	\$1,744,040
All Categories	250 Year	1,094	\$1,436,779
All Categories	500 Year	1,094	\$6,253,291
All Categories	750 Year	1,094	\$11,452,152
All Categories	1000 Year	1,094	\$16,321,851
All Categories	1500 Year	1,094	\$26,758,216
All Categories	2000 Year	1,094	\$35,577,893
All Categories	2500 Year	1,094	\$48,276,145

Source: GIS Analysis

Table 4.199: Critical Facilities Exposed to the Earthquake - Town of Cajah's Mountain

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	2	\$303
Banking and Finance	500 Year	2	\$1,496
Banking and Finance	750 Year	2	\$2,483
Banking and Finance	1000 Year	2	\$3,369
Banking and Finance	1500 Year	2	\$5,533
Banking and Finance	2000 Year	2	\$7,253
Banking and Finance	2500 Year	2	\$10,830
Commercial Facilities	250 Year	43	\$19,588
Commercial Facilities	500 Year	43	\$101,321
Commercial Facilities	750 Year	43	\$190,205
Commercial Facilities	1000 Year	43	\$282,686
Commercial Facilities	1500 Year	43	\$464,162
Commercial Facilities	2000 Year	43	\$641,641
Commercial Facilities	2500 Year	43	\$876,980
Critical Manufacturing	250 Year	26	\$12,626
Critical Manufacturing	500 Year	26	\$44,114
Critical Manufacturing	750 Year	26	\$71,624
Critical Manufacturing	1000 Year	26	\$98,511
Critical Manufacturing	1500 Year	26	\$152,643
Critical Manufacturing	2000 Year	26	\$206,127
Critical Manufacturing	2500 Year	26	\$260,481
Government Facilities	250 Year	2	\$1,247
Government Facilities	500 Year	2	\$3,400

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	750 Year	2	\$5,159
Government Facilities	1000 Year	2	\$7,133
Government Facilities	1500 Year	2	\$13,047
Government Facilities	2000 Year	2	\$19,275
Government Facilities	2500 Year	2	\$23,528
Healthcare and Public Health	250 Year	7	\$10,662
Healthcare and Public Health	500 Year	7	\$49,999
Healthcare and Public Health	750 Year	7	\$100,937
Healthcare and Public Health	1000 Year	7	\$157,973
Healthcare and Public Health	1500 Year	7	\$298,172
Healthcare and Public Health	2000 Year	7	\$422,031
Healthcare and Public Health	2500 Year	7	\$547,045
Transportation Systems	250 Year	16	\$15,026
Transportation Systems	500 Year	16	\$74,877
Transportation Systems	750 Year	16	\$139,673
Transportation Systems	1000 Year	16	\$199,817
Transportation Systems	1500 Year	16	\$333,149
Transportation Systems	2000 Year	16	\$435,392
Transportation Systems	2500 Year	16	\$594,038
All Categories	250 Year	96	\$59,452
All Categories	500 Year	96	\$275,207
All Categories	750 Year	96	\$510,081
All Categories	1000 Year	96	\$749,489
All Categories	1500 Year	96	\$1,266,706

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	2000 Year	96	\$1,731,719
All Categories	2500 Year	96	\$2,312,902

Source: GIS Analysis

Table 4.200: Critical Facilities Exposed to the Earthquake - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	45	\$25,326
Commercial Facilities	500 Year	45	\$122,799
Commercial Facilities	750 Year	45	\$227,526
Commercial Facilities	1000 Year	45	\$340,373
Commercial Facilities	1500 Year	45	\$573,926
Commercial Facilities	2000 Year	45	\$814,415
Commercial Facilities	2500 Year	45	\$1,131,235
Critical Manufacturing	250 Year	24	\$15,685
Critical Manufacturing	500 Year	24	\$68,420
Critical Manufacturing	750 Year	24	\$119,433
Critical Manufacturing	1000 Year	24	\$175,791
Critical Manufacturing	1500 Year	24	\$287,621
Critical Manufacturing	2000 Year	24	\$417,328
Critical Manufacturing	2500 Year	24	\$541,421
Government Facilities	250 Year	5	\$32,009
Government Facilities	500 Year	5	\$136,330
Government Facilities	750 Year	5	\$225,613
Government Facilities	1000 Year	5	\$317,891
Government Facilities	1500 Year	5	\$474,265
Government Facilities	2000 Year	5	\$672,685

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	2500 Year	5	\$910,502
Healthcare and Public Health	250 Year	4	\$3,514
Healthcare and Public Health	500 Year	4	\$16,430
Healthcare and Public Health	750 Year	4	\$26,662
Healthcare and Public Health	1000 Year	4	\$36,289
Healthcare and Public Health	1500 Year	4	\$56,388
Healthcare and Public Health	2000 Year	4	\$76,073
Healthcare and Public Health	2500 Year	4	\$106,921
Transportation Systems	250 Year	13	\$9,579
Transportation Systems	500 Year	13	\$48,380
Transportation Systems	750 Year	13	\$84,569
Transportation Systems	1000 Year	13	\$117,637
Transportation Systems	1500 Year	13	\$194,872
Transportation Systems	2000 Year	13	\$253,150
Transportation Systems	2500 Year	13	\$368,836
All Categories	250 Year	91	\$86,113
All Categories	500 Year	91	\$392,359
All Categories	750 Year	91	\$683,803
All Categories	1000 Year	91	\$987,981
All Categories	1500 Year	91	\$1,587,072
All Categories	2000 Year	91	\$2,233,651
All Categories	2500 Year	91	\$3,058,915

Source: GIS Analysis

Table 4.201: Critical Facilities Exposed to the Earthquake - Town of Granite Falls

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	8	\$5,142
Banking and Finance	500 Year	8	\$19,872
Banking and Finance	750 Year	8	\$36,604
Banking and Finance	1000 Year	8	\$51,483
Banking and Finance	1500 Year	8	\$90,358
Banking and Finance	2000 Year	8	\$115,796
Banking and Finance	2500 Year	8	\$153,274
Commercial Facilities	250 Year	154	\$131,526
Commercial Facilities	500 Year	154	\$671,122
Commercial Facilities	750 Year	154	\$1,278,630
Commercial Facilities	1000 Year	154	\$1,849,441
Commercial Facilities	1500 Year	154	\$3,149,357
Commercial Facilities	2000 Year	154	\$4,243,405
Commercial Facilities	2500 Year	154	\$5,940,574
Critical Manufacturing	250 Year	70	\$63,869
Critical Manufacturing	500 Year	70	\$263,230
Critical Manufacturing	750 Year	70	\$444,937
Critical Manufacturing	1000 Year	70	\$599,967
Critical Manufacturing	1500 Year	70	\$927,504
Critical Manufacturing	2000 Year	70	\$1,203,125
Critical Manufacturing	2500 Year	70	\$1,615,430
Energy	250 Year	1	\$75,400
Energy	500 Year	1	\$387,300
Energy	750 Year	1	\$809,800

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	1000 Year	1	\$1,190,500
Energy	1500 Year	1	\$2,015,600
Energy	2000 Year	1	\$2,365,000
Energy	2500 Year	1	\$2,999,600
Government Facilities	250 Year	24	\$37,230
Government Facilities	500 Year	24	\$153,232
Government Facilities	750 Year	24	\$305,855
Government Facilities	1000 Year	24	\$462,270
Government Facilities	1500 Year	24	\$724,694
Government Facilities	2000 Year	24	\$1,087,082
Government Facilities	2500 Year	24	\$1,409,554
Healthcare and Public Health	250 Year	9	\$7,002
Healthcare and Public Health	500 Year	9	\$26,699
Healthcare and Public Health	750 Year	9	\$44,835
Healthcare and Public Health	1000 Year	9	\$63,139
Healthcare and Public Health	1500 Year	9	\$107,855
Healthcare and Public Health	2000 Year	9	\$149,598
Healthcare and Public Health	2500 Year	9	\$201,751
Transportation Systems	250 Year	52	\$83,947
Transportation Systems	500 Year	52	\$385,754
Transportation Systems	750 Year	52	\$731,501
Transportation Systems	1000 Year	52	\$1,028,191
Transportation Systems	1500 Year	52	\$1,801,853
Transportation Systems	2000 Year	52	\$2,399,623

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	2500 Year	52	\$3,425,553
Water	250 Year	8	\$98,678
Water	500 Year	8	\$273,180
Water	750 Year	8	\$471,441
Water	1000 Year	8	\$649,460
Water	1500 Year	8	\$891,818
Water	2000 Year	8	\$1,262,346
Water	2500 Year	8	\$1,509,806
All Categories	250 Year	326	\$502,794
All Categories	500 Year	326	\$2,180,389
All Categories	750 Year	326	\$4,123,603
All Categories	1000 Year	326	\$5,894,451
All Categories	1500 Year	326	\$9,709,039
All Categories	2000 Year	326	\$12,825,975
All Categories	2500 Year	326	\$17,255,542

Source: GIS Analysis

Table 4.202: Critical Facilities Exposed to the Earthquake - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	4	\$4,038
Banking and Finance	500 Year	4	\$18,002
Banking and Finance	750 Year	4	\$34,941
Banking and Finance	1000 Year	4	\$51,946
Banking and Finance	1500 Year	4	\$97,642
Banking and Finance	2000 Year	4	\$129,054
Banking and Finance	2500 Year	4	\$182,927

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	122	\$101,507
Commercial Facilities	500 Year	122	\$395,831
Commercial Facilities	750 Year	122	\$712,726
Commercial Facilities	1000 Year	122	\$1,018,681
Commercial Facilities	1500 Year	122	\$1,691,156
Commercial Facilities	2000 Year	122	\$2,331,290
Commercial Facilities	2500 Year	122	\$3,178,434
Critical Manufacturing	250 Year	66	\$75,132
Critical Manufacturing	500 Year	66	\$314,487
Critical Manufacturing	750 Year	66	\$594,356
Critical Manufacturing	1000 Year	66	\$848,980
Critical Manufacturing	1500 Year	66	\$1,377,381
Critical Manufacturing	2000 Year	66	\$1,733,299
Critical Manufacturing	2500 Year	66	\$2,211,970
Government Facilities	250 Year	24	\$30,123
Government Facilities	500 Year	24	\$145,419
Government Facilities	750 Year	24	\$268,943
Government Facilities	1000 Year	24	\$383,475
Government Facilities	1500 Year	24	\$683,326
Government Facilities	2000 Year	24	\$893,840
Government Facilities	2500 Year	24	\$1,380,608
Healthcare and Public Health	250 Year	15	\$11,792
Healthcare and Public Health	500 Year	15	\$59,581
Healthcare and Public Health	750 Year	15	\$117,760
Healthcare and Public Health	1000 Year	15	\$169,623

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	1500 Year	15	\$293,315
Healthcare and Public Health	2000 Year	15	\$367,445
Healthcare and Public Health	2500 Year	15	\$503,613
Transportation Systems	250 Year	37	\$41,177
Transportation Systems	500 Year	37	\$203,129
Transportation Systems	750 Year	37	\$387,099
Transportation Systems	1000 Year	37	\$545,550
Transportation Systems	1500 Year	37	\$918,237
Transportation Systems	2000 Year	37	\$1,178,376
Transportation Systems	2500 Year	37	\$1,650,704
All Categories	250 Year	268	\$263,769
All Categories	500 Year	268	\$1,136,449
All Categories	750 Year	268	\$2,115,825
All Categories	1000 Year	268	\$3,018,255
All Categories	1500 Year	268	\$5,061,057
All Categories	2000 Year	268	\$6,633,304
All Categories	2500 Year	268	\$9,108,256

Source: GIS Analysis

Table 4.203: Critical Facilities Exposed to the Earthquake - Town of Rhodhiss

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	8	\$3,118
Commercial Facilities	500 Year	8	\$18,046
Commercial Facilities	750 Year	8	\$37,248
Commercial Facilities	1000 Year	8	\$59,671
Commercial Facilities	1500 Year	8	\$101,414

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	2000 Year	8	\$146,948
Commercial Facilities	2500 Year	8	\$190,030
Critical Manufacturing	250 Year	8	\$6,722
Critical Manufacturing	500 Year	8	\$35,402
Critical Manufacturing	750 Year	8	\$70,432
Critical Manufacturing	1000 Year	8	\$101,683
Critical Manufacturing	1500 Year	8	\$170,682
Critical Manufacturing	2000 Year	8	\$205,433
Critical Manufacturing	2500 Year	8	\$272,050
Emergency Services	250 Year	2	\$325
Emergency Services	500 Year	2	\$1,597
Emergency Services	750 Year	2	\$2,727
Emergency Services	1000 Year	2	\$3,590
Emergency Services	1500 Year	2	\$5,735
Emergency Services	2000 Year	2	\$7,152
Emergency Services	2500 Year	2	\$10,867
Government Facilities	250 Year	4	\$4,431
Government Facilities	500 Year	4	\$23,745
Government Facilities	750 Year	4	\$49,266
Government Facilities	1000 Year	4	\$72,975
Government Facilities	1500 Year	4	\$127,671
Government Facilities	2000 Year	4	\$155,904
Government Facilities	2500 Year	4	\$212,580
Transportation Systems	250 Year	3	\$1,034
Transportation Systems	500 Year	3	\$3,365

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	750 Year	3	\$5,956
Transportation Systems	1000 Year	3	\$8,470
Transportation Systems	1500 Year	3	\$14,049
Transportation Systems	2000 Year	3	\$20,138
Transportation Systems	2500 Year	3	\$26,608
All Categories	250 Year	25	\$15,630
All Categories	500 Year	25	\$82,155
All Categories	750 Year	25	\$165,629
All Categories	1000 Year	25	\$246,389
All Categories	1500 Year	25	\$419,551
All Categories	2000 Year	25	\$535,575
All Categories	2500 Year	25	\$712,135

Source: GIS Analysis

Table 4.204: Critical Facilities Exposed to the Earthquake - Town of Sawmills

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	91	\$92,345
Commercial Facilities	500 Year	91	\$432,328
Commercial Facilities	750 Year	91	\$814,143
Commercial Facilities	1000 Year	91	\$1,183,276
Commercial Facilities	1500 Year	91	\$1,950,302
Commercial Facilities	2000 Year	91	\$2,716,947
Commercial Facilities	2500 Year	91	\$3,679,963
Critical Manufacturing	250 Year	61	\$79,727
Critical Manufacturing	500 Year	61	\$317,749
Critical Manufacturing	750 Year	61	\$545,827

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	1000 Year	61	\$765,027
Critical Manufacturing	1500 Year	61	\$1,322,737
Critical Manufacturing	2000 Year	61	\$1,757,126
Critical Manufacturing	2500 Year	61	\$2,448,086
Food and Agriculture	250 Year	4	\$229
Food and Agriculture	500 Year	4	\$1,028
Food and Agriculture	750 Year	4	\$1,686
Food and Agriculture	1000 Year	4	\$2,267
Food and Agriculture	1500 Year	4	\$3,689
Food and Agriculture	2000 Year	4	\$4,685
Food and Agriculture	2500 Year	4	\$7,127
Government Facilities	250 Year	4	\$8,022
Government Facilities	500 Year	4	\$43,385
Government Facilities	750 Year	4	\$84,769
Government Facilities	1000 Year	4	\$127,477
Government Facilities	1500 Year	4	\$222,421
Government Facilities	2000 Year	4	\$315,091
Government Facilities	2500 Year	4	\$450,708
Healthcare and Public Health	250 Year	4	\$2,020
Healthcare and Public Health	500 Year	4	\$8,939
Healthcare and Public Health	750 Year	4	\$17,444
Healthcare and Public Health	1000 Year	4	\$26,858
Healthcare and Public Health	1500 Year	4	\$44,061
Healthcare and Public Health	2000 Year	4	\$63,981

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	2500 Year	4	\$81,780
Transportation Systems	250 Year	25	\$21,278
Transportation Systems	500 Year	25	\$103,846
Transportation Systems	750 Year	25	\$196,821
Transportation Systems	1000 Year	25	\$277,526
Transportation Systems	1500 Year	25	\$466,151
Transportation Systems	2000 Year	25	\$592,604
Transportation Systems	2500 Year	25	\$826,235
All Categories	250 Year	189	\$203,621
All Categories	500 Year	189	\$907,275
All Categories	750 Year	189	\$1,660,690
All Categories	1000 Year	189	\$2,382,431
All Categories	1500 Year	189	\$4,009,361
All Categories	2000 Year	189	\$5,450,434
All Categories	2500 Year	189	\$7,493,899

Source: GIS Analysis

Table 4.205: Critical Facilities Exposed to the Earthquake - Village of Cedar Rock

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	1	\$405
Commercial Facilities	500 Year	1	\$1,114
Commercial Facilities	750 Year	1	\$1,772
Commercial Facilities	1000 Year	1	\$2,375
Commercial Facilities	1500 Year	1	\$4,767
Commercial Facilities	2000 Year	1	\$7,026
Commercial Facilities	2500 Year	1	\$9,621

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	250 Year	1	\$530
Government Facilities	500 Year	1	\$2,830
Government Facilities	750 Year	1	\$6,058
Government Facilities	1000 Year	1	\$8,764
Government Facilities	1500 Year	1	\$15,913
Government Facilities	2000 Year	1	\$19,509
Government Facilities	2500 Year	1	\$26,602
Healthcare and Public Health	250 Year	1	\$1,857
Healthcare and Public Health	500 Year	1	\$7,099
Healthcare and Public Health	750 Year	1	\$13,116
Healthcare and Public Health	1000 Year	1	\$19,090
Healthcare and Public Health	1500 Year	1	\$39,262
Healthcare and Public Health	2000 Year	1	\$55,406
Healthcare and Public Health	2500 Year	1	\$84,575
Transportation Systems	250 Year	1	\$109
Transportation Systems	500 Year	1	\$582
Transportation Systems	750 Year	1	\$1,264
Transportation Systems	1000 Year	1	\$1,827
Transportation Systems	1500 Year	1	\$3,274
Transportation Systems	2000 Year	1	\$3,942
Transportation Systems	2500 Year	1	\$5,202
All Categories	250 Year	4	\$2,901
All Categories	500 Year	4	\$11,625
All Categories	750 Year	4	\$22,210

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1000 Year	4	\$32,056
All Categories	1500 Year	4	\$63,216
All Categories	2000 Year	4	\$85,883
All Categories	2500 Year	4	\$126,000

Source: GIS Analysis

Table 4.206: Critical Facilities Exposed to the Earthquake - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	7	\$3,375
Banking and Finance	500 Year	7	\$15,342
Banking and Finance	750 Year	7	\$28,657
Banking and Finance	1000 Year	7	\$42,929
Banking and Finance	1500 Year	7	\$83,070
Banking and Finance	2000 Year	7	\$113,516
Banking and Finance	2500 Year	7	\$145,908
Commercial Facilities	250 Year	1,760	\$452,332
Commercial Facilities	500 Year	1,760	\$2,296,083
Commercial Facilities	750 Year	1,760	\$4,601,674
Commercial Facilities	1000 Year	1,760	\$6,928,452
Commercial Facilities	1500 Year	1,760	\$11,882,668
Commercial Facilities	2000 Year	1,760	\$16,772,051
Commercial Facilities	2500 Year	1,760	\$22,980,726
Critical Manufacturing	250 Year	623	\$258,549
Critical Manufacturing	500 Year	623	\$1,166,524
Critical Manufacturing	750 Year	623	\$2,093,502
Critical Manufacturing	1000 Year	623	\$2,926,551

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	1500 Year	623	\$4,671,476
Critical Manufacturing	2000 Year	623	\$6,142,627
Critical Manufacturing	2500 Year	623	\$8,000,815
Emergency Services	250 Year	12	\$13,956
Emergency Services	500 Year	12	\$56,950
Emergency Services	750 Year	12	\$99,214
Emergency Services	1000 Year	12	\$139,566
Emergency Services	1500 Year	12	\$235,287
Emergency Services	2000 Year	12	\$332,980
Emergency Services	2500 Year	12	\$443,359
Energy	250 Year	36	\$751,263
Energy	500 Year	36	\$2,067,311
Energy	750 Year	36	\$3,825,847
Energy	1000 Year	36	\$5,347,565
Energy	1500 Year	36	\$7,458,570
Energy	2000 Year	36	\$10,546,528
Energy	2500 Year	36	\$12,602,138
Food and Agriculture	250 Year	141	\$16,247
Food and Agriculture	500 Year	141	\$75,536
Food and Agriculture	750 Year	141	\$129,675
Food and Agriculture	1000 Year	141	\$176,138
Food and Agriculture	1500 Year	141	\$292,801
Food and Agriculture	2000 Year	141	\$378,853
Food and Agriculture	2500 Year	141	\$568,119
Government Facilities	250 Year	86	\$145,600

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	500 Year	86	\$747,364
Government Facilities	750 Year	86	\$1,512,218
Government Facilities	1000 Year	86	\$2,309,012
Government Facilities	1500 Year	86	\$3,871,482
Government Facilities	2000 Year	86	\$5,723,079
Government Facilities	2500 Year	86	\$7,971,396
Healthcare and Public Health	250 Year	28	\$8,108
Healthcare and Public Health	500 Year	28	\$38,081
Healthcare and Public Health	750 Year	28	\$72,933
Healthcare and Public Health	1000 Year	28	\$107,115
Healthcare and Public Health	1500 Year	28	\$177,918
Healthcare and Public Health	2000 Year	28	\$249,697
Healthcare and Public Health	2500 Year	28	\$340,971
Postal and Shipping	250 Year	1	\$1,043
Postal and Shipping	500 Year	1	\$5,995
Postal and Shipping	750 Year	1	\$13,657
Postal and Shipping	1000 Year	1	\$19,847
Postal and Shipping	1500 Year	1	\$35,140
Postal and Shipping	2000 Year	1	\$42,199
Postal and Shipping	2500 Year	1	\$54,226
Transportation Systems	250 Year	290	\$217,888
Transportation Systems	500 Year	290	\$1,130,664
Transportation Systems	750 Year	290	\$2,105,254
Transportation Systems	1000 Year	290	\$2,860,188

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	1500 Year	290	\$4,742,406
Transportation Systems	2000 Year	290	\$6,133,407
Transportation Systems	2500 Year	290	\$8,468,564
Water	250 Year	1	\$210
Water	500 Year	1	\$1,030
Water	750 Year	1	\$2,304
Water	1000 Year	1	\$3,247
Water	1500 Year	1	\$5,844
Water	2000 Year	1	\$6,930
Water	2500 Year	1	\$8,578
All Categories	250 Year	2,985	\$1,868,571
All Categories	500 Year	2,985	\$7,600,880
All Categories	750 Year	2,985	\$14,484,935
All Categories	1000 Year	2,985	\$20,860,610
All Categories	1500 Year	2,985	\$33,456,662
All Categories	2000 Year	2,985	\$46,441,867
All Categories	2500 Year	2,985	\$61,584,800

Source: GIS Analysis

Table 4.207: Critical Facilities Exposed to the Earthquake - City of Claremont

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	120	\$78,178
Commercial Facilities	500 Year	120	\$346,376
Commercial Facilities	750 Year	120	\$662,465
Commercial Facilities	1000 Year	120	\$932,414
Commercial Facilities	1500 Year	120	\$1,715,729

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	2000 Year	120	\$2,385,012
Commercial Facilities	2500 Year	120	\$3,473,222
Critical Manufacturing	250 Year	104	\$354,598
Critical Manufacturing	500 Year	104	\$1,281,070
Critical Manufacturing	750 Year	104	\$2,219,155
Critical Manufacturing	1000 Year	104	\$2,853,661
Critical Manufacturing	1500 Year	104	\$4,535,195
Critical Manufacturing	2000 Year	104	\$5,652,125
Critical Manufacturing	2500 Year	104	\$7,266,307
Emergency Services	250 Year	1	\$1,195
Emergency Services	500 Year	1	\$5,784
Emergency Services	750 Year	1	\$9,924
Emergency Services	1000 Year	1	\$12,738
Emergency Services	1500 Year	1	\$21,261
Emergency Services	2000 Year	1	\$27,566
Emergency Services	2500 Year	1	\$41,225
Food and Agriculture	250 Year	1	\$13,321
Food and Agriculture	500 Year	1	\$61,788
Food and Agriculture	750 Year	1	\$108,628
Food and Agriculture	1000 Year	1	\$138,194
Food and Agriculture	1500 Year	1	\$216,350
Food and Agriculture	2000 Year	1	\$263,232
Food and Agriculture	2500 Year	1	\$346,659
Government Facilities	250 Year	7	\$4,751
Government Facilities	500 Year	7	\$25,309

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	750 Year	7	\$56,240
Government Facilities	1000 Year	7	\$79,410
Government Facilities	1500 Year	7	\$149,173
Government Facilities	2000 Year	7	\$189,128
Government Facilities	2500 Year	7	\$258,471
Transportation Systems	250 Year	7	\$2,735
Transportation Systems	500 Year	7	\$13,715
Transportation Systems	750 Year	7	\$29,135
Transportation Systems	1000 Year	7	\$39,550
Transportation Systems	1500 Year	7	\$69,597
Transportation Systems	2000 Year	7	\$88,329
Transportation Systems	2500 Year	7	\$121,706
All Categories	250 Year	240	\$454,778
All Categories	500 Year	240	\$1,734,042
All Categories	750 Year	240	\$3,085,547
All Categories	1000 Year	240	\$4,055,967
All Categories	1500 Year	240	\$6,707,305
All Categories	2000 Year	240	\$8,605,392
All Categories	2500 Year	240	\$11,507,590

Source: GIS Analysis

Table 4.208: Critical Facilities Exposed to the Earthquake - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$55
Banking and Finance	500 Year	1	\$264
Banking and Finance	750 Year	1	\$499

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	1000 Year	1	\$677
Banking and Finance	1500 Year	1	\$1,332
Banking and Finance	2000 Year	1	\$1,902
Banking and Finance	2500 Year	1	\$3,414
Commercial Facilities	250 Year	592	\$395,445
Commercial Facilities	500 Year	592	\$1,609,736
Commercial Facilities	750 Year	592	\$3,047,305
Commercial Facilities	1000 Year	592	\$4,263,469
Commercial Facilities	1500 Year	592	\$7,367,791
Commercial Facilities	2000 Year	592	\$9,952,109
Commercial Facilities	2500 Year	592	\$13,800,719
Critical Manufacturing	250 Year	305	\$791,012
Critical Manufacturing	500 Year	305	\$2,936,922
Critical Manufacturing	750 Year	305	\$5,196,005
Critical Manufacturing	1000 Year	305	\$6,904,004
Critical Manufacturing	1500 Year	305	\$10,870,418
Critical Manufacturing	2000 Year	305	\$13,884,496
Critical Manufacturing	2500 Year	305	\$18,009,893
Emergency Services	250 Year	2	\$2,766
Emergency Services	500 Year	2	\$14,146
Emergency Services	750 Year	2	\$25,307
Emergency Services	1000 Year	2	\$33,164
Emergency Services	1500 Year	2	\$55,139
Emergency Services	2000 Year	2	\$69,651
Emergency Services	2500 Year	2	\$99,845

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	250 Year	6	\$63,569
Energy	500 Year	6	\$175,977
Energy	750 Year	6	\$319,075
Energy	1000 Year	6	\$448,093
Energy	1500 Year	6	\$614,308
Energy	2000 Year	6	\$881,429
Energy	2500 Year	6	\$1,063,212
Government Facilities	250 Year	11	\$14,683
Government Facilities	500 Year	11	\$103,129
Government Facilities	750 Year	11	\$213,213
Government Facilities	1000 Year	11	\$345,827
Government Facilities	1500 Year	11	\$560,118
Government Facilities	2000 Year	11	\$847,276
Government Facilities	2500 Year	11	\$1,133,218
Healthcare and Public Health	250 Year	3	\$1,949
Healthcare and Public Health	500 Year	3	\$8,453
Healthcare and Public Health	750 Year	3	\$17,052
Healthcare and Public Health	1000 Year	3	\$24,434
Healthcare and Public Health	1500 Year	3	\$48,884
Healthcare and Public Health	2000 Year	3	\$67,257
Healthcare and Public Health	2500 Year	3	\$100,397
Transportation Systems	250 Year	36	\$36,612
Transportation Systems	500 Year	36	\$182,033
Transportation Systems	750 Year	36	\$333,588

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	1000 Year	36	\$444,337
Transportation Systems	1500 Year	36	\$745,958
Transportation Systems	2000 Year	36	\$958,430
Transportation Systems	2500 Year	36	\$1,367,121
All Categories	250 Year	956	\$1,306,091
All Categories	500 Year	956	\$5,030,660
All Categories	750 Year	956	\$9,152,044
All Categories	1000 Year	956	\$12,464,005
All Categories	1500 Year	956	\$20,263,948
All Categories	2000 Year	956	\$26,662,550
All Categories	2500 Year	956	\$35,577,819

Source: GIS Analysis

Table 4.209: Critical Facilities Exposed to the Earthquake - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	17	\$5,932
Banking and Finance	500 Year	17	\$24,359
Banking and Finance	750 Year	17	\$47,681
Banking and Finance	1000 Year	17	\$68,474
Banking and Finance	1500 Year	17	\$117,445
Banking and Finance	2000 Year	17	\$159,017
Banking and Finance	2500 Year	17	\$215,399
Commercial Facilities	250 Year	2,533	\$1,353,003
Commercial Facilities	500 Year	2,533	\$5,974,821
Commercial Facilities	750 Year	2,533	\$11,507,096
Commercial Facilities	1000 Year	2,533	\$16,733,011

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	1500 Year	2,533	\$29,598,518
Commercial Facilities	2000 Year	2,533	\$40,939,291
Commercial Facilities	2500 Year	2,533	\$57,548,397
Critical Manufacturing	250 Year	567	\$931,598
Critical Manufacturing	500 Year	567	\$3,853,440
Critical Manufacturing	750 Year	567	\$6,944,008
Critical Manufacturing	1000 Year	567	\$9,343,268
Critical Manufacturing	1500 Year	567	\$15,367,197
Critical Manufacturing	2000 Year	567	\$19,433,826
Critical Manufacturing	2500 Year	567	\$26,179,759
Defense Industrial Base	250 Year	1	\$4,925
Defense Industrial Base	500 Year	1	\$18,813
Defense Industrial Base	750 Year	1	\$31,724
Defense Industrial Base	1000 Year	1	\$43,252
Defense Industrial Base	1500 Year	1	\$79,038
Defense Industrial Base	2000 Year	1	\$106,297
Defense Industrial Base	2500 Year	1	\$157,506
Emergency Services	250 Year	13	\$9,782
Emergency Services	500 Year	13	\$45,649
Emergency Services	750 Year	13	\$83,584
Emergency Services	1000 Year	13	\$113,773
Emergency Services	1500 Year	13	\$183,714
Emergency Services	2000 Year	13	\$236,228
Emergency Services	2500 Year	13	\$332,727
Energy	250 Year	35	\$205,331

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	500 Year	35	\$567,258
Energy	750 Year	35	\$1,002,467
Energy	1000 Year	35	\$1,388,579
Energy	1500 Year	35	\$1,914,798
Energy	2000 Year	35	\$2,716,078
Energy	2500 Year	35	\$3,252,387
Food and Agriculture	250 Year	1	\$49
Food and Agriculture	500 Year	1	\$294
Food and Agriculture	750 Year	1	\$655
Food and Agriculture	1000 Year	1	\$969
Food and Agriculture	1500 Year	1	\$1,745
Food and Agriculture	2000 Year	1	\$2,119
Food and Agriculture	2500 Year	1	\$2,818
Government Facilities	250 Year	90	\$119,359
Government Facilities	500 Year	90	\$549,765
Government Facilities	750 Year	90	\$1,090,062
Government Facilities	1000 Year	90	\$1,616,133
Government Facilities	1500 Year	90	\$2,863,648
Government Facilities	2000 Year	90	\$4,058,713
Government Facilities	2500 Year	90	\$5,859,019
Healthcare and Public Health	250 Year	65	\$122,487
Healthcare and Public Health	500 Year	65	\$528,879
Healthcare and Public Health	750 Year	65	\$1,028,492
Healthcare and Public Health	1000 Year	65	\$1,403,148
Healthcare and Public Health	1500 Year	65	\$2,364,646

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	2000 Year	65	\$3,088,865
Healthcare and Public Health	2500 Year	65	\$4,336,918
Transportation Systems	250 Year	119	\$77,775
Transportation Systems	500 Year	119	\$368,784
Transportation Systems	750 Year	119	\$719,863
Transportation Systems	1000 Year	119	\$1,017,034
Transportation Systems	1500 Year	119	\$1,725,233
Transportation Systems	2000 Year	119	\$2,301,596
Transportation Systems	2500 Year	119	\$3,204,107
All Categories	250 Year	3,441	\$2,830,241
All Categories	500 Year	3,441	\$11,932,062
All Categories	750 Year	3,441	\$22,455,632
All Categories	1000 Year	3,441	\$31,727,641
All Categories	1500 Year	3,441	\$54,215,982
All Categories	2000 Year	3,441	\$73,042,030
All Categories	2500 Year	3,441	\$101,089,037

Source: GIS Analysis

Table 4.210: Critical Facilities Exposed to the Earthquake - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	4	\$10,522
Banking and Finance	500 Year	4	\$41,882
Banking and Finance	750 Year	4	\$78,326
Banking and Finance	1000 Year	4	\$114,130
Banking and Finance	1500 Year	4	\$228,262
Banking and Finance	2000 Year	4	\$317,584

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	2500 Year	4	\$496,974
Commercial Facilities	250 Year	684	\$344,685
Commercial Facilities	500 Year	684	\$1,700,107
Commercial Facilities	750 Year	684	\$3,200,570
Commercial Facilities	1000 Year	684	\$4,513,459
Commercial Facilities	1500 Year	684	\$7,972,348
Commercial Facilities	2000 Year	684	\$10,638,665
Commercial Facilities	2500 Year	684	\$16,136,572
Critical Manufacturing	250 Year	192	\$448,791
Critical Manufacturing	500 Year	192	\$1,708,673
Critical Manufacturing	750 Year	192	\$2,885,351
Critical Manufacturing	1000 Year	192	\$3,753,798
Critical Manufacturing	1500 Year	192	\$6,016,362
Critical Manufacturing	2000 Year	192	\$7,641,474
Critical Manufacturing	2500 Year	192	\$10,359,249
Defense Industrial Base	250 Year	1	\$47,543
Defense Industrial Base	500 Year	1	\$132,910
Defense Industrial Base	750 Year	1	\$197,075
Defense Industrial Base	1000 Year	1	\$249,522
Defense Industrial Base	1500 Year	1	\$396,029
Defense Industrial Base	2000 Year	1	\$510,350
Defense Industrial Base	2500 Year	1	\$652,363
Emergency Services	250 Year	7	\$10,311
Emergency Services	500 Year	7	\$37,314
Emergency Services	750 Year	7	\$71,566

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	1000 Year	7	\$104,974
Emergency Services	1500 Year	7	\$205,277
Emergency Services	2000 Year	7	\$290,118
Emergency Services	2500 Year	7	\$397,774
Energy	250 Year	11	\$96,691
Energy	500 Year	11	\$269,960
Energy	750 Year	11	\$478,928
Energy	1000 Year	11	\$661,354
Energy	1500 Year	11	\$923,559
Energy	2000 Year	11	\$1,295,741
Energy	2500 Year	11	\$1,543,498
Food and Agriculture	250 Year	1	\$12
Food and Agriculture	500 Year	1	\$55
Food and Agriculture	750 Year	1	\$107
Food and Agriculture	1000 Year	1	\$153
Food and Agriculture	1500 Year	1	\$285
Food and Agriculture	2000 Year	1	\$388
Food and Agriculture	2500 Year	1	\$625
Government Facilities	250 Year	24	\$32,044
Government Facilities	500 Year	24	\$150,844
Government Facilities	750 Year	24	\$329,268
Government Facilities	1000 Year	24	\$524,775
Government Facilities	1500 Year	24	\$900,354
Government Facilities	2000 Year	24	\$1,372,960
Government Facilities	2500 Year	24	\$1,808,378

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	250 Year	9	\$10,348
Healthcare and Public Health	500 Year	9	\$63,103
Healthcare and Public Health	750 Year	9	\$139,316
Healthcare and Public Health	1000 Year	9	\$204,301
Healthcare and Public Health	1500 Year	9	\$378,312
Healthcare and Public Health	2000 Year	9	\$486,538
Healthcare and Public Health	2500 Year	9	\$671,169
Transportation Systems	250 Year	26	\$6,677
Transportation Systems	500 Year	26	\$31,233
Transportation Systems	750 Year	26	\$63,060
Transportation Systems	1000 Year	26	\$88,915
Transportation Systems	1500 Year	26	\$159,564
Transportation Systems	2000 Year	26	\$204,506
Transportation Systems	2500 Year	26	\$280,175
All Categories	250 Year	959	\$1,007,624
All Categories	500 Year	959	\$4,136,081
All Categories	750 Year	959	\$7,443,567
All Categories	1000 Year	959	\$10,215,381
All Categories	1500 Year	959	\$17,180,352
All Categories	2000 Year	959	\$22,758,324
All Categories	2500 Year	959	\$32,346,777

Source: GIS Analysis

Table 4.211: Critical Facilities Exposed to the Earthquake - Town of Brookford

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	28	\$6,833
Commercial Facilities	500 Year	28	\$32,048
Commercial Facilities	750 Year	28	\$61,713
Commercial Facilities	1000 Year	28	\$88,354
Commercial Facilities	1500 Year	28	\$162,066
Commercial Facilities	2000 Year	28	\$216,319
Commercial Facilities	2500 Year	28	\$315,078
Critical Manufacturing	250 Year	7	\$6,709
Critical Manufacturing	500 Year	7	\$32,557
Critical Manufacturing	750 Year	7	\$63,199
Critical Manufacturing	1000 Year	7	\$89,682
Critical Manufacturing	1500 Year	7	\$151,967
Critical Manufacturing	2000 Year	7	\$188,107
Critical Manufacturing	2500 Year	7	\$249,912
Transportation Systems	250 Year	2	\$5,079
Transportation Systems	500 Year	2	\$27,925
Transportation Systems	750 Year	2	\$60,504
Transportation Systems	1000 Year	2	\$88,439
Transportation Systems	1500 Year	2	\$155,545
Transportation Systems	2000 Year	2	\$186,559
Transportation Systems	2500 Year	2	\$243,113
All Categories	250 Year	37	\$18,621
All Categories	500 Year	37	\$92,530
All Categories	750 Year	37	\$185,416

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1000 Year	37	\$266,475
All Categories	1500 Year	37	\$469,578
All Categories	2000 Year	37	\$590,985
All Categories	2500 Year	37	\$808,103

Source: GIS Analysis

Table 4.212: Critical Facilities Exposed to the Earthquake - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$71
Banking and Finance	500 Year	1	\$377
Banking and Finance	750 Year	1	\$756
Banking and Finance	1000 Year	1	\$1,023
Banking and Finance	1500 Year	1	\$1,910
Banking and Finance	2000 Year	1	\$2,566
Banking and Finance	2500 Year	1	\$3,819
Commercial Facilities	250 Year	77	\$29,760
Commercial Facilities	500 Year	77	\$125,679
Commercial Facilities	750 Year	77	\$268,368
Commercial Facilities	1000 Year	77	\$395,172
Commercial Facilities	1500 Year	77	\$655,405
Commercial Facilities	2000 Year	77	\$936,090
Commercial Facilities	2500 Year	77	\$1,244,064
Critical Manufacturing	250 Year	25	\$21,746
Critical Manufacturing	500 Year	25	\$109,440
Critical Manufacturing	750 Year	25	\$225,247
Critical Manufacturing	1000 Year	25	\$297,926

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	1500 Year	25	\$456,334
Critical Manufacturing	2000 Year	25	\$562,720
Critical Manufacturing	2500 Year	25	\$721,091
Emergency Services	250 Year	2	\$1,067
Emergency Services	500 Year	2	\$3,615
Emergency Services	750 Year	2	\$7,530
Emergency Services	1000 Year	2	\$11,286
Emergency Services	1500 Year	2	\$16,563
Emergency Services	2000 Year	2	\$24,719
Emergency Services	2500 Year	2	\$30,833
Government Facilities	250 Year	3	\$8,145
Government Facilities	500 Year	3	\$57,950
Government Facilities	750 Year	3	\$106,007
Government Facilities	1000 Year	3	\$165,938
Government Facilities	1500 Year	3	\$259,053
Government Facilities	2000 Year	3	\$406,032
Government Facilities	2500 Year	3	\$539,181
Transportation Systems	250 Year	7	\$1,347
Transportation Systems	500 Year	7	\$6,685
Transportation Systems	750 Year	7	\$13,474
Transportation Systems	1000 Year	7	\$17,996
Transportation Systems	1500 Year	7	\$33,131
Transportation Systems	2000 Year	7	\$43,550
Transportation Systems	2500 Year	7	\$62,974
All Categories	250 Year	115	\$62,136

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	500 Year	115	\$303,746
All Categories	750 Year	115	\$621,382
All Categories	1000 Year	115	\$889,341
All Categories	1500 Year	115	\$1,422,396
All Categories	2000 Year	115	\$1,975,677
All Categories	2500 Year	115	\$2,601,962

Source: GIS Analysis

Table 4.213: Critical Facilities Exposed to the Earthquake - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	3	\$319
Banking and Finance	500 Year	3	\$2,099
Banking and Finance	750 Year	3	\$4,228
Banking and Finance	1000 Year	3	\$6,958
Banking and Finance	1500 Year	3	\$11,832
Banking and Finance	2000 Year	3	\$18,227
Banking and Finance	2500 Year	3	\$24,577
Commercial Facilities	250 Year	215	\$85,902
Commercial Facilities	500 Year	215	\$389,091
Commercial Facilities	750 Year	215	\$760,598
Commercial Facilities	1000 Year	215	\$1,134,807
Commercial Facilities	1500 Year	215	\$1,922,455
Commercial Facilities	2000 Year	215	\$2,693,838
Commercial Facilities	2500 Year	215	\$3,699,113
Critical Manufacturing	250 Year	86	\$178,291
Critical Manufacturing	500 Year	86	\$737,734

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	750 Year	86	\$1,306,919
Critical Manufacturing	1000 Year	86	\$1,833,336
Critical Manufacturing	1500 Year	86	\$3,107,028
Critical Manufacturing	2000 Year	86	\$4,097,283
Critical Manufacturing	2500 Year	86	\$5,622,764
Emergency Services	250 Year	1	\$364
Emergency Services	500 Year	1	\$1,816
Emergency Services	750 Year	1	\$3,110
Emergency Services	1000 Year	1	\$4,146
Emergency Services	1500 Year	1	\$6,817
Emergency Services	2000 Year	1	\$8,576
Emergency Services	2500 Year	1	\$12,772
Government Facilities	250 Year	8	\$6,670
Government Facilities	500 Year	8	\$48,926
Government Facilities	750 Year	8	\$110,678
Government Facilities	1000 Year	8	\$190,114
Government Facilities	1500 Year	8	\$330,083
Government Facilities	2000 Year	8	\$514,112
Government Facilities	2500 Year	8	\$668,072
Healthcare and Public Health	250 Year	1	\$251
Healthcare and Public Health	500 Year	1	\$1,307
Healthcare and Public Health	750 Year	1	\$2,422
Healthcare and Public Health	1000 Year	1	\$3,382
Healthcare and Public Health	1500 Year	1	\$6,132
Healthcare and Public Health	2000 Year	1	\$8,081

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	2500 Year	1	\$13,033
Transportation Systems	250 Year	10	\$15,102
Transportation Systems	500 Year	10	\$77,969
Transportation Systems	750 Year	10	\$146,130
Transportation Systems	1000 Year	10	\$203,208
Transportation Systems	1500 Year	10	\$335,957
Transportation Systems	2000 Year	10	\$431,190
Transportation Systems	2500 Year	10	\$611,578
All Categories	250 Year	324	\$286,899
All Categories	500 Year	324	\$1,258,942
All Categories	750 Year	324	\$2,334,085
All Categories	1000 Year	324	\$3,375,951
All Categories	1500 Year	324	\$5,720,304
All Categories	2000 Year	324	\$7,771,307
All Categories	2500 Year	324	\$10,651,909

Source: GIS Analysis

Table 4.214: Critical Facilities Exposed to the Earthquake - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	1	\$257
Banking and Finance	500 Year	1	\$1,468
Banking and Finance	750 Year	1	\$3,261
Banking and Finance	1000 Year	1	\$4,811
Banking and Finance	1500 Year	1	\$8,428
Banking and Finance	2000 Year	1	\$10,054
Banking and Finance	2500 Year	1	\$12,949

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	250 Year	271	\$102,429
Commercial Facilities	500 Year	271	\$500,105
Commercial Facilities	750 Year	271	\$1,003,350
Commercial Facilities	1000 Year	271	\$1,485,474
Commercial Facilities	1500 Year	271	\$2,511,722
Commercial Facilities	2000 Year	271	\$3,346,057
Commercial Facilities	2500 Year	271	\$4,517,298
Critical Manufacturing	250 Year	138	\$288,997
Critical Manufacturing	500 Year	138	\$1,393,252
Critical Manufacturing	750 Year	138	\$2,595,217
Critical Manufacturing	1000 Year	138	\$3,618,855
Critical Manufacturing	1500 Year	138	\$5,972,923
Critical Manufacturing	2000 Year	138	\$7,301,376
Critical Manufacturing	2500 Year	138	\$9,740,734
Emergency Services	250 Year	1	\$531
Emergency Services	500 Year	1	\$1,815
Emergency Services	750 Year	1	\$3,725
Emergency Services	1000 Year	1	\$5,543
Emergency Services	1500 Year	1	\$8,299
Emergency Services	2000 Year	1	\$12,217
Emergency Services	2500 Year	1	\$14,863
Energy	250 Year	5	\$129,026
Energy	500 Year	5	\$366,618
Energy	750 Year	5	\$645,590
Energy	1000 Year	5	\$887,953

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	1500 Year	5	\$1,258,155
Energy	2000 Year	5	\$1,749,626
Energy	2500 Year	5	\$2,071,727
Government Facilities	250 Year	10	\$21,401
Government Facilities	500 Year	10	\$105,350
Government Facilities	750 Year	10	\$192,558
Government Facilities	1000 Year	10	\$267,352
Government Facilities	1500 Year	10	\$477,864
Government Facilities	2000 Year	10	\$640,595
Government Facilities	2500 Year	10	\$1,030,538
Healthcare and Public Health	250 Year	1	\$359
Healthcare and Public Health	500 Year	1	\$1,245
Healthcare and Public Health	750 Year	1	\$2,535
Healthcare and Public Health	1000 Year	1	\$3,756
Healthcare and Public Health	1500 Year	1	\$5,683
Healthcare and Public Health	2000 Year	1	\$8,262
Healthcare and Public Health	2500 Year	1	\$9,989
Transportation Systems	250 Year	13	\$4,015
Transportation Systems	500 Year	13	\$19,107
Transportation Systems	750 Year	13	\$38,873
Transportation Systems	1000 Year	13	\$57,379
Transportation Systems	1500 Year	13	\$99,512
Transportation Systems	2000 Year	13	\$129,911
Transportation Systems	2500 Year	13	\$175,757

Sector	Event	Number of Buildings At Risk	Estimated Damages
Water	250 Year	2	\$26,756
Water	500 Year	2	\$75,198
Water	750 Year	2	\$133,892
Water	1000 Year	2	\$184,769
Water	1500 Year	2	\$259,945
Water	2000 Year	2	\$363,418
Water	2500 Year	2	\$431,604
All Categories	250 Year	442	\$573,771
All Categories	500 Year	442	\$2,464,158
All Categories	750 Year	442	\$4,619,001
All Categories	1000 Year	442	\$6,515,892
All Categories	1500 Year	442	\$10,602,531
All Categories	2000 Year	442	\$13,561,516
All Categories	2500 Year	442	\$18,005,459

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event.

Table 4.215: Critical Facilities Exposed to the Earthquake (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	250 Year	4,622	\$2,240,570
Banking and Finance	500 Year	5,500	\$12,961,838
Banking and Finance	750 Year	5,543	\$27,139,412
Banking and Finance	1000 Year	5,544	\$43,907,302
Banking and Finance	1500 Year	5,544	\$77,951,697
Banking and Finance	2000 Year	5,544	\$115,275,307

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	2500 Year	5,544	\$149,179,073
Chemical	250 Year	51	\$1,496,117
Chemical	500 Year	63	\$4,104,556
Chemical	750 Year	64	\$7,149,358
Chemical	1000 Year	64	\$9,580,116
Chemical	1500 Year	64	\$16,474,845
Chemical	2000 Year	64	\$20,538,723
Chemical	2500 Year	64	\$25,638,345
Commercial Facilities	250 Year	165,621	\$58,929,269
Commercial Facilities	500 Year	195,936	\$327,522,014
Commercial Facilities	750 Year	197,333	\$687,945,192
Commercial Facilities	1000 Year	197,399	\$1,113,569,211
Commercial Facilities	1500 Year	197,399	\$1,996,097,777
Commercial Facilities	2000 Year	197,399	\$2,941,588,745
Commercial Facilities	2500 Year	197,399	\$3,814,755,184
Communications	250 Year	129	\$103,196
Communications	500 Year	215	\$800,203
Communications	750 Year	227	\$1,882,578
Communications	1000 Year	227	\$3,145,269
Communications	1500 Year	227	\$5,746,446
Communications	2000 Year	227	\$8,711,044
Communications	2500 Year	227	\$11,481,814
Critical Manufacturing	250 Year	57,813	\$43,884,303
Critical Manufacturing	500 Year	61,782	\$215,094,048
Critical Manufacturing	750 Year	61,954	\$409,783,055

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	1000 Year	61,961	\$616,614,885
Critical Manufacturing	1500 Year	61,961	\$1,010,078,298
Critical Manufacturing	2000 Year	61,961	\$1,401,390,536
Critical Manufacturing	2500 Year	61,961	\$1,747,368,014
Defense Industrial Base	250 Year	57	\$368,022
Defense Industrial Base	500 Year	74	\$1,722,804
Defense Industrial Base	750 Year	77	\$3,559,806
Defense Industrial Base	1000 Year	77	\$5,484,336
Defense Industrial Base	1500 Year	77	\$9,111,029
Defense Industrial Base	2000 Year	77	\$12,499,356
Defense Industrial Base	2500 Year	77	\$15,639,134
Emergency Services	250 Year	1,276	\$703,637
Emergency Services	500 Year	2,486	\$4,552,091
Emergency Services	750 Year	2,498	\$10,412,559
Emergency Services	1000 Year	2,499	\$17,080,247
Emergency Services	1500 Year	2,499	\$30,608,841
Emergency Services	2000 Year	2,499	\$45,487,040
Emergency Services	2500 Year	2,499	\$59,890,119
Energy	250 Year	1,521	\$26,376,778
Energy	500 Year	1,626	\$113,505,610
Energy	750 Year	1,632	\$232,719,571
Energy	1000 Year	1,633	\$346,203,060
Energy	1500 Year	1,633	\$581,024,713
Energy	2000 Year	1,633	\$814,179,352
Energy	2500 Year	1,633	\$994,787,201

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	250 Year	95,152	\$1,985,726
Food and Agriculture	500 Year	151,997	\$15,128,435
Food and Agriculture	750 Year	152,145	\$33,639,525
Food and Agriculture	1000 Year	152,146	\$53,618,446
Food and Agriculture	1500 Year	152,146	\$97,368,829
Food and Agriculture	2000 Year	152,146	\$142,489,738
Food and Agriculture	2500 Year	152,146	\$187,362,069
Government Facilities	250 Year	29,908	\$15,914,543
Government Facilities	500 Year	38,796	\$93,541,244
Government Facilities	750 Year	38,920	\$201,596,950
Government Facilities	1000 Year	38,920	\$333,657,897
Government Facilities	1500 Year	38,920	\$622,275,014
Government Facilities	2000 Year	38,920	\$956,825,675
Government Facilities	2500 Year	38,920	\$1,278,500,829
Healthcare and Public Health	250 Year	11,187	\$9,467,779
Healthcare and Public Health	500 Year	13,556	\$51,900,817
Healthcare and Public Health	750 Year	13,615	\$107,515,853
Healthcare and Public Health	1000 Year	13,616	\$172,383,993
Healthcare and Public Health	1500 Year	13,616	\$302,857,121
Healthcare and Public Health	2000 Year	13,616	\$445,905,788
Healthcare and Public Health	2500 Year	13,616	\$574,194,170
Information Technology	250 Year	3	\$593
Information Technology	500 Year	3	\$3,674
Information Technology	750 Year	3	\$7,542

Sector	Event	Number of Buildings At Risk	Estimated Damages
Information Technology	1000 Year	3	\$11,553
Information Technology	1500 Year	3	\$20,158
Information Technology	2000 Year	3	\$29,349
Information Technology	2500 Year	3	\$38,644
National Monuments and Icons	500 Year	2	\$1,192
National Monuments and Icons	750 Year	2	\$3,048
National Monuments and Icons	1000 Year	2	\$5,087
National Monuments and Icons	1500 Year	2	\$10,443
National Monuments and Icons	2000 Year	2	\$16,253
National Monuments and Icons	2500 Year	2	\$21,524
Nuclear Reactors, Materials and Waste	250 Year	38	\$18,970
Nuclear Reactors, Materials and Waste	500 Year	62	\$154,779
Nuclear Reactors, Materials and Waste	750 Year	64	\$371,388
Nuclear Reactors, Materials and Waste	1000 Year	64	\$623,406
Nuclear Reactors, Materials and Waste	1500 Year	64	\$1,168,491
Nuclear Reactors, Materials and Waste	2000 Year	64	\$1,701,674
Nuclear Reactors, Materials and Waste	2500 Year	64	\$2,169,101
Other	250 Year	9	\$24,451
Other	500 Year	12	\$96,631
Other	750 Year	12	\$192,611
Other	1000 Year	12	\$305,413
Other	1500 Year	12	\$515,477
Other	2000 Year	12	\$699,556
Other	2500 Year	12	\$805,266

Sector	Event	Number of Buildings At Risk	Estimated Damages
Postal and Shipping	250 Year	231	\$13,355
Postal and Shipping	500 Year	246	\$106,630
Postal and Shipping	750 Year	246	\$248,722
Postal and Shipping	1000 Year	246	\$406,356
Postal and Shipping	1500 Year	246	\$730,148
Postal and Shipping	2000 Year	246	\$1,093,517
Postal and Shipping	2500 Year	246	\$1,399,474
Transportation Systems	250 Year	32,004	\$17,823,693
Transportation Systems	500 Year	36,748	\$101,028,030
Transportation Systems	750 Year	36,884	\$203,980,080
Transportation Systems	1000 Year	36,884	\$323,790,655
Transportation Systems	1500 Year	36,884	\$562,733,773
Transportation Systems	2000 Year	36,884	\$828,565,475
Transportation Systems	2500 Year	36,884	\$1,070,986,116
Water	250 Year	1,199	\$22,336,179
Water	500 Year	1,279	\$79,573,042
Water	750 Year	1,279	\$153,138,925
Water	1000 Year	1,279	\$225,011,468
Water	1500 Year	1,279	\$374,184,076
Water	2000 Year	1,279	\$502,411,886
Water	2500 Year	1,279	\$618,666,913
All Categories	250 Year	400,821	\$201,687,181
All Categories	500 Year	510,383	\$1,021,797,638
All Categories	750 Year	512,498	\$2,081,286,175
All Categories	1000 Year	512,576	\$3,265,398,700

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1500 Year	512,576	\$5,688,957,176
All Categories	2000 Year	512,576	\$8,239,409,014
All Categories	2500 Year	512,576	\$10,552,882,990

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.216: High Potential Loss Properties Exposed to the Earthquake - Alexander County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	172	\$210,901
Commercial	500 Year	172	\$1,039,200
Commercial	750 Year	172	\$2,070,441
Commercial	1000 Year	172	\$2,961,273
Commercial	1500 Year	172	\$5,104,131
Commercial	2000 Year	172	\$7,280,053
Commercial	2500 Year	172	\$9,863,145
Government	250 Year	23	\$54,542
Government	500 Year	23	\$269,055
Government	750 Year	23	\$510,689
Government	1000 Year	23	\$754,003
Government	1500 Year	23	\$1,294,024
Government	2000 Year	23	\$1,959,061
Government	2500 Year	23	\$2,691,561
Industrial	250 Year	62	\$176,802
Industrial	500 Year	62	\$748,428

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	750 Year	62	\$1,425,335
Industrial	1000 Year	62	\$1,897,970
Industrial	1500 Year	62	\$3,086,401
Industrial	2000 Year	62	\$4,106,114
Industrial	2500 Year	62	\$5,234,309
Religious	250 Year	28	\$62,847
Religious	500 Year	28	\$326,967
Religious	750 Year	28	\$760,913
Religious	1000 Year	28	\$1,060,910
Religious	1500 Year	28	\$2,004,628
Religious	2000 Year	28	\$2,543,100
Religious	2500 Year	28	\$3,158,523
Residential	250 Year	17	\$9,372
Residential	500 Year	17	\$56,325
Residential	750 Year	17	\$138,982
Residential	1000 Year	17	\$194,027
Residential	1500 Year	17	\$386,670
Residential	2000 Year	17	\$517,863
Residential	2500 Year	17	\$670,936
Utilities	250 Year	13	\$133,299
Utilities	500 Year	13	\$350,474
Utilities	750 Year	13	\$638,140
Utilities	1000 Year	13	\$884,418
Utilities	1500 Year	13	\$1,220,005
Utilities	2000 Year	13	\$1,738,415

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	2500 Year	13	\$2,124,222
All Categories	250 Year	315	\$647,763
All Categories	500 Year	315	\$2,790,449
All Categories	750 Year	315	\$5,544,500
All Categories	1000 Year	315	\$7,752,601
All Categories	1500 Year	315	\$13,095,859
All Categories	2000 Year	315	\$18,144,606
All Categories	2500 Year	315	\$23,742,696

Source: GIS Analysis

Table 4.217: High Potential Loss Properties Exposed to the Earthquake - Town of Taylorsville

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	53	\$81,801
Commercial	500 Year	53	\$366,144
Commercial	750 Year	53	\$756,431
Commercial	1000 Year	53	\$1,034,378
Commercial	1500 Year	53	\$1,830,756
Commercial	2000 Year	53	\$2,497,598
Commercial	2500 Year	53	\$3,348,522
Government	250 Year	5	\$16,894
Government	500 Year	5	\$65,553
Government	750 Year	5	\$141,747
Government	1000 Year	5	\$203,511
Government	1500 Year	5	\$352,270
Government	2000 Year	5	\$510,417
Government	2500 Year	5	\$688,460

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	250 Year	17	\$95,645
Industrial	500 Year	17	\$402,605
Industrial	750 Year	17	\$749,013
Industrial	1000 Year	17	\$953,074
Industrial	1500 Year	17	\$1,573,018
Industrial	2000 Year	17	\$1,970,339
Industrial	2500 Year	17	\$2,501,603
Religious	250 Year	7	\$8,061
Religious	500 Year	7	\$41,600
Religious	750 Year	7	\$96,687
Religious	1000 Year	7	\$131,388
Religious	1500 Year	7	\$252,464
Religious	2000 Year	7	\$320,137
Religious	2500 Year	7	\$411,654
Residential	250 Year	8	\$4,995
Residential	500 Year	8	\$26,018
Residential	750 Year	8	\$64,701
Residential	1000 Year	8	\$90,020
Residential	1500 Year	8	\$184,460
Residential	2000 Year	8	\$245,434
Residential	2500 Year	8	\$318,681
Utilities	250 Year	2	\$57,940
Utilities	500 Year	2	\$151,090
Utilities	750 Year	2	\$276,813
Utilities	1000 Year	2	\$383,750

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	1500 Year	2	\$523,092
Utilities	2000 Year	2	\$750,617
Utilities	2500 Year	2	\$913,248
All Categories	250 Year	92	\$265,336
All Categories	500 Year	92	\$1,053,010
All Categories	750 Year	92	\$2,085,392
All Categories	1000 Year	92	\$2,796,121
All Categories	1500 Year	92	\$4,716,060
All Categories	2000 Year	92	\$6,294,542
All Categories	2500 Year	92	\$8,182,168

Source: GIS Analysis

Table 4.218: High Potential Loss Properties Exposed to the Earthquake - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	54	\$101,178
Commercial	500 Year	54	\$486,555
Commercial	750 Year	54	\$924,390
Commercial	1000 Year	54	\$1,434,314
Commercial	1500 Year	54	\$2,448,331
Commercial	2000 Year	54	\$3,475,021
Commercial	2500 Year	54	\$4,539,173
Government	250 Year	11	\$78,719
Government	500 Year	11	\$342,379
Government	750 Year	11	\$650,959
Government	1000 Year	11	\$983,939

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	1500 Year	11	\$1,635,819
Government	2000 Year	11	\$2,443,224
Government	2500 Year	11	\$3,370,509
Industrial	250 Year	14	\$18,412
Industrial	500 Year	14	\$87,591
Industrial	750 Year	14	\$165,480
Industrial	1000 Year	14	\$254,298
Industrial	1500 Year	14	\$411,681
Industrial	2000 Year	14	\$585,468
Industrial	2500 Year	14	\$705,319
Religious	250 Year	5	\$6,828
Religious	500 Year	5	\$39,220
Religious	750 Year	5	\$79,769
Religious	1000 Year	5	\$129,400
Religious	1500 Year	5	\$221,844
Religious	2000 Year	5	\$295,339
Religious	2500 Year	5	\$389,445
Residential	250 Year	15	\$32,625
Residential	500 Year	15	\$163,447
Residential	750 Year	15	\$299,422
Residential	1000 Year	15	\$428,846
Residential	1500 Year	15	\$733,607
Residential	2000 Year	15	\$983,143
Residential	2500 Year	15	\$1,556,603
Utilities	250 Year	7	\$250,180

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	500 Year	7	\$769,390
Utilities	750 Year	7	\$1,245,730
Utilities	1000 Year	7	\$1,717,440
Utilities	1500 Year	7	\$2,541,410
Utilities	2000 Year	7	\$3,543,330
Utilities	2500 Year	7	\$4,243,960
All Categories	250 Year	106	\$487,942
All Categories	500 Year	106	\$1,888,582
All Categories	750 Year	106	\$3,365,750
All Categories	1000 Year	106	\$4,948,237
All Categories	1500 Year	106	\$7,992,692
All Categories	2000 Year	106	\$11,325,525
All Categories	2500 Year	106	\$14,805,009

Source: GIS Analysis

Table 4.219: High Potential Loss Properties Exposed to the Earthquake - City of Morganton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	72	\$376,147
Commercial	500 Year	72	\$1,540,554
Commercial	750 Year	72	\$2,789,403
Commercial	1000 Year	72	\$4,212,862
Commercial	1500 Year	72	\$6,996,649
Commercial	2000 Year	72	\$10,041,241
Commercial	2500 Year	72	\$13,037,869
Government	250 Year	49	\$151,329
Government	500 Year	49	\$710,000

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	750 Year	49	\$1,319,070
Government	1000 Year	49	\$2,046,878
Government	1500 Year	49	\$3,524,147
Government	2000 Year	49	\$5,175,644
Government	2500 Year	49	\$7,180,355
Industrial	250 Year	25	\$310,809
Industrial	500 Year	25	\$1,151,555
Industrial	750 Year	25	\$1,877,151
Industrial	1000 Year	25	\$2,745,581
Industrial	1500 Year	25	\$4,301,598
Industrial	2000 Year	25	\$5,942,726
Industrial	2500 Year	25	\$7,352,359
Religious	250 Year	3	\$4,696
Religious	500 Year	3	\$24,326
Religious	750 Year	3	\$48,163
Religious	1000 Year	3	\$75,724
Religious	1500 Year	3	\$125,548
Religious	2000 Year	3	\$165,127
Religious	2500 Year	3	\$221,519
Residential	250 Year	42	\$79,072
Residential	500 Year	42	\$380,930
Residential	750 Year	42	\$702,680
Residential	1000 Year	42	\$1,095,475
Residential	1500 Year	42	\$1,864,966
Residential	2000 Year	42	\$2,673,770

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	2500 Year	42	\$3,840,841
Utilities	250 Year	18	\$242,085
Utilities	500 Year	18	\$685,273
Utilities	750 Year	18	\$1,101,223
Utilities	1000 Year	18	\$1,490,653
Utilities	1500 Year	18	\$2,109,149
Utilities	2000 Year	18	\$2,918,802
Utilities	2500 Year	18	\$3,446,366
All Categories	250 Year	209	\$1,164,138
All Categories	500 Year	209	\$4,492,638
All Categories	750 Year	209	\$7,837,690
All Categories	1000 Year	209	\$11,667,173
All Categories	1500 Year	209	\$18,922,057
All Categories	2000 Year	209	\$26,917,310
All Categories	2500 Year	209	\$35,079,309

Source: GIS Analysis

Table 4.220: High Potential Loss Properties Exposed to the Earthquake - Town of Connelly Springs

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	250 Year	1	\$2,747
Religious	500 Year	1	\$18,076
Religious	750 Year	1	\$39,411
Religious	1000 Year	1	\$62,019
Religious	1500 Year	1	\$113,417
Religious	2000 Year	1	\$145,860
Religious	2500 Year	1	\$199,375

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	250 Year	2	\$939
Residential	500 Year	2	\$4,969
Residential	750 Year	2	\$10,517
Residential	1000 Year	2	\$15,910
Residential	1500 Year	2	\$28,137
Residential	2000 Year	2	\$34,787
Residential	2500 Year	2	\$47,067
All Categories	250 Year	3	\$3,686
All Categories	500 Year	3	\$23,045
All Categories	750 Year	3	\$49,928
All Categories	1000 Year	3	\$77,929
All Categories	1500 Year	3	\$141,554
All Categories	2000 Year	3	\$180,647
All Categories	2500 Year	3	\$246,442

Source: GIS Analysis

Table 4.221: High Potential Loss Properties Exposed to the Earthquake - Town of Drexel

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	6	\$32,199
Commercial	500 Year	6	\$152,294
Commercial	750 Year	6	\$278,174
Commercial	1000 Year	6	\$432,618
Commercial	1500 Year	6	\$707,399
Commercial	2000 Year	6	\$1,063,472
Commercial	2500 Year	6	\$1,357,102
Government	250 Year	1	\$4,660

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	500 Year	1	\$24,996
Government	750 Year	1	\$49,697
Government	1000 Year	1	\$76,489
Government	1500 Year	1	\$128,338
Government	2000 Year	1	\$162,258
Government	2500 Year	1	\$218,147
Religious	250 Year	1	\$1,290
Religious	500 Year	1	\$6,574
Religious	750 Year	1	\$13,153
Religious	1000 Year	1	\$20,087
Religious	1500 Year	1	\$33,407
Religious	2000 Year	1	\$42,582
Religious	2500 Year	1	\$58,032
Residential	250 Year	2	\$939
Residential	500 Year	2	\$5,509
Residential	750 Year	2	\$11,065
Residential	1000 Year	2	\$17,265
Residential	1500 Year	2	\$29,576
Residential	2000 Year	2	\$38,473
Residential	2500 Year	2	\$52,587
Utilities	250 Year	1	\$79,200
Utilities	500 Year	1	\$225,660
Utilities	750 Year	1	\$371,340
Utilities	1000 Year	1	\$504,840
Utilities	1500 Year	1	\$709,980

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	2000 Year	1	\$986,760
Utilities	2500 Year	1	\$1,168,140
All Categories	250 Year	11	\$118,288
All Categories	500 Year	11	\$415,033
All Categories	750 Year	11	\$723,429
All Categories	1000 Year	11	\$1,051,299
All Categories	1500 Year	11	\$1,608,700
All Categories	2000 Year	11	\$2,293,545
All Categories	2500 Year	11	\$2,854,008

Source: GIS Analysis

Table 4.222: High Potential Loss Properties Exposed to the Earthquake - Town of Glen Alpine

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	1	\$868
Commercial	500 Year	1	\$3,799
Commercial	750 Year	1	\$6,369
Commercial	1000 Year	1	\$9,955
Commercial	1500 Year	1	\$17,587
Commercial	2000 Year	1	\$27,663
Commercial	2500 Year	1	\$36,158
Government	250 Year	1	\$4,618
Government	500 Year	1	\$20,759
Government	750 Year	1	\$36,544
Government	1000 Year	1	\$59,751
Government	1500 Year	1	\$115,595
Government	2000 Year	1	\$195,356

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	2500 Year	1	\$265,025
Residential	250 Year	1	\$681
Residential	500 Year	1	\$4,638
Residential	750 Year	1	\$10,070
Residential	1000 Year	1	\$16,113
Residential	1500 Year	1	\$26,727
Residential	2000 Year	1	\$40,126
Residential	2500 Year	1	\$49,776
All Categories	250 Year	3	\$6,167
All Categories	500 Year	3	\$29,196
All Categories	750 Year	3	\$52,983
All Categories	1000 Year	3	\$85,819
All Categories	1500 Year	3	\$159,909
All Categories	2000 Year	3	\$263,145
All Categories	2500 Year	3	\$350,959

Source: GIS Analysis

Table 4.223: High Potential Loss Properties Exposed to the Earthquake - Town of Hildebran

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	3	\$8,713
Commercial	500 Year	3	\$46,512
Commercial	750 Year	3	\$84,090
Commercial	1000 Year	3	\$120,065
Commercial	1500 Year	3	\$197,733
Commercial	2000 Year	3	\$266,190
Commercial	2500 Year	3	\$370,679

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	250 Year	2	\$6,613
Government	500 Year	2	\$29,536
Government	750 Year	2	\$63,206
Government	1000 Year	2	\$106,474
Government	1500 Year	2	\$216,674
Government	2000 Year	2	\$324,653
Government	2500 Year	2	\$453,471
Industrial	250 Year	6	\$50,778
Industrial	500 Year	6	\$206,872
Industrial	750 Year	6	\$348,829
Industrial	1000 Year	6	\$455,810
Industrial	1500 Year	6	\$677,294
Industrial	2000 Year	6	\$857,102
Industrial	2500 Year	6	\$1,130,248
Utilities	250 Year	2	\$24,880
Utilities	500 Year	2	\$69,820
Utilities	750 Year	2	\$120,480
Utilities	1000 Year	2	\$165,420
Utilities	1500 Year	2	\$230,380
Utilities	2000 Year	2	\$322,960
Utilities	2500 Year	2	\$384,220
All Categories	250 Year	13	\$90,984
All Categories	500 Year	13	\$352,740
All Categories	750 Year	13	\$616,605
All Categories	1000 Year	13	\$847,769

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	1500 Year	13	\$1,322,081
All Categories	2000 Year	13	\$1,770,905
All Categories	2500 Year	13	\$2,338,618

Source: GIS Analysis

Table 4.224: High Potential Loss Properties Exposed to the Earthquake - Town of Rutherford College

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	2	\$2,843
Commercial	500 Year	2	\$14,453
Commercial	750 Year	2	\$26,615
Commercial	1000 Year	2	\$39,773
Commercial	1500 Year	2	\$63,602
Commercial	2000 Year	2	\$86,595
Commercial	2500 Year	2	\$111,687
Government	250 Year	1	\$1,844
Government	500 Year	1	\$8,361
Government	750 Year	1	\$14,337
Government	1000 Year	1	\$21,225
Government	1500 Year	1	\$32,262
Government	2000 Year	1	\$49,593
Government	2500 Year	1	\$61,414
Industrial	250 Year	2	\$21,816
Industrial	500 Year	2	\$84,963
Industrial	750 Year	2	\$141,413
Industrial	1000 Year	2	\$201,631
Industrial	1500 Year	2	\$360,922

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	2000 Year	2	\$500,475
Industrial	2500 Year	2	\$698,590
Residential	250 Year	3	\$3,793
Residential	500 Year	3	\$27,617
Residential	750 Year	3	\$61,490
Residential	1000 Year	3	\$97,970
Residential	1500 Year	3	\$180,601
Residential	2000 Year	3	\$233,435
Residential	2500 Year	3	\$322,385
All Categories	250 Year	8	\$30,296
All Categories	500 Year	8	\$135,394
All Categories	750 Year	8	\$243,855
All Categories	1000 Year	8	\$360,599
All Categories	1500 Year	8	\$637,387
All Categories	2000 Year	8	\$870,098
All Categories	2500 Year	8	\$1,194,076

Source: GIS Analysis

Table 4.225: High Potential Loss Properties Exposed to the Earthquake - Town of Valdese

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	9	\$36,204
Commercial	500 Year	9	\$124,434
Commercial	750 Year	9	\$217,040
Commercial	1000 Year	9	\$320,670
Commercial	1500 Year	9	\$604,481
Commercial	2000 Year	9	\$872,040

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	2500 Year	9	\$1,123,931
Government	250 Year	5	\$28,164
Government	500 Year	5	\$113,540
Government	750 Year	5	\$220,446
Government	1000 Year	5	\$331,746
Government	1500 Year	5	\$558,093
Government	2000 Year	5	\$831,764
Government	2500 Year	5	\$1,086,147
Industrial	250 Year	4	\$80,983
Industrial	500 Year	4	\$335,692
Industrial	750 Year	4	\$584,557
Industrial	1000 Year	4	\$798,251
Industrial	1500 Year	4	\$1,193,461
Industrial	2000 Year	4	\$1,555,636
Industrial	2500 Year	4	\$2,072,967
Residential	250 Year	3	\$4,924
Residential	500 Year	3	\$29,273
Residential	750 Year	3	\$62,014
Residential	1000 Year	3	\$97,087
Residential	1500 Year	3	\$170,214
Residential	2000 Year	3	\$216,918
Residential	2500 Year	3	\$291,354
Utilities	250 Year	9	\$155,649
Utilities	500 Year	9	\$467,622
Utilities	750 Year	9	\$772,508

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	1000 Year	9	\$1,067,803
Utilities	1500 Year	9	\$1,502,179
Utilities	2000 Year	9	\$2,118,580
Utilities	2500 Year	9	\$2,536,278
All Categories	250 Year	30	\$305,924
All Categories	500 Year	30	\$1,070,561
All Categories	750 Year	30	\$1,856,565
All Categories	1000 Year	30	\$2,615,557
All Categories	1500 Year	30	\$4,028,428
All Categories	2000 Year	30	\$5,594,938
All Categories	2500 Year	30	\$7,110,677

Source: GIS Analysis

Table 4.226: High Potential Loss Properties Exposed to the Earthquake - Caldwell County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	34	\$52,520
Commercial	500 Year	34	\$282,716
Commercial	750 Year	34	\$564,729
Commercial	1000 Year	34	\$881,853
Commercial	1500 Year	34	\$1,459,670
Commercial	2000 Year	34	\$2,151,193
Commercial	2500 Year	34	\$2,869,389
Government	250 Year	12	\$50,345
Government	500 Year	12	\$267,008
Government	750 Year	12	\$522,804

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	1000 Year	12	\$767,912
Government	1500 Year	12	\$1,352,446
Government	2000 Year	12	\$1,824,089
Government	2500 Year	12	\$2,582,449
Industrial	250 Year	9	\$15,151
Industrial	500 Year	9	\$75,558
Industrial	750 Year	9	\$130,018
Industrial	1000 Year	9	\$180,111
Industrial	1500 Year	9	\$277,560
Industrial	2000 Year	9	\$375,598
Industrial	2500 Year	9	\$494,083
Religious	250 Year	3	\$6,271
Religious	500 Year	3	\$32,748
Religious	750 Year	3	\$62,669
Religious	1000 Year	3	\$91,498
Religious	1500 Year	3	\$155,277
Religious	2000 Year	3	\$209,788
Religious	2500 Year	3	\$271,563
Residential	250 Year	8	\$4,214
Residential	500 Year	8	\$23,119
Residential	750 Year	8	\$50,455
Residential	1000 Year	8	\$78,862
Residential	1500 Year	8	\$147,087
Residential	2000 Year	8	\$195,072
Residential	2500 Year	8	\$261,453

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	250 Year	1	\$12,220
Utilities	500 Year	1	\$32,910
Utilities	750 Year	1	\$57,010
Utilities	1000 Year	1	\$79,380
Utilities	1500 Year	1	\$105,730
Utilities	2000 Year	1	\$153,150
Utilities	2500 Year	1	\$185,390
All Categories	250 Year	67	\$140,721
All Categories	500 Year	67	\$714,059
All Categories	750 Year	67	\$1,387,685
All Categories	1000 Year	67	\$2,079,616
All Categories	1500 Year	67	\$3,497,770
All Categories	2000 Year	67	\$4,908,890
All Categories	2500 Year	67	\$6,664,327

Source: GIS Analysis

Table 4.227: High Potential Loss Properties Exposed to the Earthquake - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	52	\$296,286
Commercial	500 Year	52	\$1,393,591
Commercial	750 Year	52	\$2,666,878
Commercial	1000 Year	52	\$3,885,713
Commercial	1500 Year	52	\$6,676,504
Commercial	2000 Year	52	\$8,877,518
Commercial	2500 Year	52	\$12,336,797
Government	250 Year	14	\$58,651

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	500 Year	14	\$277,450
Government	750 Year	14	\$511,930
Government	1000 Year	14	\$749,969
Government	1500 Year	14	\$1,286,755
Government	2000 Year	14	\$1,824,918
Government	2500 Year	14	\$2,633,313
Industrial	250 Year	19	\$291,250
Industrial	500 Year	19	\$1,248,331
Industrial	750 Year	19	\$2,173,431
Industrial	1000 Year	19	\$2,981,736
Industrial	1500 Year	19	\$4,659,959
Industrial	2000 Year	19	\$5,842,994
Industrial	2500 Year	19	\$7,618,336
Religious	250 Year	8	\$13,732
Religious	500 Year	8	\$78,514
Religious	750 Year	8	\$161,737
Religious	1000 Year	8	\$243,527
Religious	1500 Year	8	\$426,305
Religious	2000 Year	8	\$540,037
Religious	2500 Year	8	\$732,847
Residential	250 Year	29	\$74,598
Residential	500 Year	29	\$459,800
Residential	750 Year	29	\$986,962
Residential	1000 Year	29	\$1,530,390
Residential	1500 Year	29	\$2,770,721

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	2000 Year	29	\$3,563,042
Residential	2500 Year	29	\$4,918,102
Utilities	250 Year	14	\$123,232
Utilities	500 Year	14	\$354,985
Utilities	750 Year	14	\$596,297
Utilities	1000 Year	14	\$820,539
Utilities	1500 Year	14	\$1,147,942
Utilities	2000 Year	14	\$1,600,366
Utilities	2500 Year	14	\$1,913,404
All Categories	250 Year	136	\$857,749
All Categories	500 Year	136	\$3,812,671
All Categories	750 Year	136	\$7,097,235
All Categories	1000 Year	136	\$10,211,874
All Categories	1500 Year	136	\$16,968,186
All Categories	2000 Year	136	\$22,248,875
All Categories	2500 Year	136	\$30,152,799

Source: GIS Analysis

Table 4.228: High Potential Loss Properties Exposed to the Earthquake - Town of Cahah's Mountain

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	3	\$6,018
Commercial	500 Year	3	\$23,681
Commercial	750 Year	3	\$45,845
Commercial	1000 Year	3	\$71,498
Commercial	1500 Year	3	\$146,572
Commercial	2000 Year	3	\$214,957

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	2500 Year	3	\$285,673
Residential	250 Year	1	\$5,376
Residential	500 Year	1	\$29,239
Residential	750 Year	1	\$55,064
Residential	1000 Year	1	\$75,575
Residential	1500 Year	1	\$115,913
Residential	2000 Year	1	\$146,258
Residential	2500 Year	1	\$211,006
All Categories	250 Year	4	\$11,394
All Categories	500 Year	4	\$52,920
All Categories	750 Year	4	\$100,909
All Categories	1000 Year	4	\$147,073
All Categories	1500 Year	4	\$262,485
All Categories	2000 Year	4	\$361,215
All Categories	2500 Year	4	\$496,679

Source: GIS Analysis

Table 4.229: High Potential Loss Properties Exposed to the Earthquake - Town of Gamewell

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	1	\$343
Commercial	500 Year	1	\$2,329
Commercial	750 Year	1	\$5,101
Commercial	1000 Year	1	\$9,026
Commercial	1500 Year	1	\$15,630
Commercial	2000 Year	1	\$26,205
Commercial	2500 Year	1	\$34,406

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	250 Year	2	\$30,255
Government	500 Year	2	\$128,408
Government	750 Year	2	\$212,825
Government	1000 Year	2	\$300,454
Government	1500 Year	2	\$445,964
Government	2000 Year	2	\$633,240
Government	2500 Year	2	\$846,921
Industrial	250 Year	3	\$2,182
Industrial	500 Year	3	\$12,623
Industrial	750 Year	3	\$27,104
Industrial	1000 Year	3	\$45,182
Industrial	1500 Year	3	\$73,177
Industrial	2000 Year	3	\$115,759
Industrial	2500 Year	3	\$147,117
All Categories	250 Year	6	\$32,780
All Categories	500 Year	6	\$143,360
All Categories	750 Year	6	\$245,030
All Categories	1000 Year	6	\$354,662
All Categories	1500 Year	6	\$534,771
All Categories	2000 Year	6	\$775,204
All Categories	2500 Year	6	\$1,028,444

Source: GIS Analysis

Table 4.230: High Potential Loss Properties Exposed to the Earthquake - Town of Granite Falls

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	12	\$49,290

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	500 Year	12	\$260,843
Commercial	750 Year	12	\$482,076
Commercial	1000 Year	12	\$696,628
Commercial	1500 Year	12	\$1,171,908
Commercial	2000 Year	12	\$1,631,830
Commercial	2500 Year	12	\$2,286,403
Government	250 Year	5	\$33,797
Government	500 Year	5	\$134,691
Government	750 Year	5	\$265,486
Government	1000 Year	5	\$402,201
Government	1500 Year	5	\$631,620
Government	2000 Year	5	\$962,726
Government	2500 Year	5	\$1,243,397
Industrial	250 Year	2	\$19,754
Industrial	500 Year	2	\$92,986
Industrial	750 Year	2	\$150,992
Industrial	1000 Year	2	\$194,747
Industrial	1500 Year	2	\$299,606
Industrial	2000 Year	2	\$365,024
Industrial	2500 Year	2	\$515,523
Religious	250 Year	2	\$1,311
Religious	500 Year	2	\$7,558
Religious	750 Year	2	\$16,440
Religious	1000 Year	2	\$24,496
Religious	1500 Year	2	\$44,294

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	2000 Year	2	\$54,633
Religious	2500 Year	2	\$73,245
Residential	250 Year	7	\$4,376
Residential	500 Year	7	\$27,783
Residential	750 Year	7	\$63,331
Residential	1000 Year	7	\$96,271
Residential	1500 Year	7	\$180,219
Residential	2000 Year	7	\$227,625
Residential	2500 Year	7	\$311,429
Utilities	250 Year	9	\$174,078
Utilities	500 Year	9	\$660,480
Utilities	750 Year	9	\$1,281,241
Utilities	1000 Year	9	\$1,839,960
Utilities	1500 Year	9	\$2,907,418
Utilities	2000 Year	9	\$3,627,346
Utilities	2500 Year	9	\$4,509,406
All Categories	250 Year	37	\$282,606
All Categories	500 Year	37	\$1,184,341
All Categories	750 Year	37	\$2,259,566
All Categories	1000 Year	37	\$3,254,303
All Categories	1500 Year	37	\$5,235,065
All Categories	2000 Year	37	\$6,869,184
All Categories	2500 Year	37	\$8,939,403

Source: GIS Analysis

Table 4.231: High Potential Loss Properties Exposed to the Earthquake - Town of Hudson

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	8	\$20,506
Commercial	500 Year	8	\$83,248
Commercial	750 Year	8	\$151,030
Commercial	1000 Year	8	\$213,248
Commercial	1500 Year	8	\$372,010
Commercial	2000 Year	8	\$486,013
Commercial	2500 Year	8	\$664,207
Government	250 Year	9	\$23,826
Government	500 Year	9	\$118,359
Government	750 Year	9	\$219,267
Government	1000 Year	9	\$311,513
Government	1500 Year	9	\$553,745
Government	2000 Year	9	\$719,682
Government	2500 Year	9	\$1,129,746
Industrial	250 Year	7	\$50,616
Industrial	500 Year	7	\$192,502
Industrial	750 Year	7	\$363,958
Industrial	1000 Year	7	\$516,459
Industrial	1500 Year	7	\$817,186
Industrial	2000 Year	7	\$1,026,756
Industrial	2500 Year	7	\$1,286,511
Religious	250 Year	1	\$3,042
Religious	500 Year	1	\$16,473
Religious	750 Year	1	\$34,450

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	1000 Year	1	\$51,248
Religious	1500 Year	1	\$88,699
Religious	2000 Year	1	\$107,119
Religious	2500 Year	1	\$142,005
Residential	250 Year	5	\$5,458
Residential	500 Year	5	\$30,132
Residential	750 Year	5	\$65,025
Residential	1000 Year	5	\$98,667
Residential	1500 Year	5	\$177,026
Residential	2000 Year	5	\$220,141
Residential	2500 Year	5	\$299,700
All Categories	250 Year	30	\$103,448
All Categories	500 Year	30	\$440,714
All Categories	750 Year	30	\$833,730
All Categories	1000 Year	30	\$1,191,135
All Categories	1500 Year	30	\$2,008,666
All Categories	2000 Year	30	\$2,559,711
All Categories	2500 Year	30	\$3,522,169

Source: GIS Analysis

Table 4.232: High Potential Loss Properties Exposed to the Earthquake - Town of Rhodhiss

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	1	\$1,351
Commercial	500 Year	1	\$9,505
Commercial	750 Year	1	\$20,196
Commercial	1000 Year	1	\$34,183

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	1500 Year	1	\$54,747
Commercial	2000 Year	1	\$84,969
Commercial	2500 Year	1	\$105,499
Government	250 Year	1	\$4,144
Government	500 Year	1	\$22,761
Government	750 Year	1	\$47,431
Government	1000 Year	1	\$70,333
Government	1500 Year	1	\$123,253
Government	2000 Year	1	\$149,864
Government	2500 Year	1	\$204,694
Residential	250 Year	1	\$368
Residential	500 Year	1	\$2,640
Residential	750 Year	1	\$6,047
Residential	1000 Year	1	\$9,404
Residential	1500 Year	1	\$17,750
Residential	2000 Year	1	\$22,644
Residential	2500 Year	1	\$31,532
All Categories	250 Year	3	\$5,863
All Categories	500 Year	3	\$34,906
All Categories	750 Year	3	\$73,674
All Categories	1000 Year	3	\$113,920
All Categories	1500 Year	3	\$195,750
All Categories	2000 Year	3	\$257,477
All Categories	2500 Year	3	\$341,725

Source: GIS Analysis

Table 4.233: High Potential Loss Properties Exposed to the Earthquake - Town of Sawmills

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	8	\$10,075
Commercial	500 Year	8	\$55,234
Commercial	750 Year	8	\$111,266
Commercial	1000 Year	8	\$173,604
Commercial	1500 Year	8	\$285,116
Commercial	2000 Year	8	\$419,026
Commercial	2500 Year	8	\$561,622
Government	250 Year	2	\$7,100
Government	500 Year	2	\$37,969
Government	750 Year	2	\$74,209
Government	1000 Year	2	\$110,913
Government	1500 Year	2	\$195,428
Government	2000 Year	2	\$273,047
Government	2500 Year	2	\$397,351
Industrial	250 Year	2	\$2,013
Industrial	500 Year	2	\$8,779
Industrial	750 Year	2	\$15,330
Industrial	1000 Year	2	\$22,328
Industrial	1500 Year	2	\$38,841
Industrial	2000 Year	2	\$54,090
Industrial	2500 Year	2	\$74,438
Residential	250 Year	1	\$196
Residential	500 Year	1	\$1,415
Residential	750 Year	1	\$3,186

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	1000 Year	1	\$5,031
Residential	1500 Year	1	\$9,353
Residential	2000 Year	1	\$12,014
Residential	2500 Year	1	\$16,685
All Categories	250 Year	13	\$19,384
All Categories	500 Year	13	\$103,397
All Categories	750 Year	13	\$203,991
All Categories	1000 Year	13	\$311,876
All Categories	1500 Year	13	\$528,738
All Categories	2000 Year	13	\$758,177
All Categories	2500 Year	13	\$1,050,096

Source: GIS Analysis

Table 4.234: High Potential Loss Properties Exposed to the Earthquake - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	41	\$50,278
Commercial	500 Year	41	\$259,399
Commercial	750 Year	41	\$542,335
Commercial	1000 Year	41	\$816,761
Commercial	1500 Year	41	\$1,401,566
Commercial	2000 Year	41	\$1,919,356
Commercial	2500 Year	41	\$2,639,572
Government	250 Year	22	\$140,742
Government	500 Year	22	\$719,606
Government	750 Year	22	\$1,454,188

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	1000 Year	22	\$2,215,823
Government	1500 Year	22	\$3,710,071
Government	2000 Year	22	\$5,482,981
Government	2500 Year	22	\$7,628,714
Industrial	250 Year	8	\$97,726
Industrial	500 Year	8	\$519,109
Industrial	750 Year	8	\$907,797
Industrial	1000 Year	8	\$1,157,869
Industrial	1500 Year	8	\$1,815,951
Industrial	2000 Year	8	\$2,258,953
Industrial	2500 Year	8	\$3,070,929
Religious	250 Year	4	\$1,577
Religious	500 Year	4	\$9,211
Religious	750 Year	4	\$19,342
Religious	1000 Year	4	\$27,782
Religious	1500 Year	4	\$48,139
Religious	2000 Year	4	\$61,311
Religious	2500 Year	4	\$86,458
Residential	250 Year	20	\$4,830
Residential	500 Year	20	\$31,865
Residential	750 Year	20	\$75,474
Residential	1000 Year	20	\$114,299
Residential	1500 Year	20	\$217,784
Residential	2000 Year	20	\$281,389
Residential	2500 Year	20	\$381,836

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	250 Year	24	\$742,148
Utilities	500 Year	24	\$2,042,062
Utilities	750 Year	24	\$3,778,801
Utilities	1000 Year	24	\$5,281,755
Utilities	1500 Year	24	\$7,366,079
Utilities	2000 Year	24	\$10,416,187
Utilities	2500 Year	24	\$12,446,701
All Categories	250 Year	119	\$1,037,301
All Categories	500 Year	119	\$3,581,252
All Categories	750 Year	119	\$6,777,937
All Categories	1000 Year	119	\$9,614,289
All Categories	1500 Year	119	\$14,559,590
All Categories	2000 Year	119	\$20,420,177
All Categories	2500 Year	119	\$26,254,210

Source: GIS Analysis

Table 4.235: High Potential Loss Properties Exposed to the Earthquake - City of Claremont

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	10	\$51,411
Commercial	500 Year	10	\$219,816
Commercial	750 Year	10	\$404,667
Commercial	1000 Year	10	\$559,006
Commercial	1500 Year	10	\$1,052,546
Commercial	2000 Year	10	\$1,466,525
Commercial	2500 Year	10	\$2,239,252
Government	250 Year	2	\$4,428

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	500 Year	2	\$23,759
Government	750 Year	2	\$51,124
Government	1000 Year	2	\$71,191
Government	1500 Year	2	\$130,201
Government	2000 Year	2	\$162,166
Government	2500 Year	2	\$216,566
Industrial	250 Year	12	\$272,073
Industrial	500 Year	12	\$970,759
Industrial	750 Year	12	\$1,654,543
Industrial	1000 Year	12	\$2,109,214
Industrial	1500 Year	12	\$3,369,750
Industrial	2000 Year	12	\$4,164,680
Industrial	2500 Year	12	\$5,356,740
All Categories	250 Year	24	\$327,912
All Categories	500 Year	24	\$1,214,334
All Categories	750 Year	24	\$2,110,334
All Categories	1000 Year	24	\$2,739,411
All Categories	1500 Year	24	\$4,552,497
All Categories	2000 Year	24	\$5,793,371
All Categories	2500 Year	24	\$7,812,558

Source: GIS Analysis

Table 4.236: High Potential Loss Properties Exposed to the Earthquake - City of Conover

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	35	\$121,559
Commercial	500 Year	35	\$522,557

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	750 Year	35	\$999,244
Commercial	1000 Year	35	\$1,411,639
Commercial	1500 Year	35	\$2,471,447
Commercial	2000 Year	35	\$3,402,642
Commercial	2500 Year	35	\$4,822,642
Government	250 Year	5	\$14,332
Government	500 Year	5	\$104,261
Government	750 Year	5	\$214,924
Government	1000 Year	5	\$347,406
Government	1500 Year	5	\$560,823
Government	2000 Year	5	\$846,917
Government	2500 Year	5	\$1,135,251
Industrial	250 Year	23	\$370,953
Industrial	500 Year	23	\$1,343,953
Industrial	750 Year	23	\$2,310,561
Industrial	1000 Year	23	\$3,006,269
Industrial	1500 Year	23	\$4,752,248
Industrial	2000 Year	23	\$5,908,734
Industrial	2500 Year	23	\$7,637,850
Residential	250 Year	6	\$3,215
Residential	500 Year	6	\$21,876
Residential	750 Year	6	\$52,551
Residential	1000 Year	6	\$77,943
Residential	1500 Year	6	\$151,893
Residential	2000 Year	6	\$195,586

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	2500 Year	6	\$264,832
Utilities	250 Year	6	\$63,569
Utilities	500 Year	6	\$175,977
Utilities	750 Year	6	\$319,075
Utilities	1000 Year	6	\$448,093
Utilities	1500 Year	6	\$614,308
Utilities	2000 Year	6	\$881,429
Utilities	2500 Year	6	\$1,063,212
All Categories	250 Year	75	\$573,628
All Categories	500 Year	75	\$2,168,624
All Categories	750 Year	75	\$3,896,355
All Categories	1000 Year	75	\$5,291,350
All Categories	1500 Year	75	\$8,550,719
All Categories	2000 Year	75	\$11,235,308
All Categories	2500 Year	75	\$14,923,787

Source: GIS Analysis

Table 4.237: High Potential Loss Properties Exposed to the Earthquake - City of Hickory

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	207	\$634,669
Commercial	500 Year	207	\$2,920,531
Commercial	750 Year	207	\$5,619,420
Commercial	1000 Year	207	\$8,141,657
Commercial	1500 Year	207	\$14,208,034
Commercial	2000 Year	207	\$19,630,286
Commercial	2500 Year	207	\$27,583,954

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	250 Year	35	\$97,621
Government	500 Year	35	\$463,487
Government	750 Year	35	\$925,142
Government	1000 Year	35	\$1,377,134
Government	1500 Year	35	\$2,436,759
Government	2000 Year	35	\$3,456,490
Government	2500 Year	35	\$5,009,705
Industrial	250 Year	33	\$339,300
Industrial	500 Year	33	\$1,461,483
Industrial	750 Year	33	\$2,685,541
Industrial	1000 Year	33	\$3,615,248
Industrial	1500 Year	33	\$6,000,674
Industrial	2000 Year	33	\$7,463,015
Industrial	2500 Year	33	\$10,060,646
Religious	250 Year	4	\$17,487
Religious	500 Year	4	\$83,246
Religious	750 Year	4	\$157,731
Religious	1000 Year	4	\$221,823
Religious	1500 Year	4	\$355,682
Religious	2000 Year	4	\$463,280
Religious	2500 Year	4	\$621,149
Residential	250 Year	40	\$50,123
Residential	500 Year	40	\$260,068
Residential	750 Year	40	\$555,076
Residential	1000 Year	40	\$828,086

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	1500 Year	40	\$1,562,536
Residential	2000 Year	40	\$2,023,759
Residential	2500 Year	40	\$2,791,354
Utilities	250 Year	26	\$196,174
Utilities	500 Year	26	\$540,160
Utilities	750 Year	26	\$951,662
Utilities	1000 Year	26	\$1,315,440
Utilities	1500 Year	26	\$1,810,196
Utilities	2000 Year	26	\$2,562,164
Utilities	2500 Year	26	\$3,064,438
All Categories	250 Year	345	\$1,335,374
All Categories	500 Year	345	\$5,728,975
All Categories	750 Year	345	\$10,894,572
All Categories	1000 Year	345	\$15,499,388
All Categories	1500 Year	345	\$26,373,881
All Categories	2000 Year	345	\$35,598,994
All Categories	2500 Year	345	\$49,131,246

Source: GIS Analysis

Table 4.238: High Potential Loss Properties Exposed to the Earthquake - City of Newton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	26	\$150,907
Commercial	500 Year	26	\$763,606
Commercial	750 Year	26	\$1,375,022
Commercial	1000 Year	26	\$1,930,404
Commercial	1500 Year	26	\$3,448,139

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	2000 Year	26	\$4,557,582
Commercial	2500 Year	26	\$7,161,231
Government	250 Year	9	\$34,929
Government	500 Year	9	\$157,944
Government	750 Year	9	\$343,582
Government	1000 Year	9	\$547,721
Government	1500 Year	9	\$969,502
Government	2000 Year	9	\$1,471,004
Government	2500 Year	9	\$1,946,435
Industrial	250 Year	17	\$270,619
Industrial	500 Year	17	\$1,007,081
Industrial	750 Year	17	\$1,640,546
Industrial	1000 Year	17	\$2,090,341
Industrial	1500 Year	17	\$3,294,021
Industrial	2000 Year	17	\$4,113,762
Industrial	2500 Year	17	\$5,482,119
Religious	250 Year	1	\$811
Religious	500 Year	1	\$4,441
Religious	750 Year	1	\$9,745
Religious	1000 Year	1	\$14,286
Religious	1500 Year	1	\$25,277
Religious	2000 Year	1	\$30,429
Religious	2500 Year	1	\$39,561
Residential	250 Year	3	\$2,005
Residential	500 Year	3	\$11,074

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	750 Year	3	\$24,880
Residential	1000 Year	3	\$36,694
Residential	1500 Year	3	\$65,646
Residential	2000 Year	3	\$80,276
Residential	2500 Year	3	\$106,886
Utilities	250 Year	10	\$96,480
Utilities	500 Year	10	\$268,880
Utilities	750 Year	10	\$476,560
Utilities	1000 Year	10	\$657,920
Utilities	1500 Year	10	\$917,600
Utilities	2000 Year	10	\$1,288,720
Utilities	2500 Year	10	\$1,534,720
All Categories	250 Year	66	\$555,751
All Categories	500 Year	66	\$2,213,026
All Categories	750 Year	66	\$3,870,335
All Categories	1000 Year	66	\$5,277,366
All Categories	1500 Year	66	\$8,720,185
All Categories	2000 Year	66	\$11,541,773
All Categories	2500 Year	66	\$16,270,952

Source: GIS Analysis

Table 4.239: High Potential Loss Properties Exposed to the Earthquake - Town of Catawba

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	1	\$13,925
Commercial	500 Year	1	\$45,819
Commercial	750 Year	1	\$101,639

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	1000 Year	1	\$159,251
Commercial	1500 Year	1	\$235,271
Commercial	2000 Year	1	\$372,151
Commercial	2500 Year	1	\$471,758
Government	250 Year	2	\$7,982
Government	500 Year	2	\$57,124
Government	750 Year	2	\$104,375
Government	1000 Year	2	\$163,776
Government	1500 Year	2	\$255,089
Government	2000 Year	2	\$400,727
Government	2500 Year	2	\$531,235
All Categories	250 Year	3	\$21,907
All Categories	500 Year	3	\$102,943
All Categories	750 Year	3	\$206,014
All Categories	1000 Year	3	\$323,027
All Categories	1500 Year	3	\$490,360
All Categories	2000 Year	3	\$772,878
All Categories	2500 Year	3	\$1,002,993

Source: GIS Analysis

Table 4.240: High Potential Loss Properties Exposed to the Earthquake - Town of Long View

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	5	\$16,101
Commercial	500 Year	5	\$87,561
Commercial	750 Year	5	\$169,387
Commercial	1000 Year	5	\$253,329

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	1500 Year	5	\$424,112
Commercial	2000 Year	5	\$603,599
Commercial	2500 Year	5	\$847,973
Government	250 Year	2	\$6,074
Government	500 Year	2	\$46,608
Government	750 Year	2	\$105,816
Government	1000 Year	2	\$182,739
Government	1500 Year	2	\$317,820
Government	2000 Year	2	\$495,953
Government	2500 Year	2	\$643,977
Industrial	250 Year	2	\$14,527
Industrial	500 Year	2	\$58,279
Industrial	750 Year	2	\$96,558
Industrial	1000 Year	2	\$130,918
Industrial	1500 Year	2	\$231,652
Industrial	2000 Year	2	\$306,933
Industrial	2500 Year	2	\$449,944
Residential	250 Year	1	\$298
Residential	500 Year	1	\$2,142
Residential	750 Year	1	\$4,962
Residential	1000 Year	1	\$7,685
Residential	1500 Year	1	\$14,550
Residential	2000 Year	1	\$18,587
Residential	2500 Year	1	\$25,694
All Categories	250 Year	10	\$37,000

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	500 Year	10	\$194,590
All Categories	750 Year	10	\$376,723
All Categories	1000 Year	10	\$574,671
All Categories	1500 Year	10	\$988,134
All Categories	2000 Year	10	\$1,425,072
All Categories	2500 Year	10	\$1,967,588

Source: GIS Analysis

Table 4.241: High Potential Loss Properties Exposed to the Earthquake - Town of Maiden

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	250 Year	7	\$12,272
Commercial	500 Year	7	\$65,872
Commercial	750 Year	7	\$133,206
Commercial	1000 Year	7	\$187,404
Commercial	1500 Year	7	\$308,613
Commercial	2000 Year	7	\$390,646
Commercial	2500 Year	7	\$558,331
Government	250 Year	4	\$19,324
Government	500 Year	4	\$96,444
Government	750 Year	4	\$174,735
Government	1000 Year	4	\$240,927
Government	1500 Year	4	\$433,373
Government	2000 Year	4	\$575,392
Government	2500 Year	4	\$935,781
Industrial	250 Year	7	\$145,245
Industrial	500 Year	7	\$726,112

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	750 Year	7	\$1,405,632
Industrial	1000 Year	7	\$1,978,047
Industrial	1500 Year	7	\$3,273,707
Industrial	2000 Year	7	\$3,919,381
Industrial	2500 Year	7	\$5,141,981
Utilities	250 Year	7	\$155,782
Utilities	500 Year	7	\$441,817
Utilities	750 Year	7	\$779,482
Utilities	1000 Year	7	\$1,072,722
Utilities	1500 Year	7	\$1,518,100
Utilities	2000 Year	7	\$2,113,044
Utilities	2500 Year	7	\$2,503,331
All Categories	250 Year	25	\$332,623
All Categories	500 Year	25	\$1,330,245
All Categories	750 Year	25	\$2,493,055
All Categories	1000 Year	25	\$3,479,100
All Categories	1500 Year	25	\$5,533,793
All Categories	2000 Year	25	\$6,998,463
All Categories	2500 Year	25	\$9,139,424

Source: GIS Analysis

4.5.6 Landslide

A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation, which is driven by gravity. Landslides may be triggered by both natural and human-caused changes in the environment, including heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, volcanic eruptions, and changes in groundwater levels.

There are several types of landslides: rock falls, rock topple, slides, and flows. Rock falls are rapid movements of bedrock, which result in bouncing or rolling. A topple is a section or block of rock that rotates or tilts before falling to the slope below. Slides are movements of soil or rock along a distinct

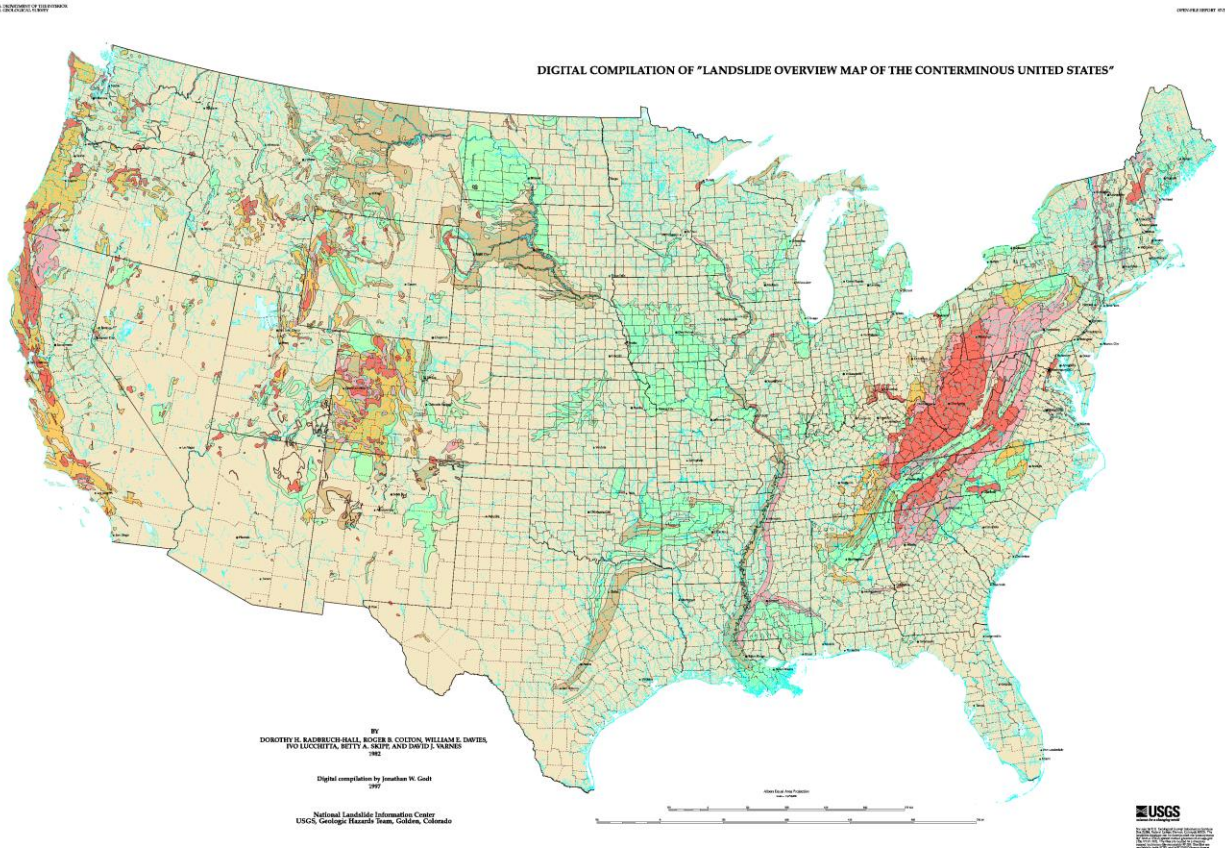
surface of rupture, which separates the slide material from the more stable underlying material. Mudflows, sometimes referred to as mudslides, mudflows, lahars or debris avalanches, are fast-moving rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as heavy rainfall or rapid snow melt, changing the soil into a flowing river of mud or 'slurry.' Slurry can flow rapidly down slopes or through channels, and can strike with little or no warning at avalanche speeds. Slurry can travel several miles from its source, growing in size as it picks up trees, cars, and other materials along the way. As the flows reach flatter ground, the mudflow spreads over a broad area where it can accumulate in thick deposits.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides. Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range of California, Oregon and Washington are at risk from the same types of flows during future volcanic eruptions.

Areas that are generally prone to landslide hazards include previous landslide areas; the bases of steep slopes; the bases of drainage channels; and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past; relatively flat-lying areas away from sudden changes in slope; and areas at the top or along ridges, set back from the tops of slopes.

In the United States, it is estimated that landslides cause up to \$2 billion in damages and from 25 to 50 death(s) annually. Globally, landslides cause billions of dollars in damage and thousands of death(s) and injuries each year. **Figure 4.60** delineates areas where large numbers of landslides have occurred and areas which are susceptible to landslides in the conterminous United States. This map layer is provided in the U.S. Geological Survey Professional Paper 1183, Landslide Overview Map of the Conterminous United States, available online at http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html

Figure 4.60: Landslide Overview Map of the Conterminous United States



Source: United States Geological Survey

EXPLANATION

LANDSLIDE INCIDENCE

- Low (less than 1.5% of area involved)
- Moderate (1.5%-15% of area involved)
- High (greater than 15% of area involved)

LANDSLIDE SUSCEPTIBILITY/INCIDENCE

- Moderate susceptibility/low incidence
- High susceptibility/low incidence
- High susceptibility/moderate incidence

Susceptibility not indicated where same or lower than incidence. Susceptibility to landsliding was defined as the probable degree of response of [the area] rocks and soils to natural or artificial cutting or loading of slopes, or to anomalously high precipitation. High, moderate, and low susceptibility are delimited by the same percentages used in classifying the incidence of landsliding. Some generalization was necessary at this scale, and several small areas of high incidence and susceptibility were slightly exaggerated.

Source: United States Geological Survey

Landslide Hazard Analysis

Location within the Planning Area

The below figures show information developed by the United States Geological Survey (USGS) which depicts areas of landslide incidence and susceptibility. This information suggests that there is some significant potential risk that is not supported by any historical data or detailed landslide hazard mapping presently available for the planning area. In addition, the figures show slope and average annual precipitation data for the plan area.

Figure 4.61: Landslide Hazard Areas

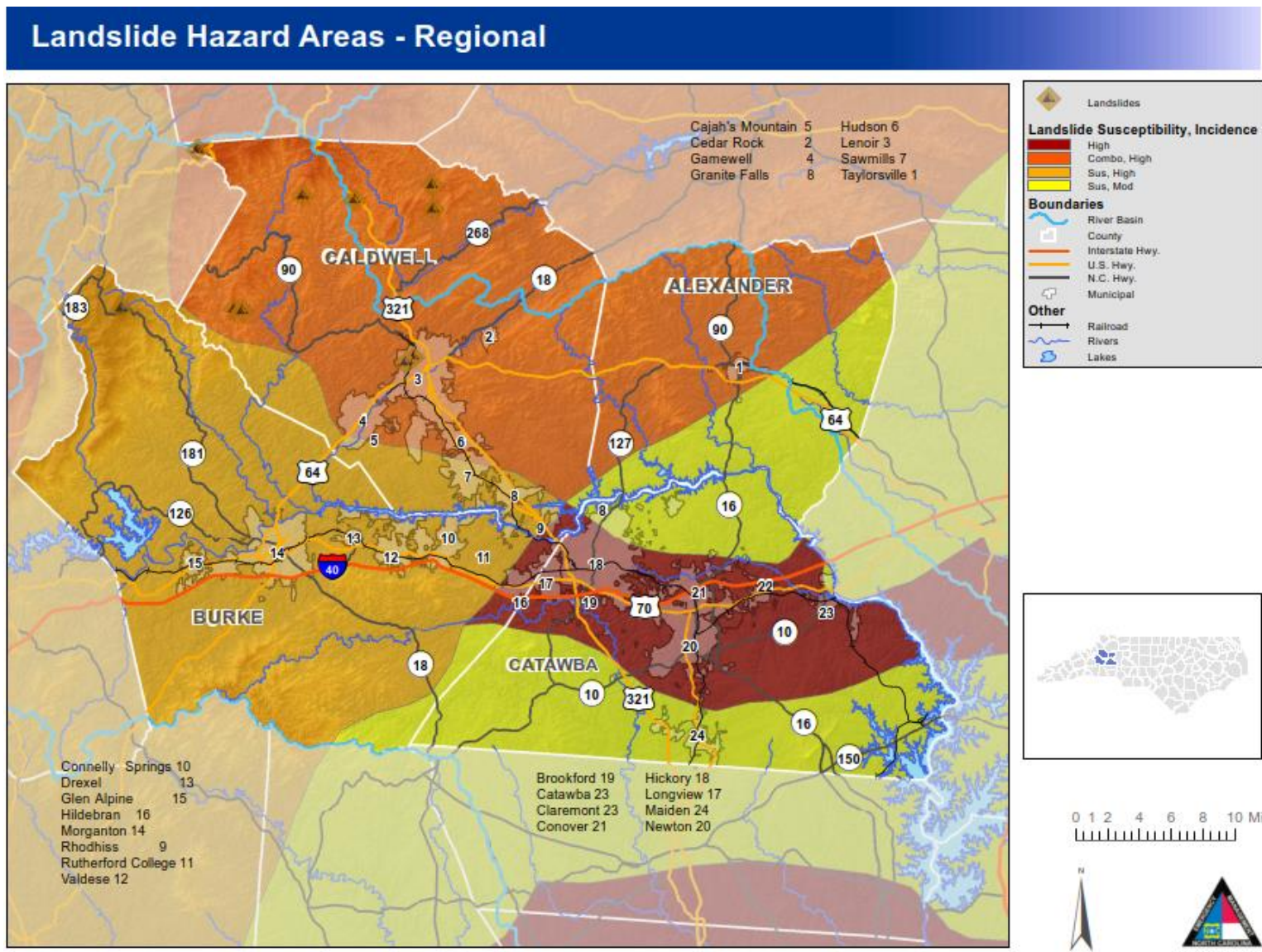


Figure 4.62: Landslide Hazard Areas

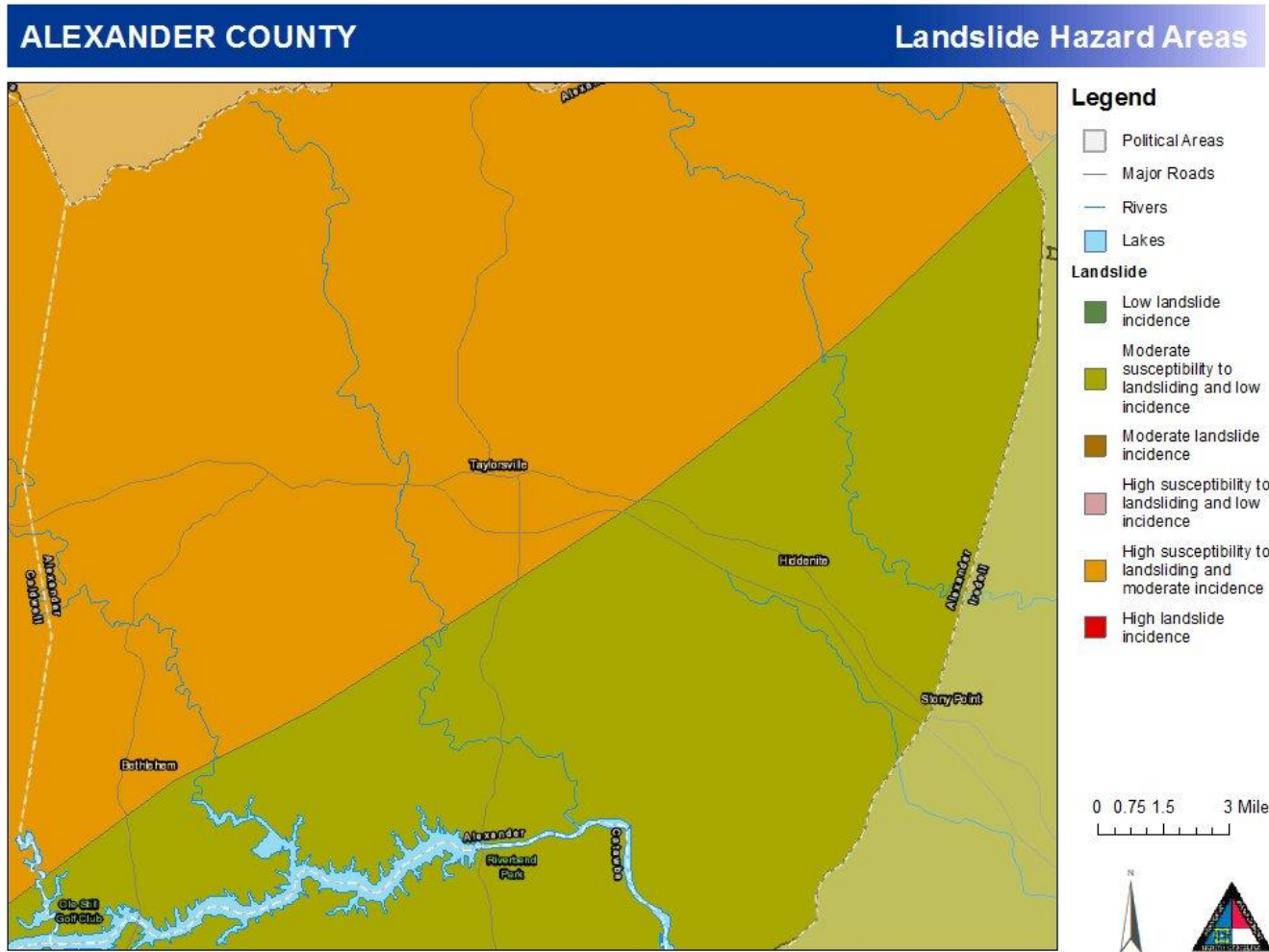


Figure 4.63: Landslide Hazard Areas

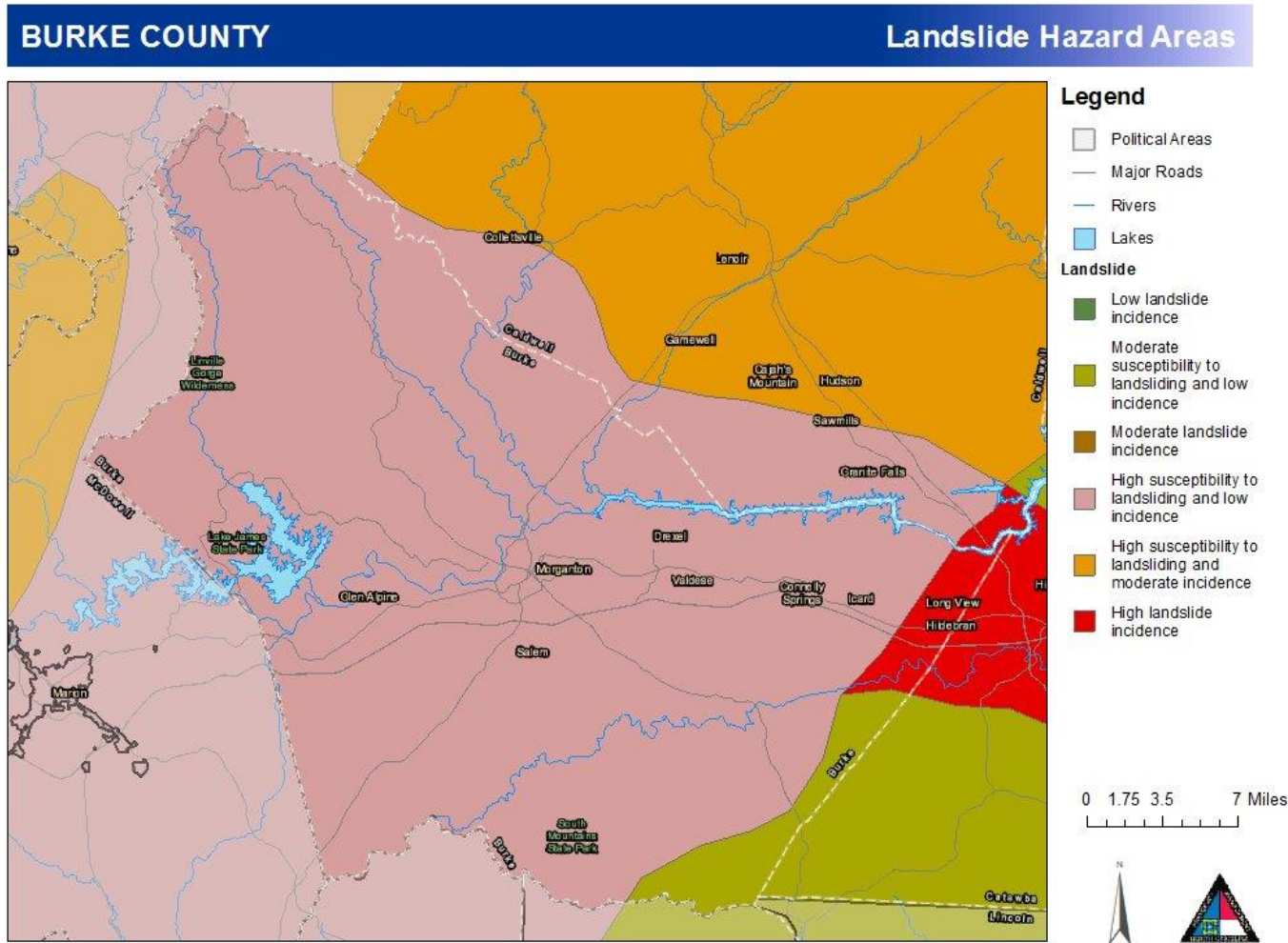


Figure 4.64: Landslide Hazard Areas

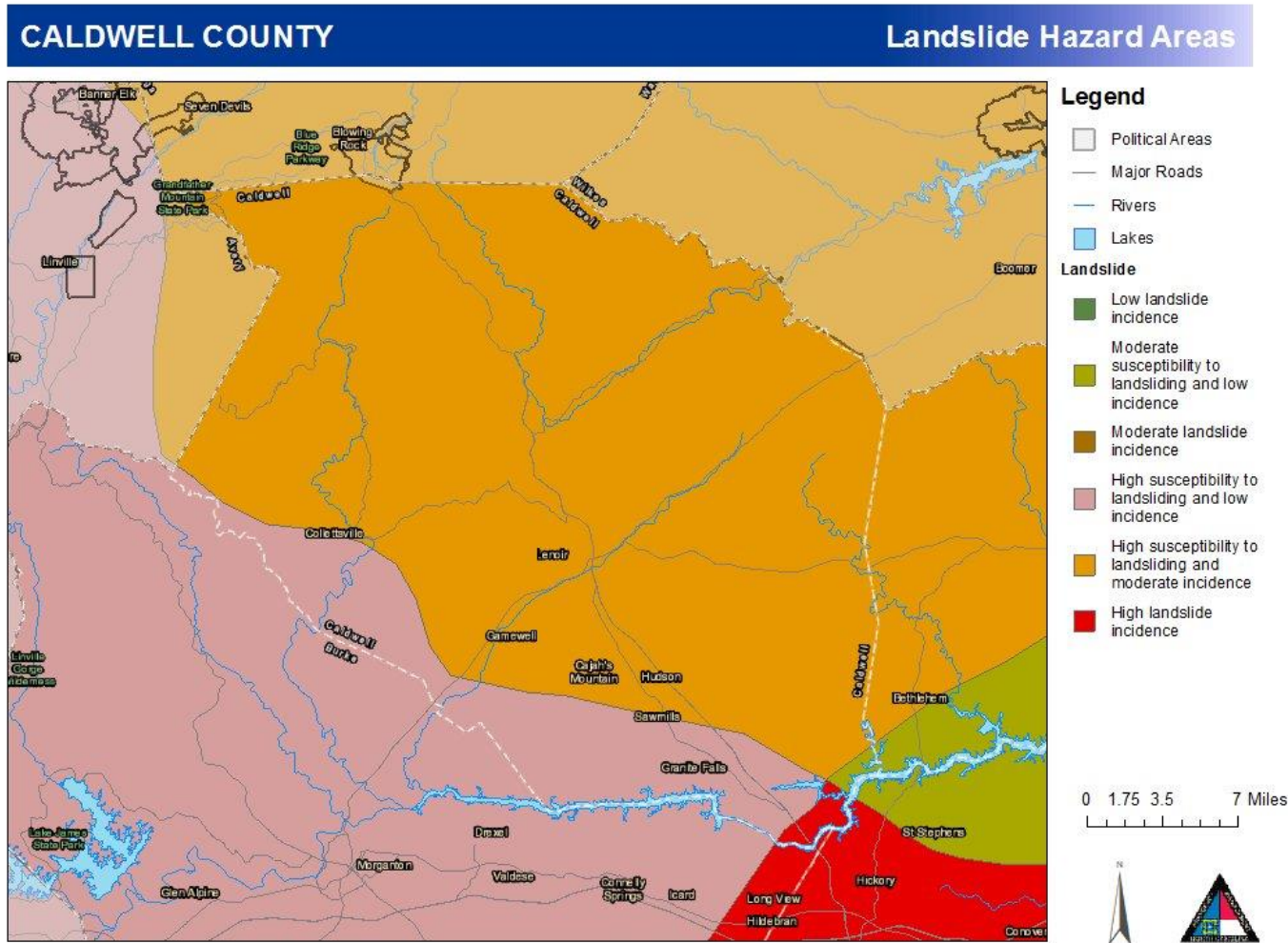
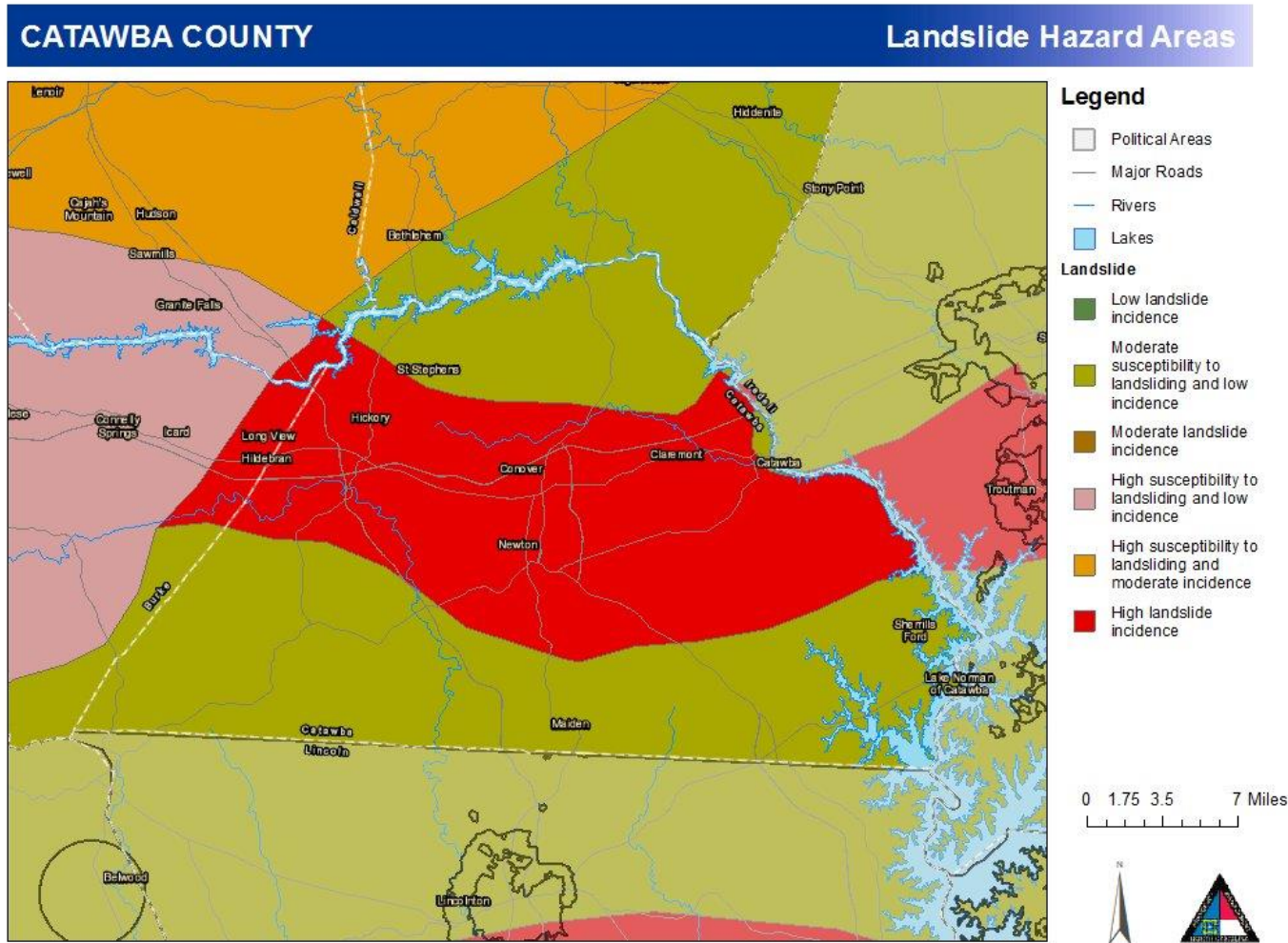


Figure 4.65: Landslide Hazard Areas



Extent (Magnitude and Severity)

Definition:

Landslide data is provided from United States Geological Survey (USGS).

Extent Event:

The magnitude and severity of landslides can vary greatly depending on terrain and other highly localized factors. There were four anecdotal reported landslides in the Unifour Region, however there is no data available on the severity of these landslides as they were provided by local knowledge through the Hazard Mitigation Planning Committee. Mitigation strategy regarding landslide identification and mapping will be considered in future mitigation actions for the Unifour Region.

Historical Occurrences

Table 4.242 shows historical occurrences of landslides in the planning area.

Table 4.242: Historical Occurrences of Landslide (2003 to 2019)

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Caldwell								
Caldwell County (Unincorporated Area)	04/11/03	Standard	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	09/01/04	Standard	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	06/01/05	Standard	0	0	\$0	\$0	\$0	\$0
Caldwell County (Unincorporated Area)	07/01/13	Standard	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	4 Events		0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4 Events		0	0	\$0	\$0	\$0	\$0

Source: Anecdotal data provided by the HMPC.

Table 4.243 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.243: Summary of Historical Landslide Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Caldwell							
Caldwell County (Unincorporated Area)	4	0	0	\$0	\$0	\$0	\$0

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Subtotal Caldwell	4	0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4	0	0	\$0	\$0	\$0	\$0

Source: Anecdotal data provided by the HMPC.

Probability of Future Occurrences

The probability of future Landslide is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	High
City of Claremont	High
City of Conover	High
City of Hickory	High
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	High
Town of Brookford	Medium
Town of Cahaj's Mountain	Medium
Town of Catawba	High
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium
Town of Hildebran	High
Town of Hudson	Medium
Town of Long View	High
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium

Jurisdiction	Probability of Future Occurrence
Town of Sawmills	Medium
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Landslide Hazard Vulnerability

Sufficient hazard information is not currently available with which to conduct a detailed vulnerability assessment. In addition, any specific vulnerability of individual assets would depend on individual design, building characteristics, and any existing mitigation measures currently in place. Such site-specific vulnerability determinations are outside the scope of this risk assessment but may be considered during future plan updates. Mitigation strategy regarding landslide identification and mapping will be considered in future mitigation actions for the Region.

4.5.7 Snow

A winter storm can range from a moderate snow over a period of a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Some winter storms may be large enough to affect several states, while others may affect only a single community. Many winter storms are accompanied by low temperatures and heavy and/or blowing snow, which can severely impair visibility.

Snow Hazard Analysis

In general, winter weather events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation, all of which may create locally hazardous conditions regardless of the magnitude of the overall event. Blizzards, the most dangerous of all winter storms, combine heavy snowfall, low temperatures, and winds of at least 35 mph, reducing visibility to only a few yards. Blizzards have been reported in a number of counties in western North Carolina.

Location within the Planning Area

Winter weather, including blizzards, frosts/freezes, heavy snow and sleet, are widespread atmospheric conditions that are not isolated to a specific geographic location. Therefore it is assumed that the entire planning area is exposed to this hazard. However, it is possible to map average annual snowfall and greatest one-day snowfall as an indicator of where severe conditions have been observed historically in the plan Area.

Figure 4.66: Snow Hazard Areas

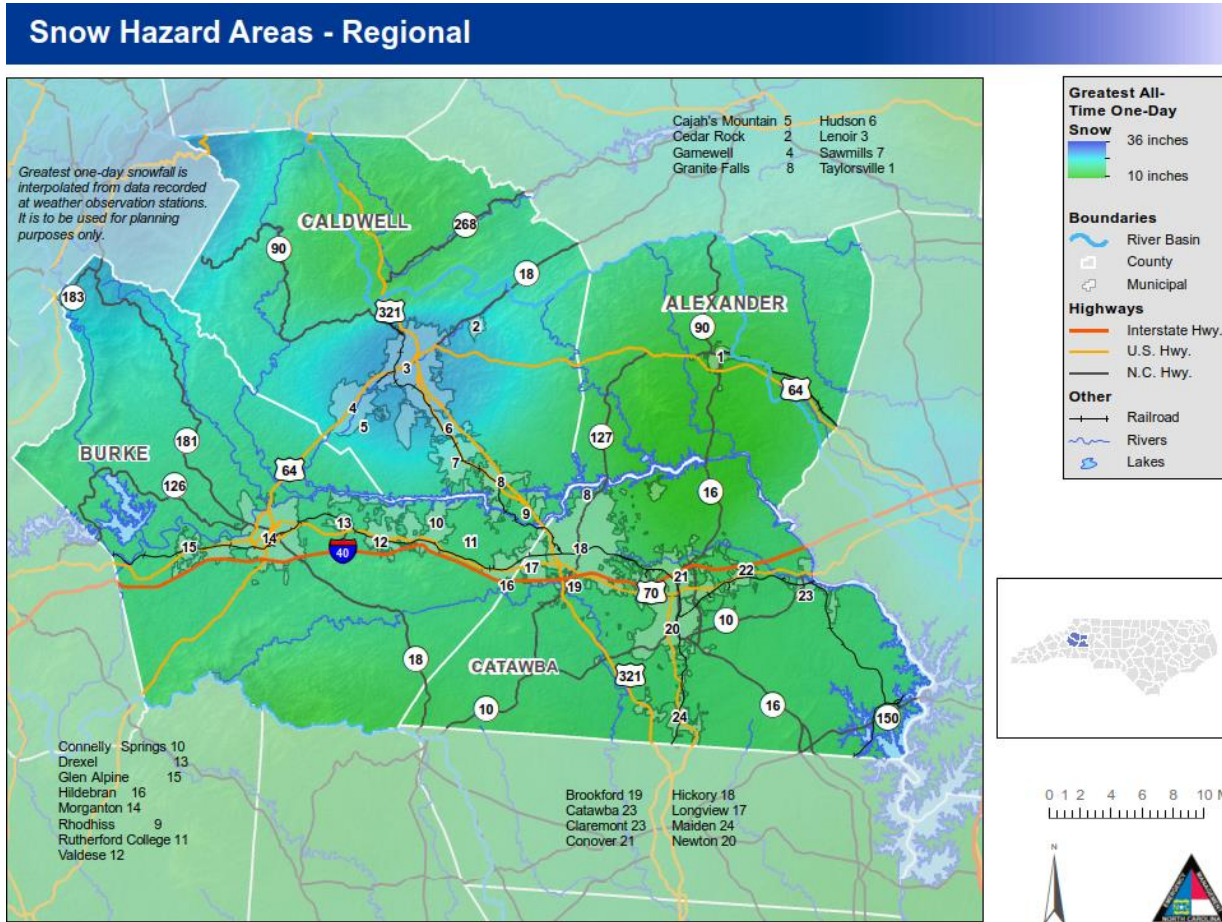


Figure 4.67: Snow Hazard Areas

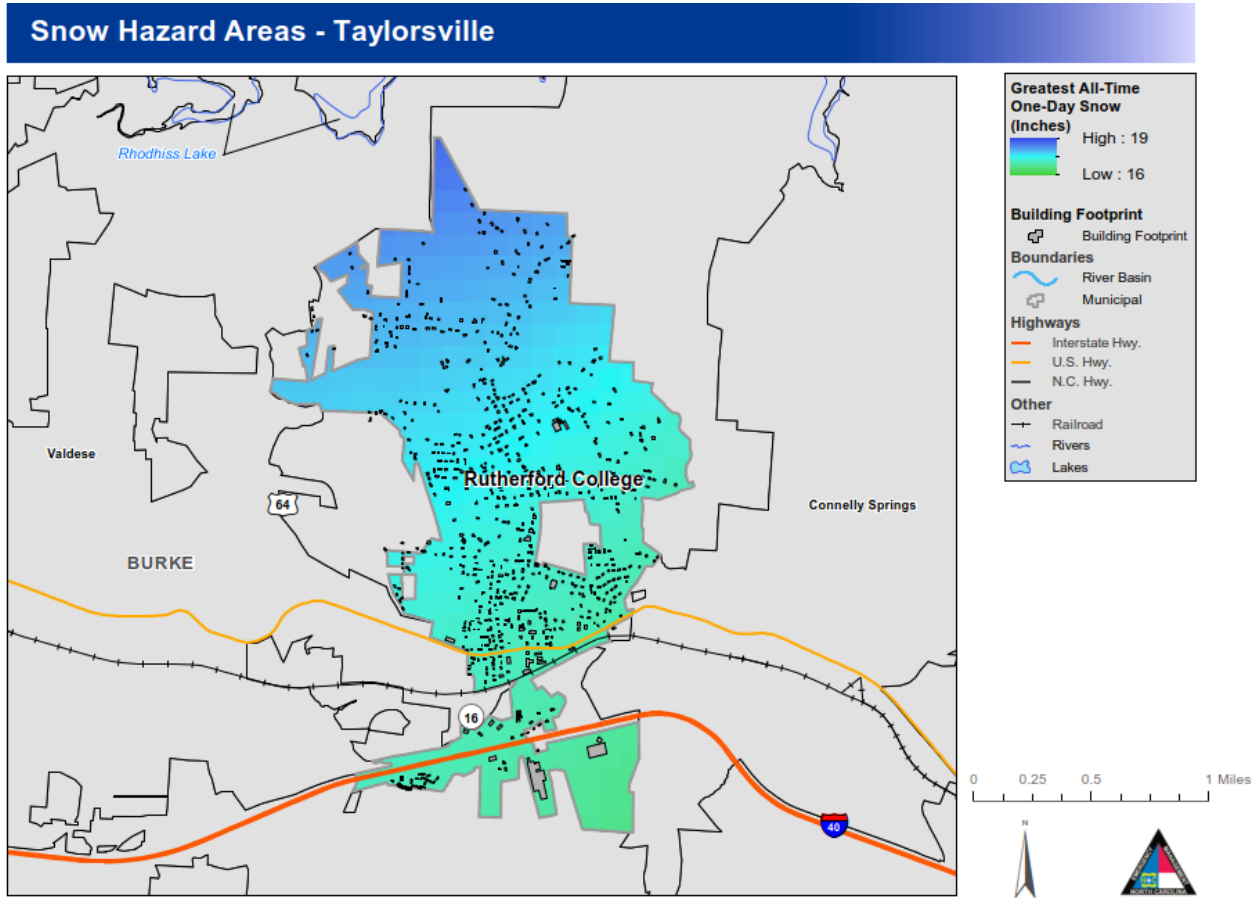


Figure 4.68: Snow Hazard Areas

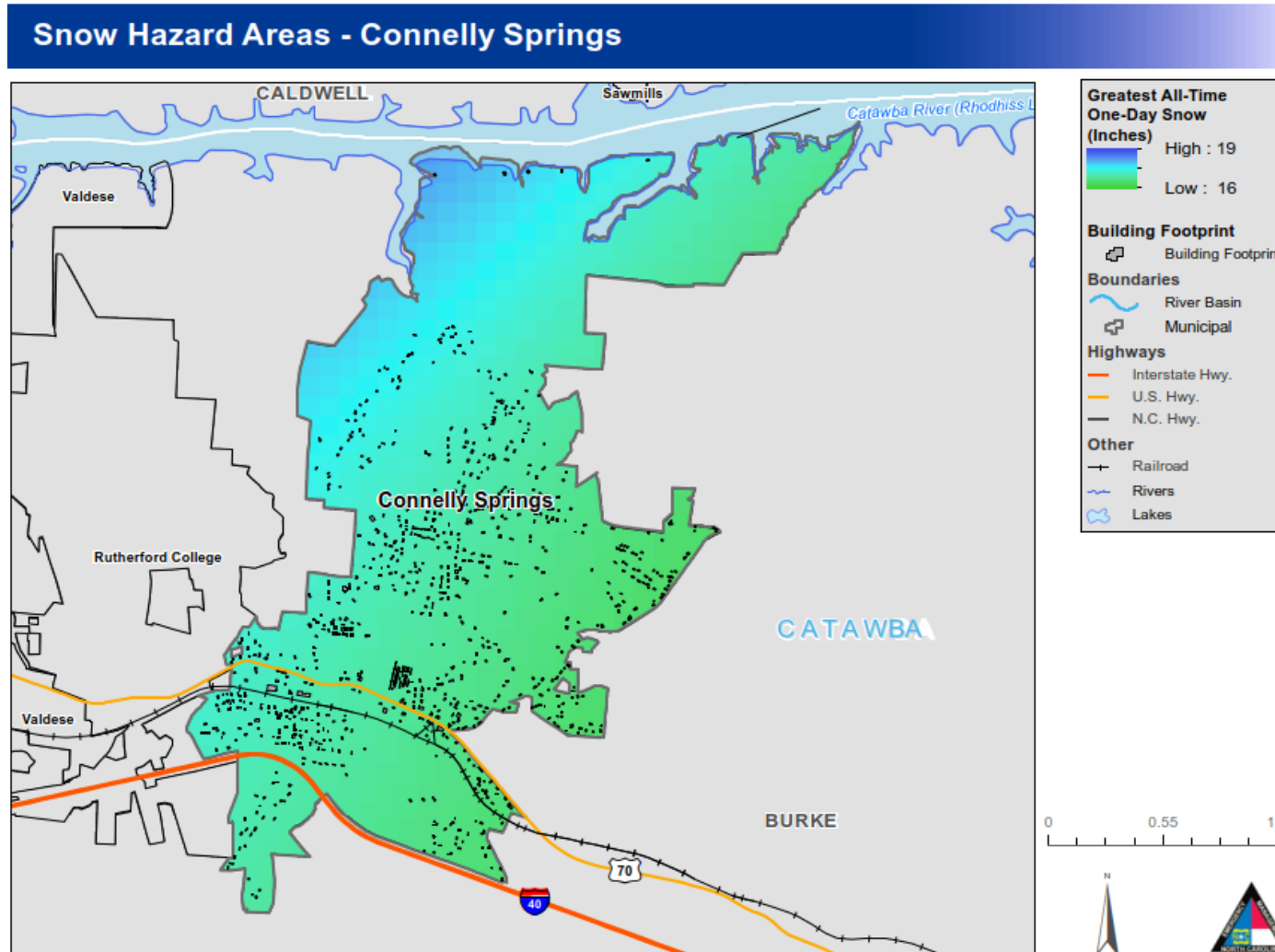


Figure 4.69: Snow Hazard Areas

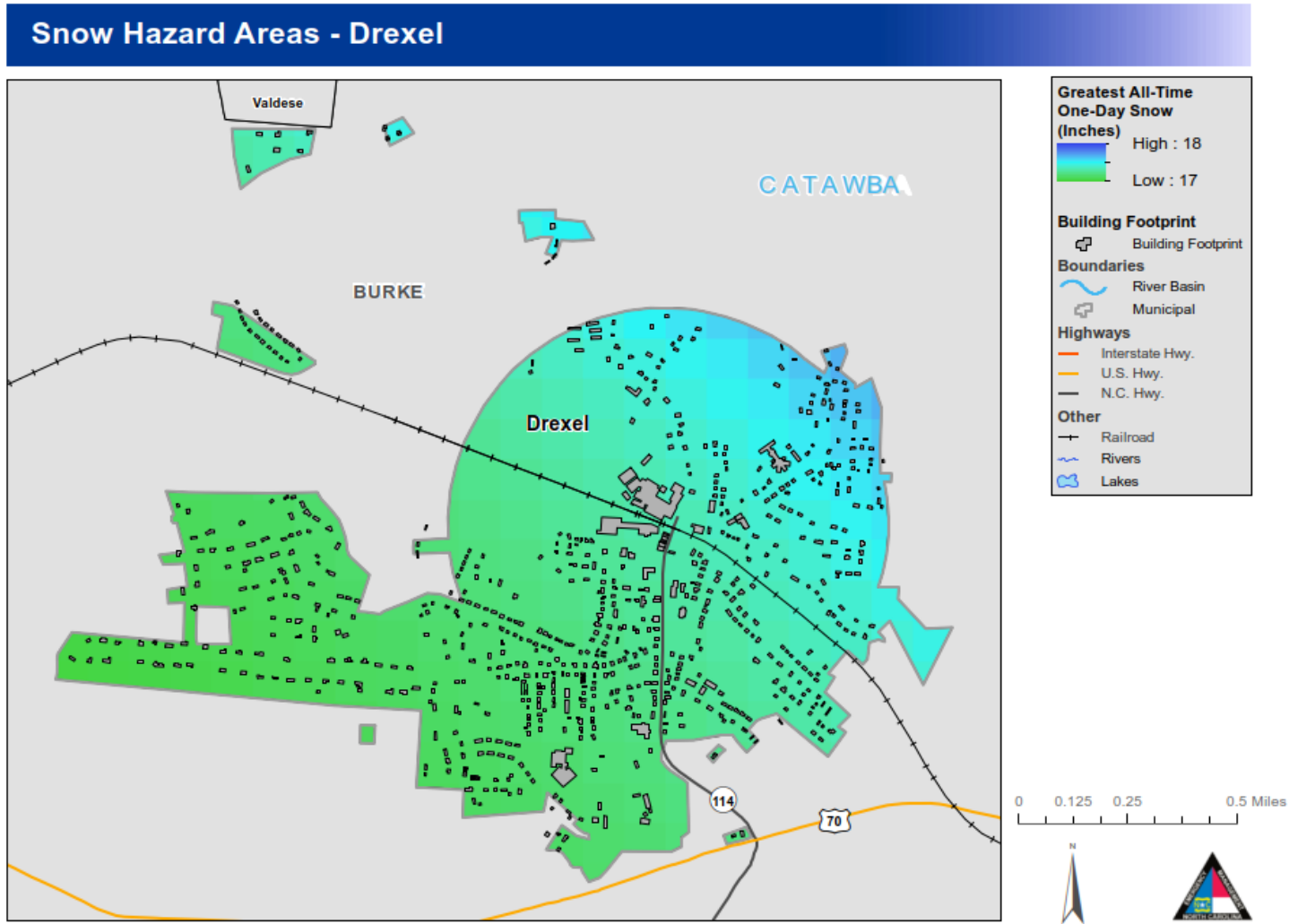


Figure 4.70: Snow Hazard Areas

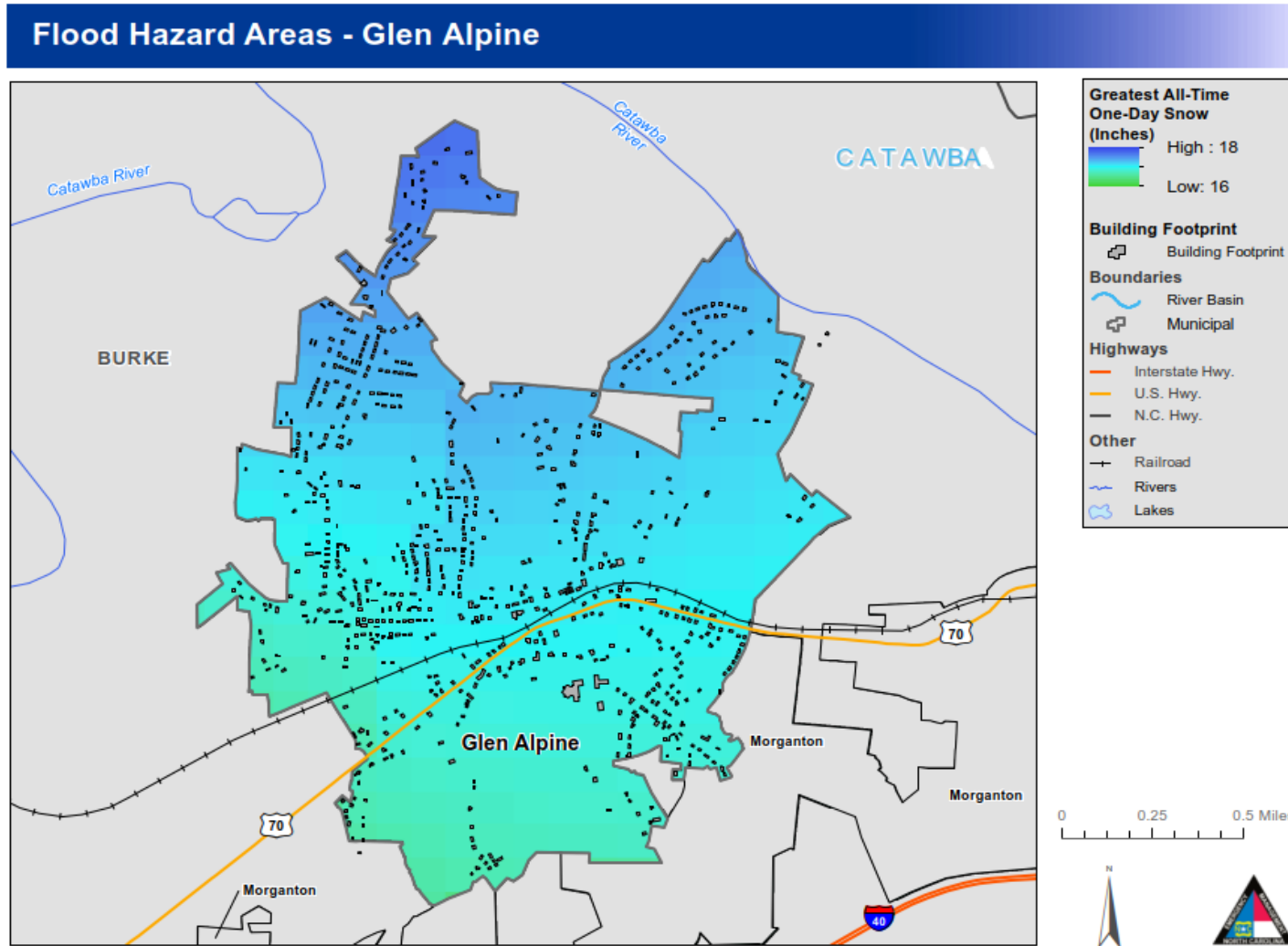


Figure 4.71: Snow Hazard Areas

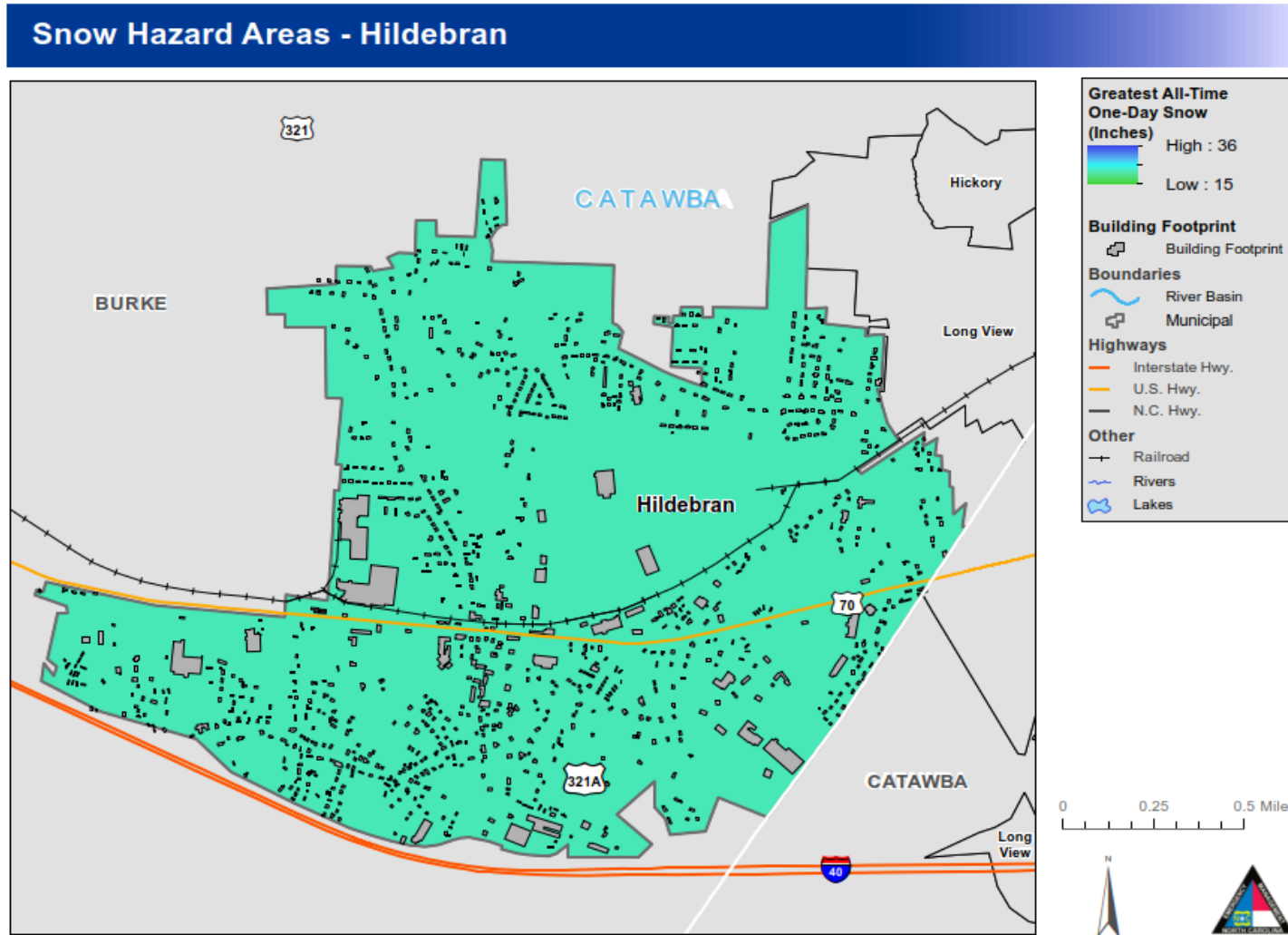


Figure 4.72: Snow Hazard Areas

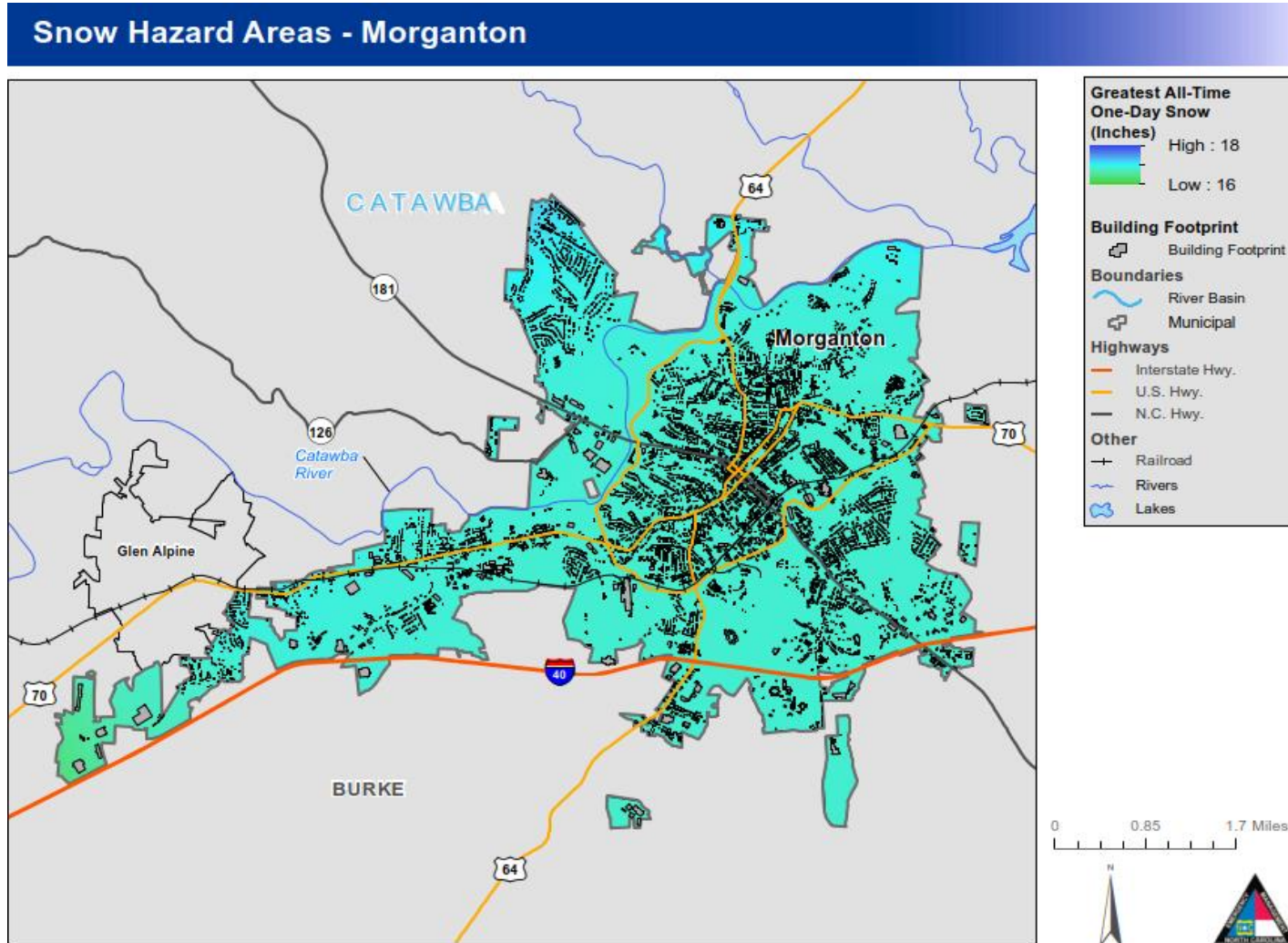


Figure 4.73: Snow Hazard Areas

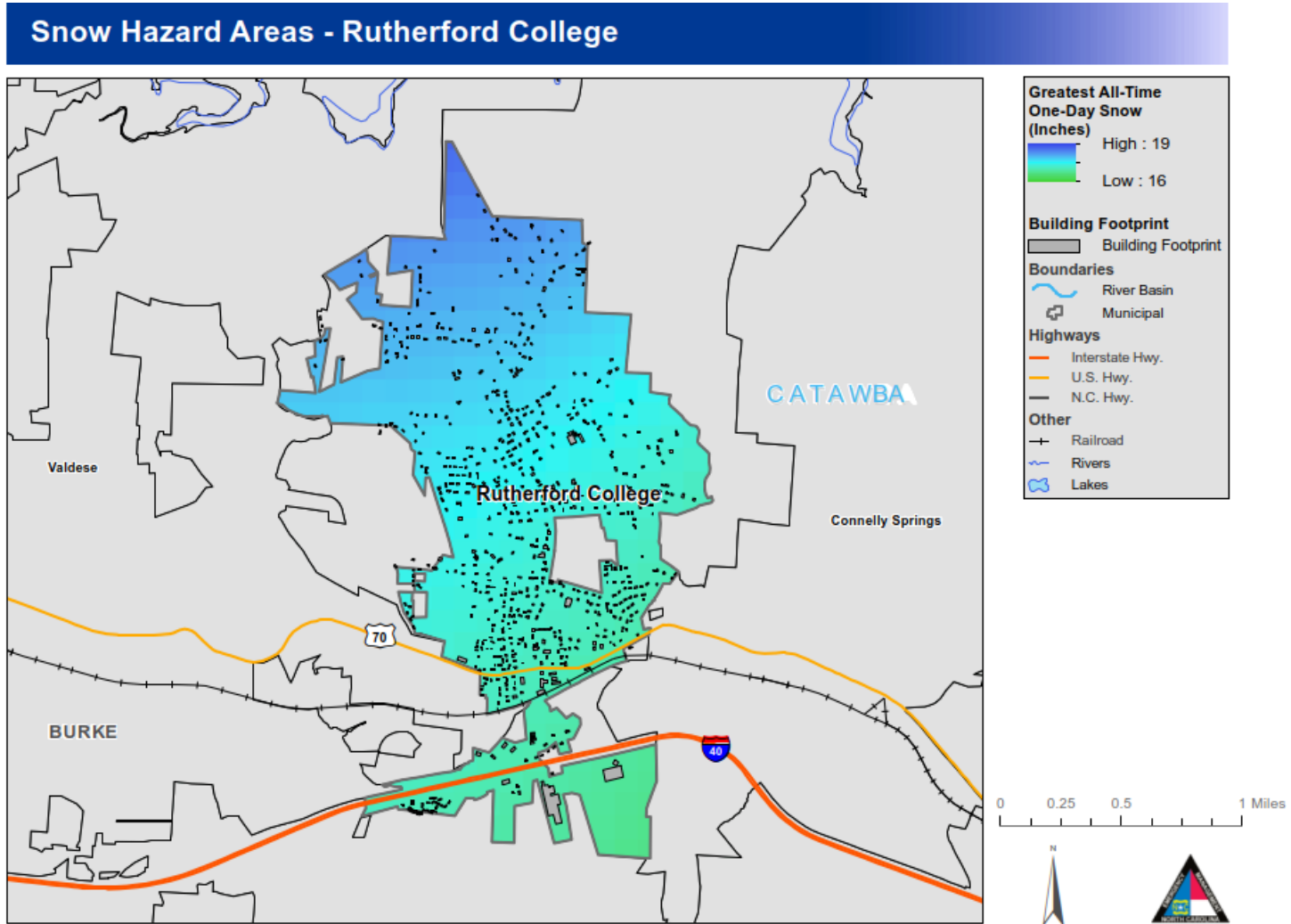


Figure 4.74: Snow Hazard Areas

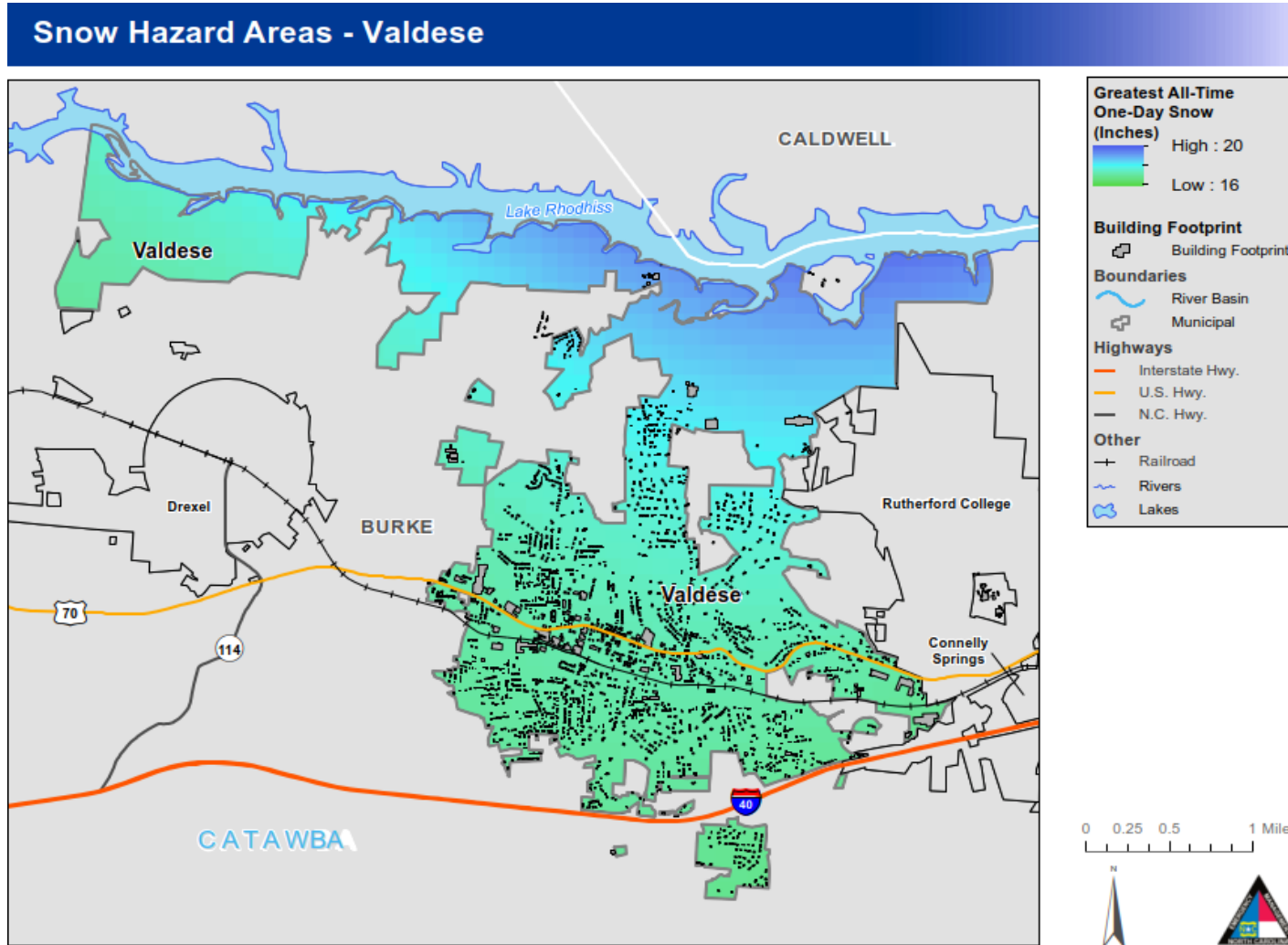


Figure 4.75: Snow Hazard Areas

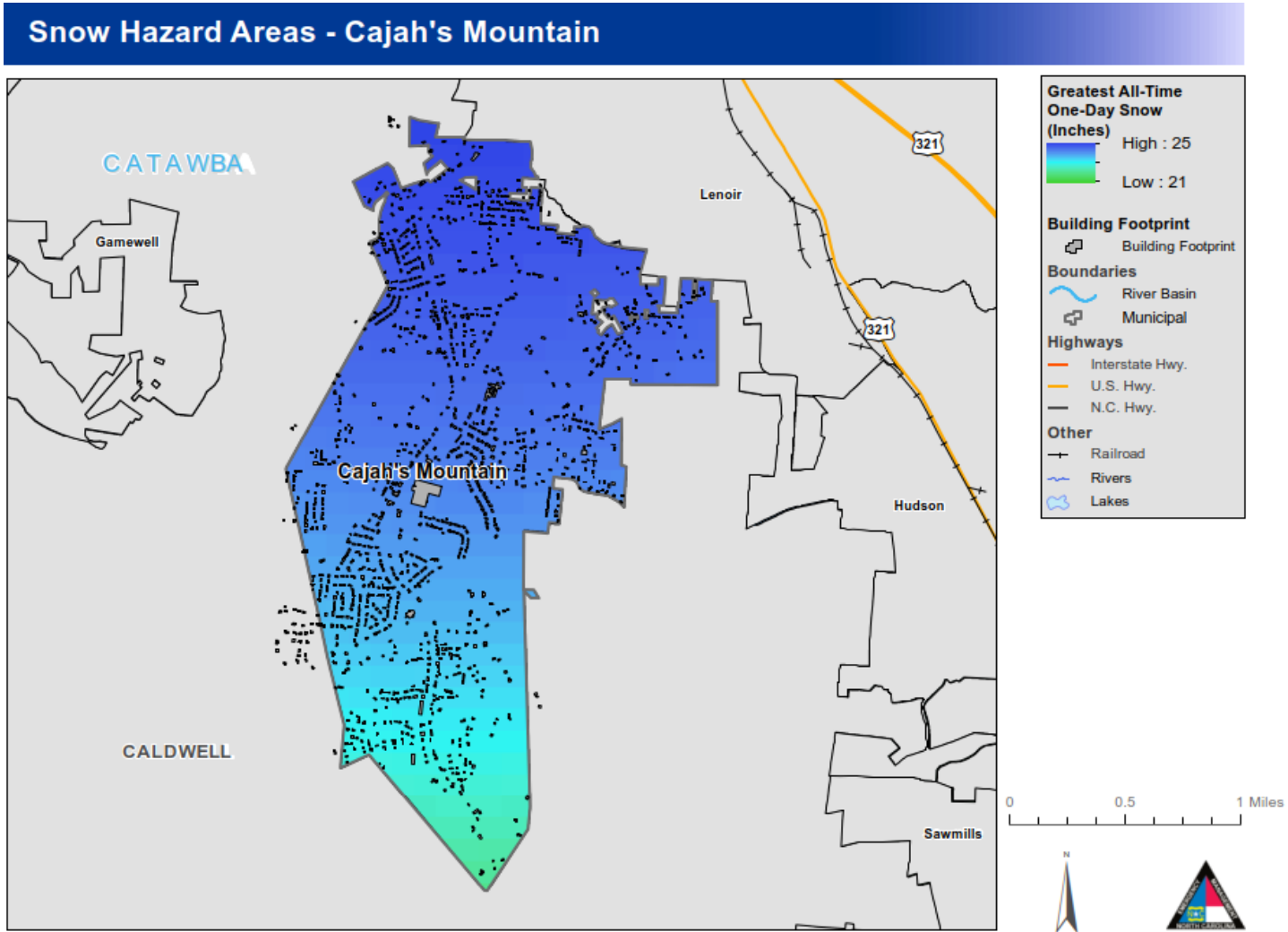


Figure 4.76: Snow Hazard Areas

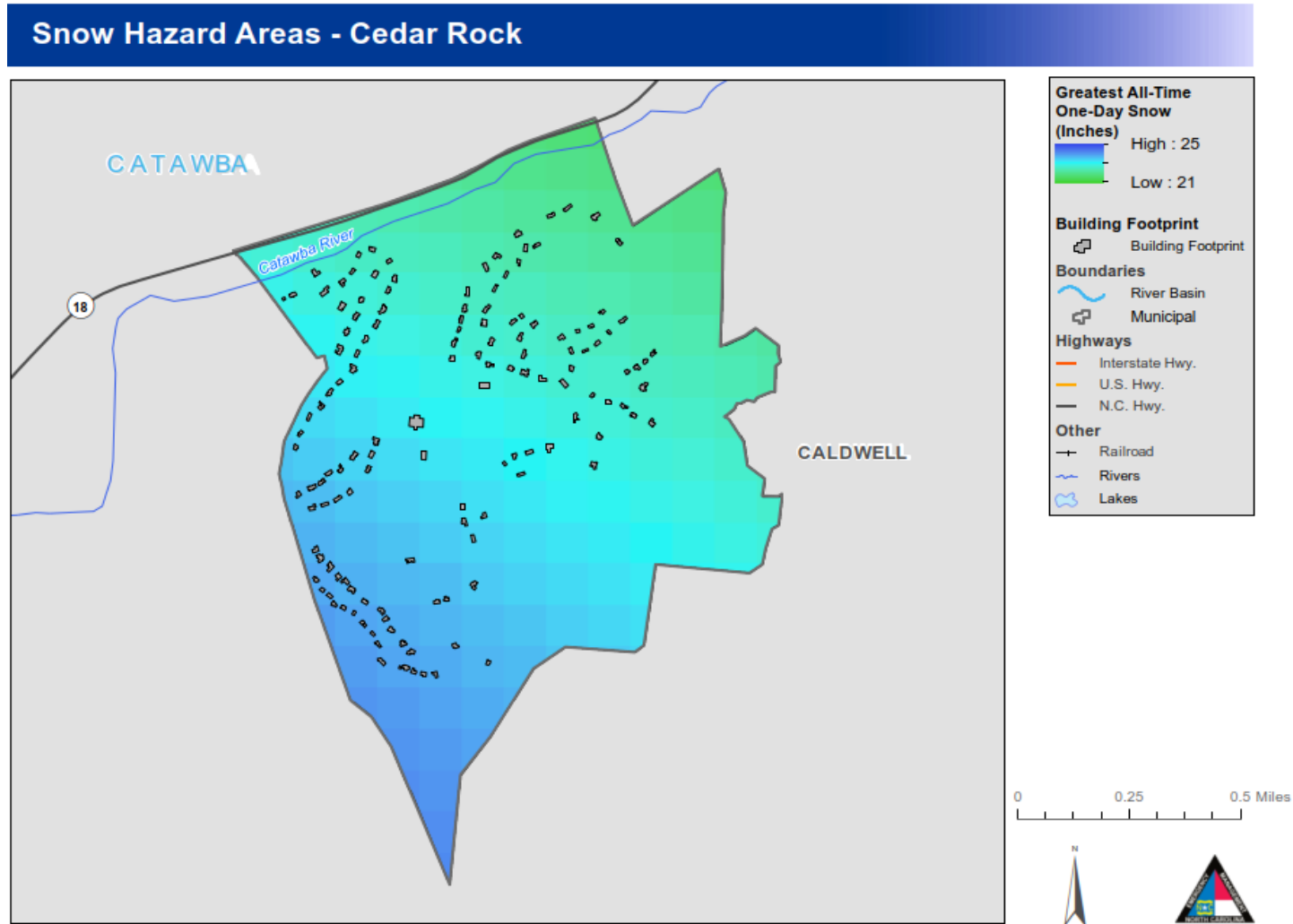


Figure 4.77: Snow Hazard Areas

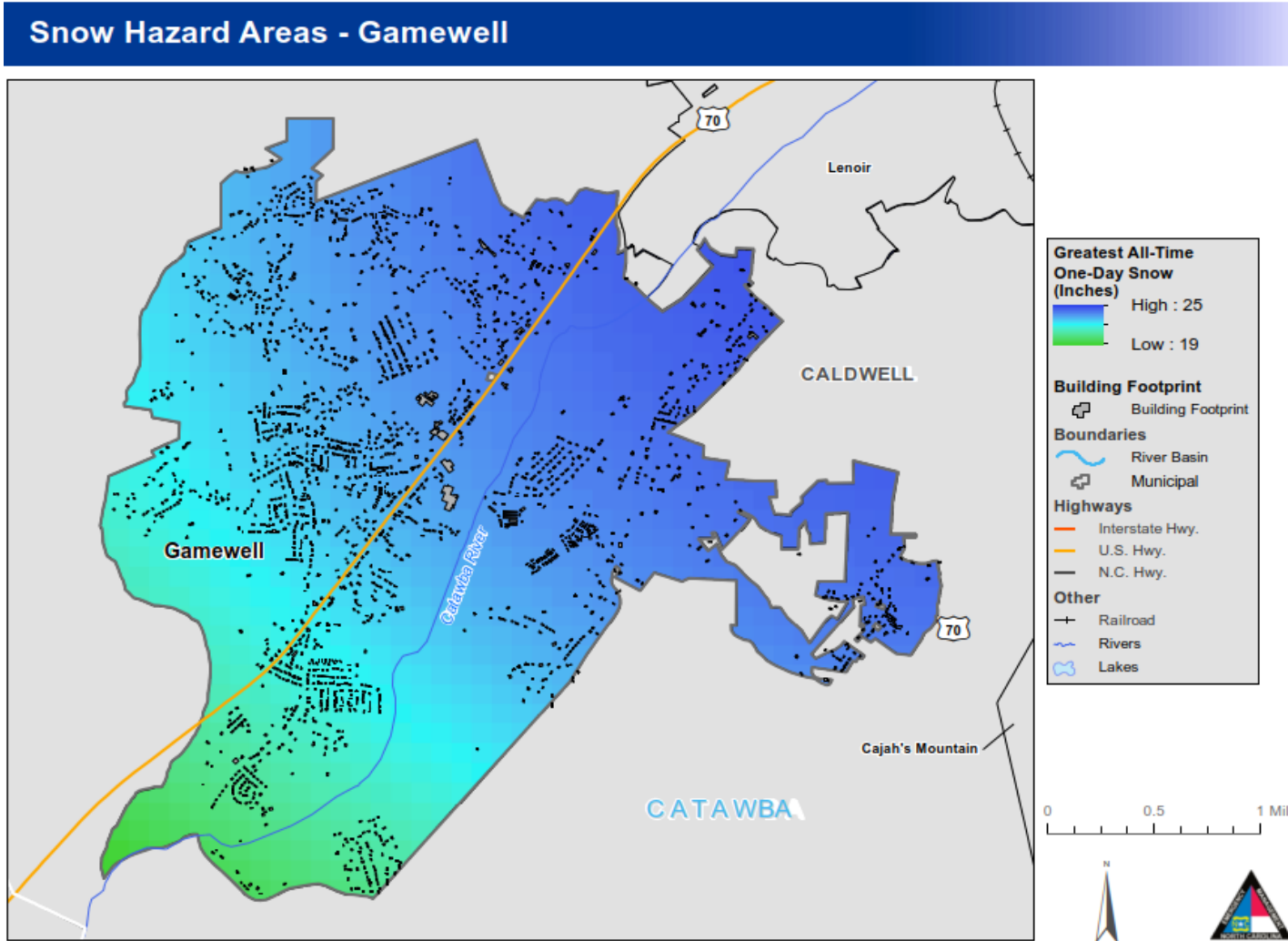


Figure 4.78: Snow Hazard Areas

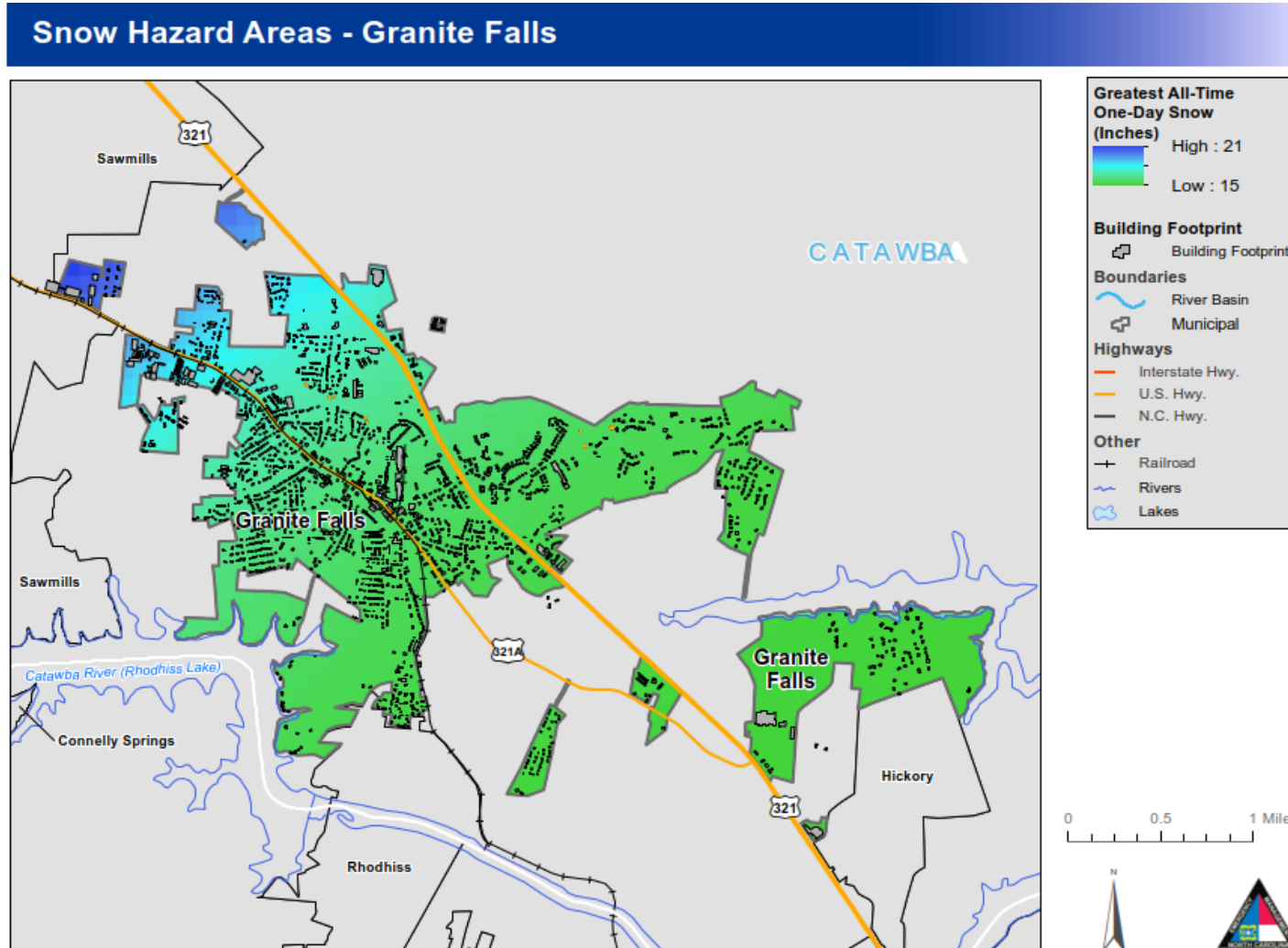


Figure 4.79: Snow Hazard Areas

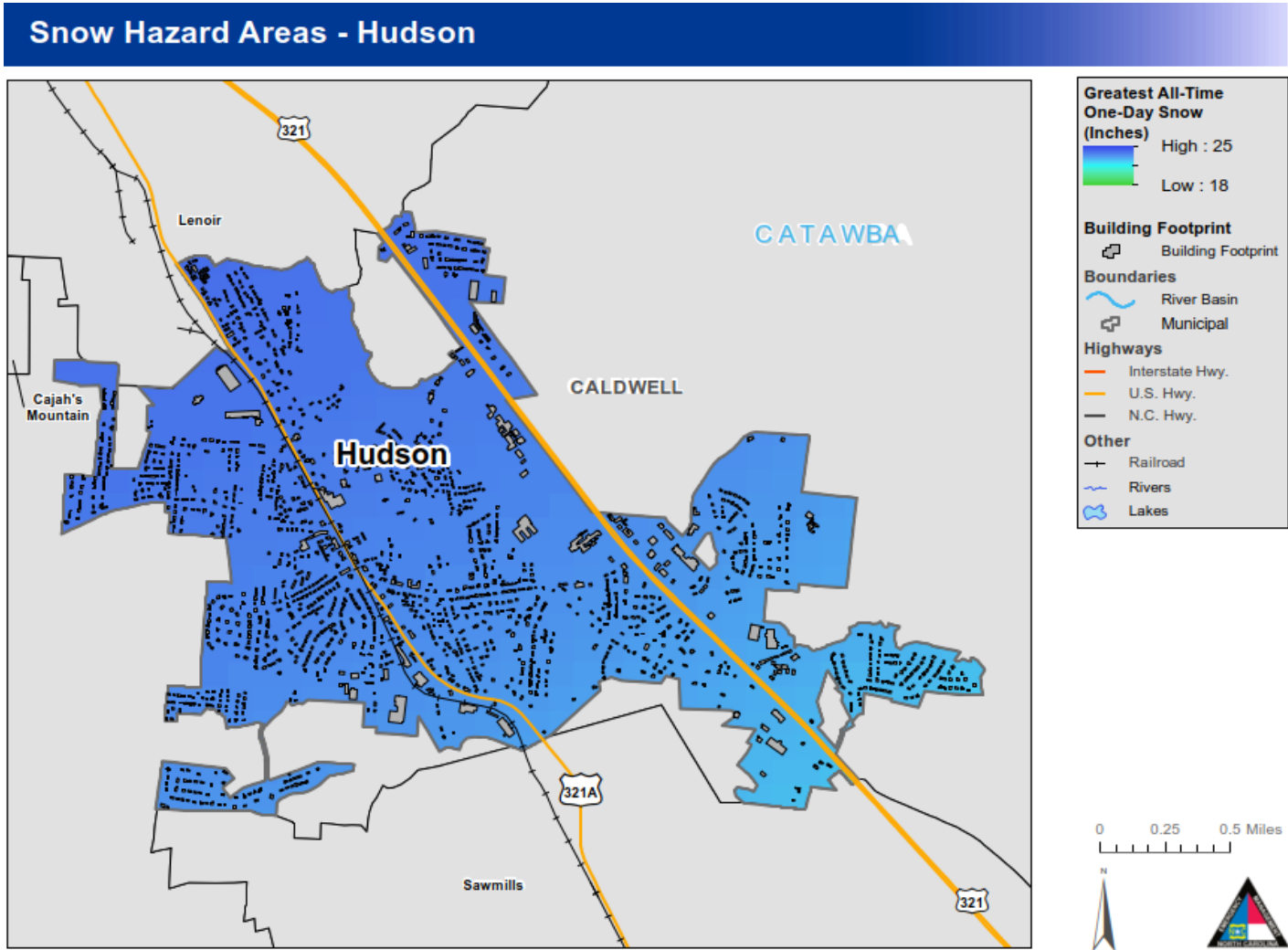


Figure 4.80: Snow Hazard Areas

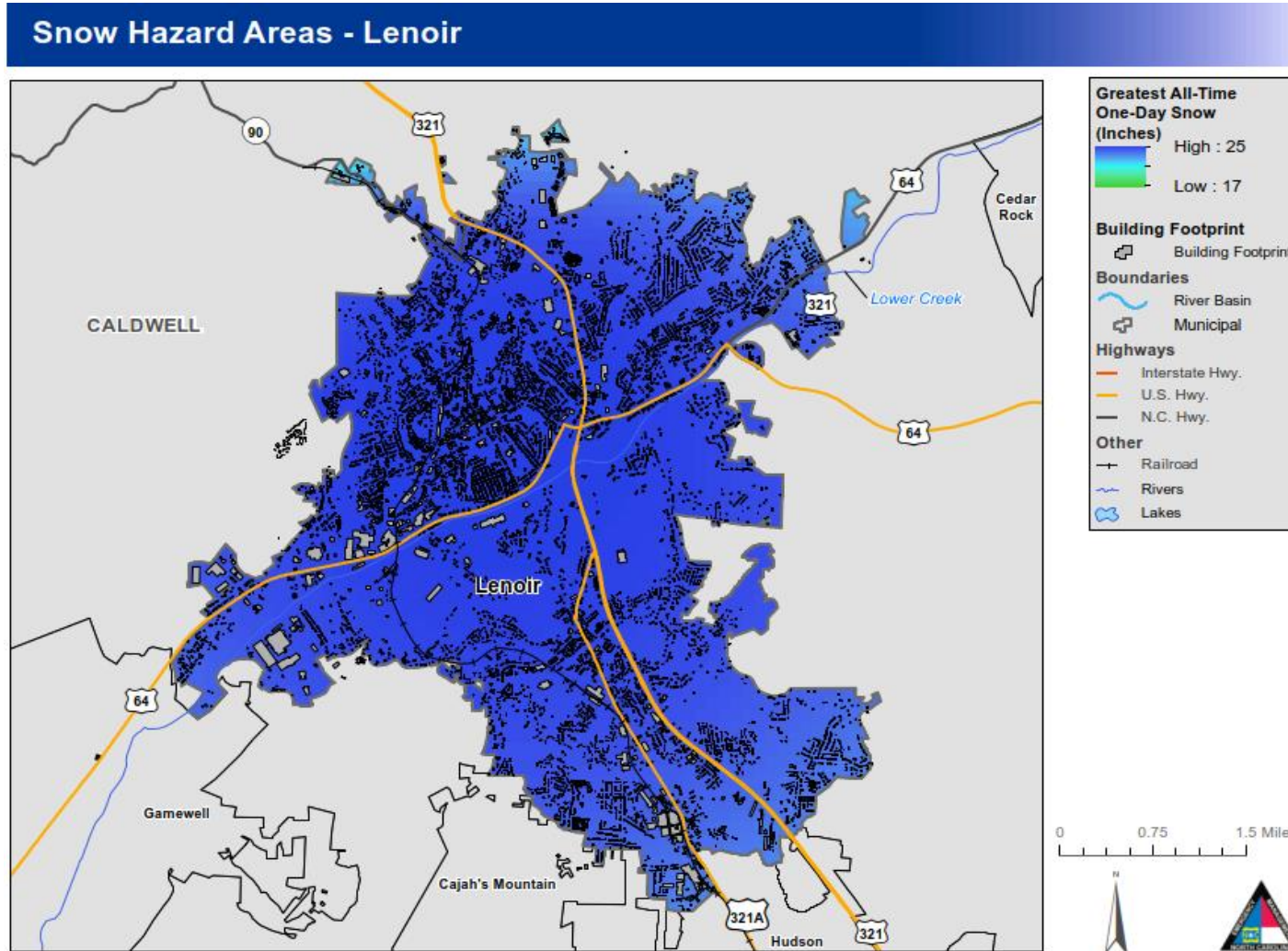


Figure 4.81: Snow Hazard Areas

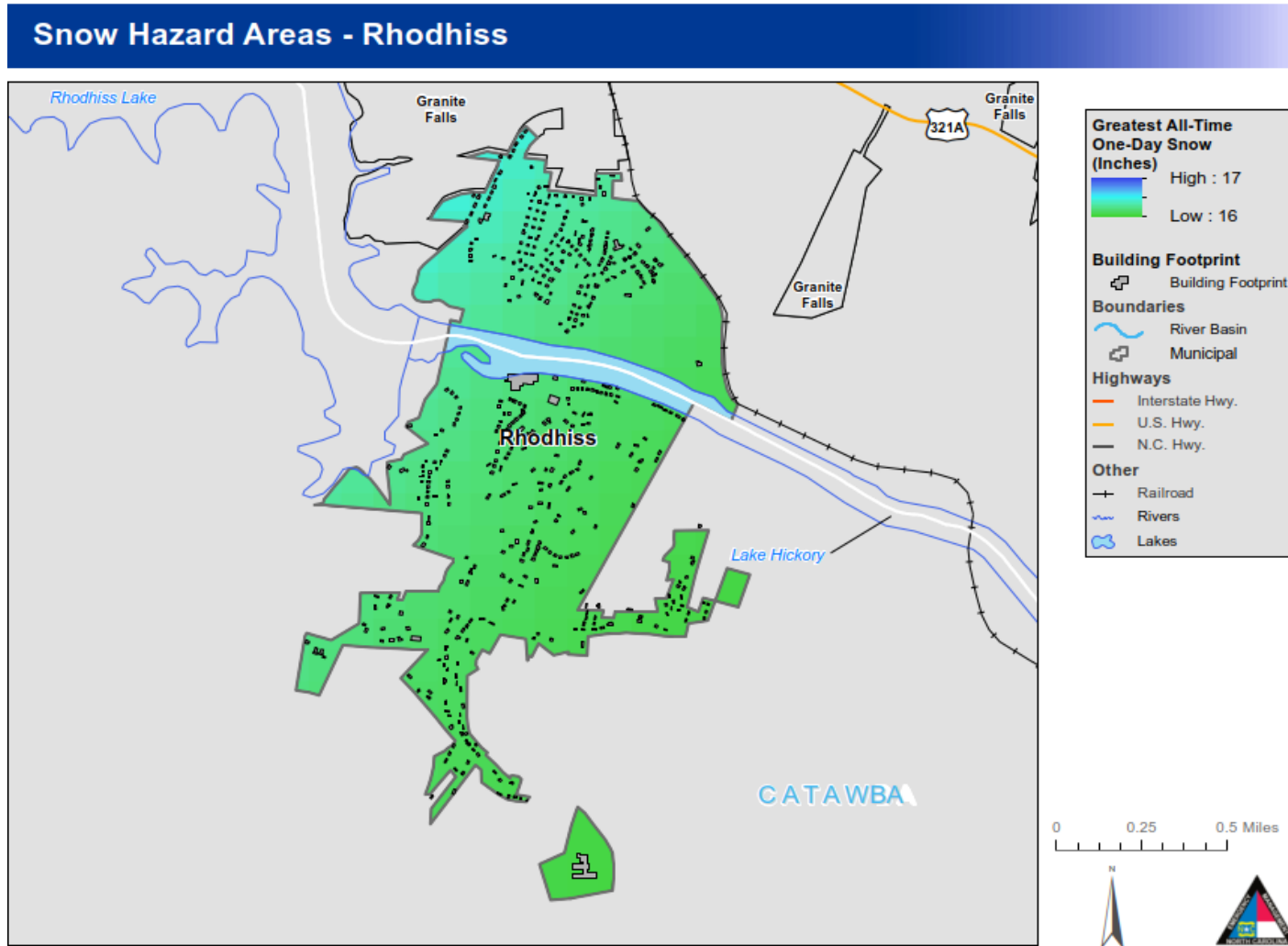


Figure 4.82: Snow Hazard Areas

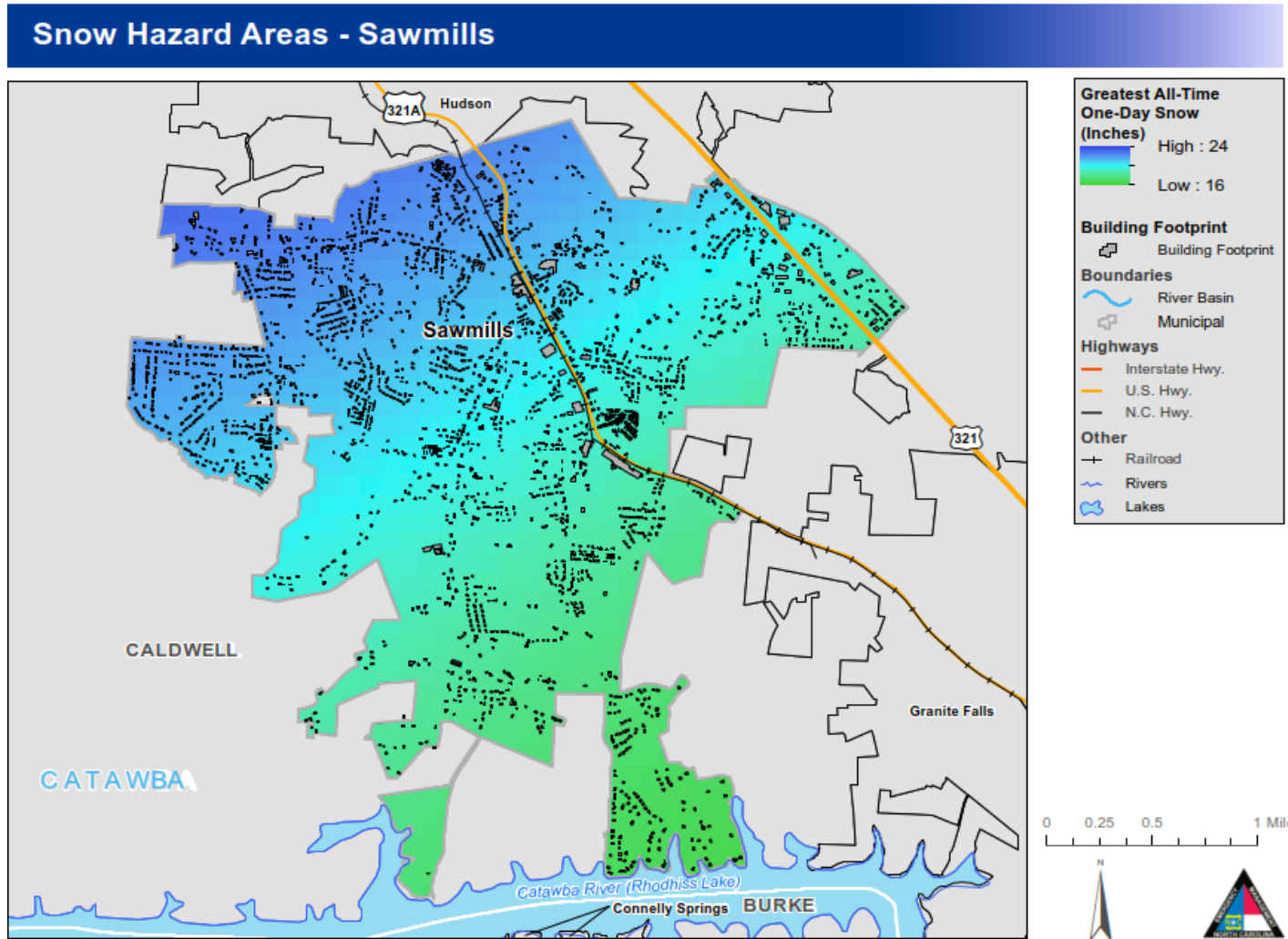


Figure 4.83: Snow Hazard Areas

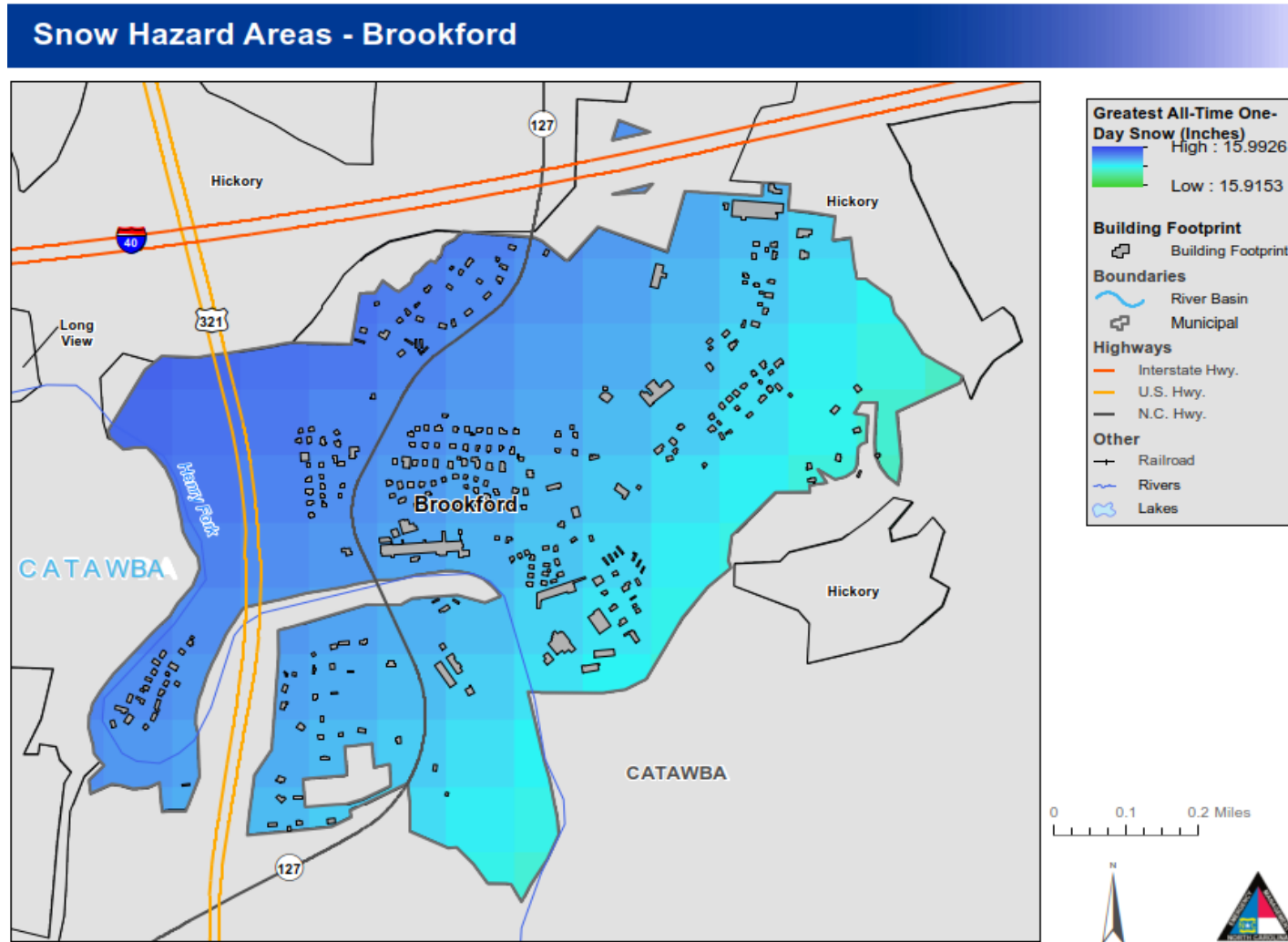


Figure 4.84: Snow Hazard Areas

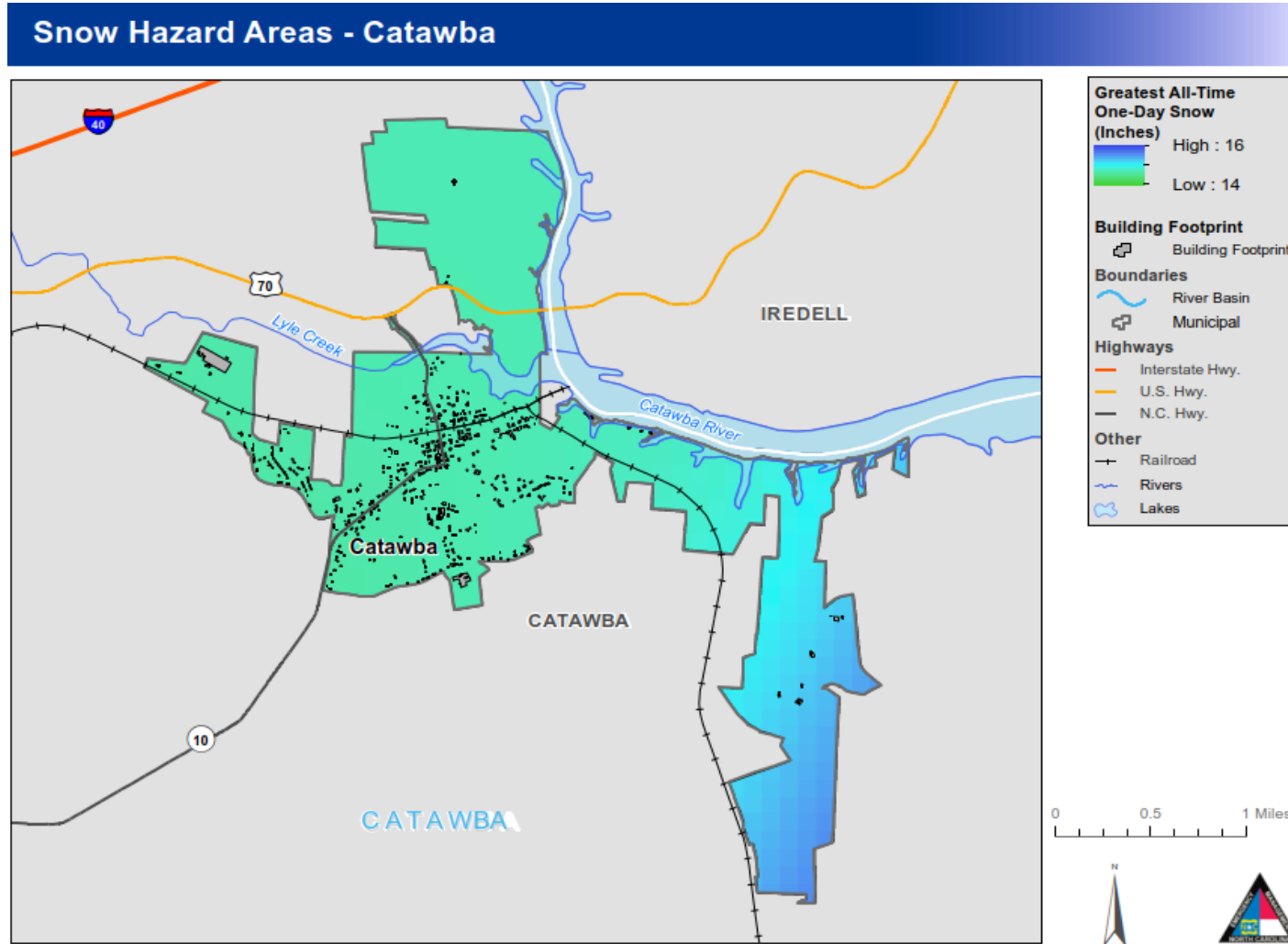


Figure 4.85: Snow Hazard Areas

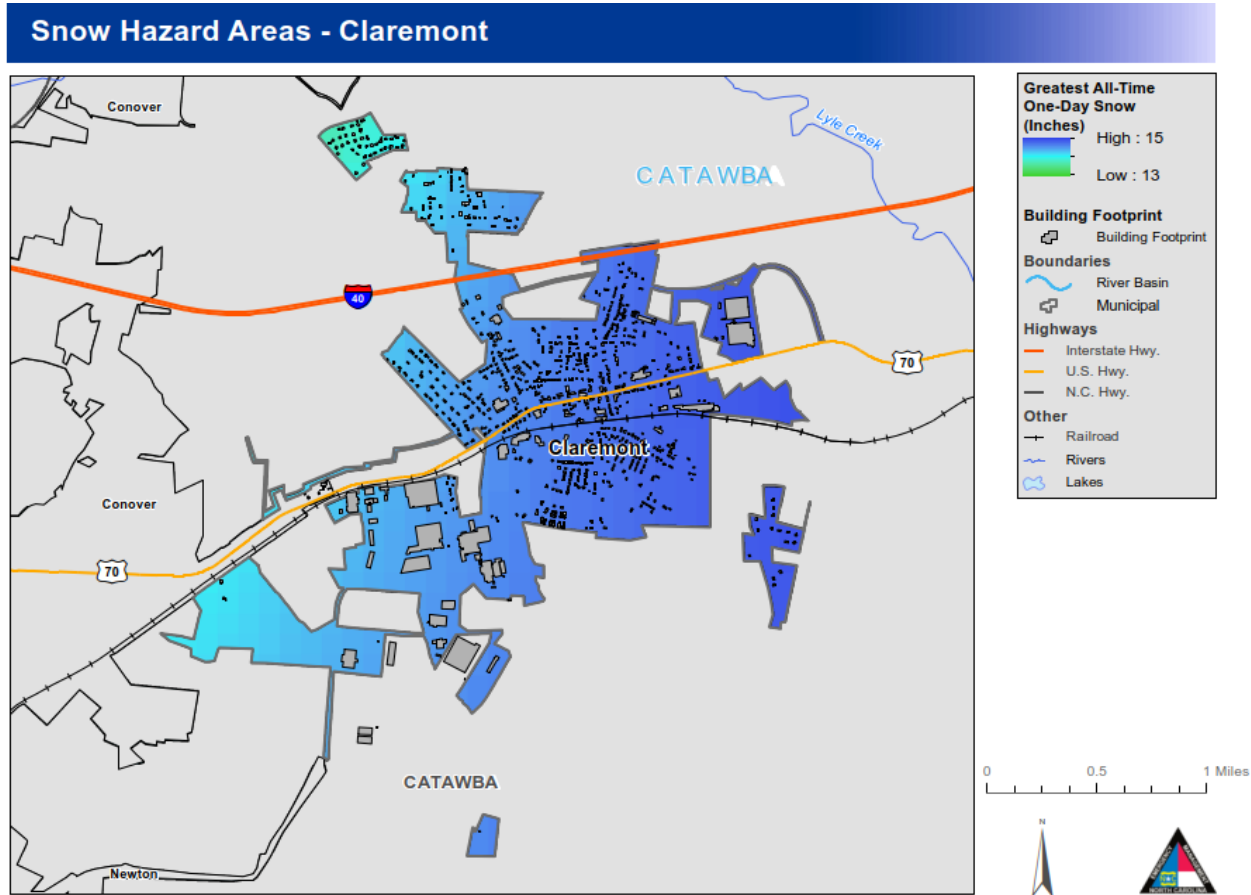


Figure 4.86: Snow Hazard Areas

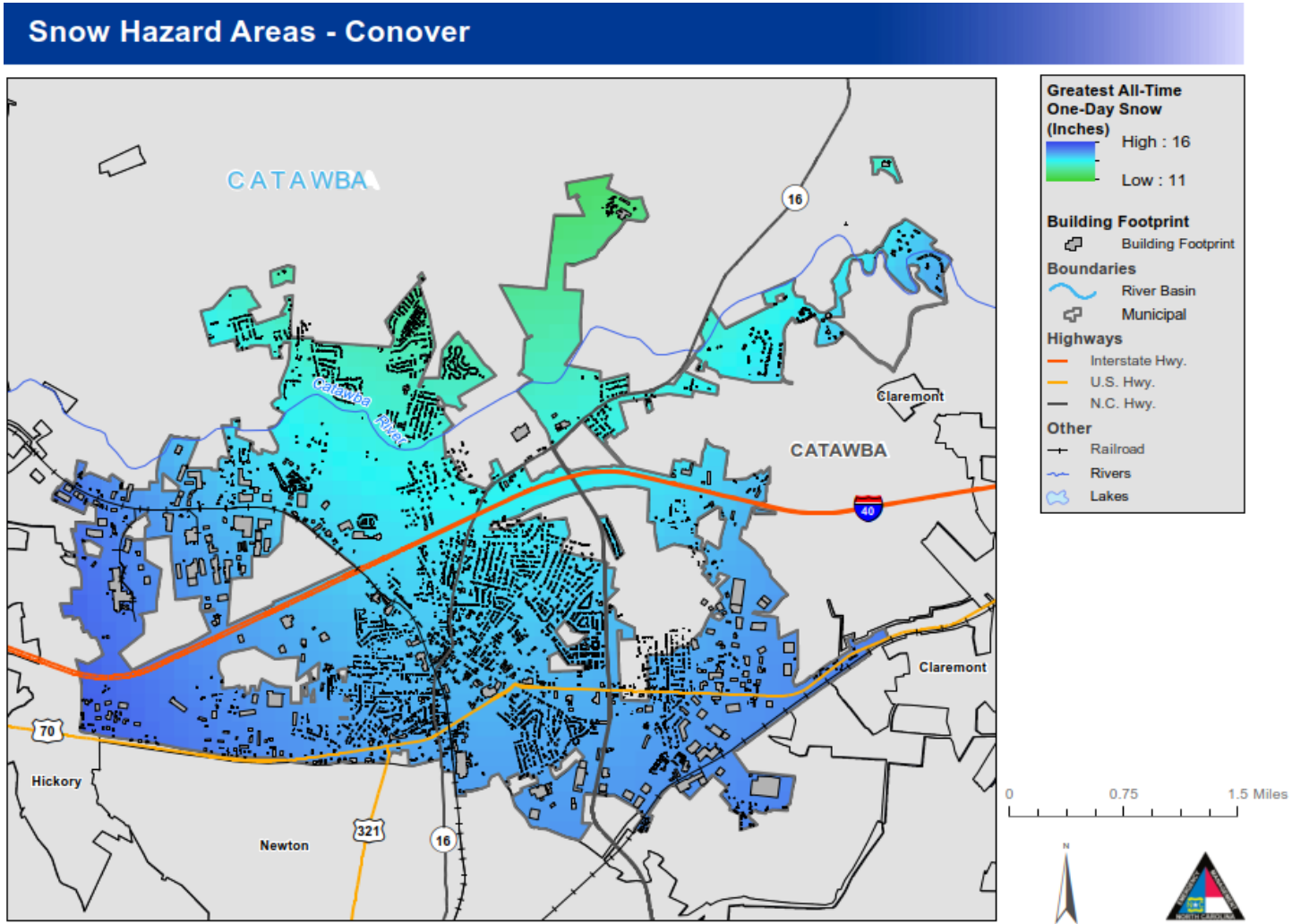


Figure 4.87: Snow Hazard Areas

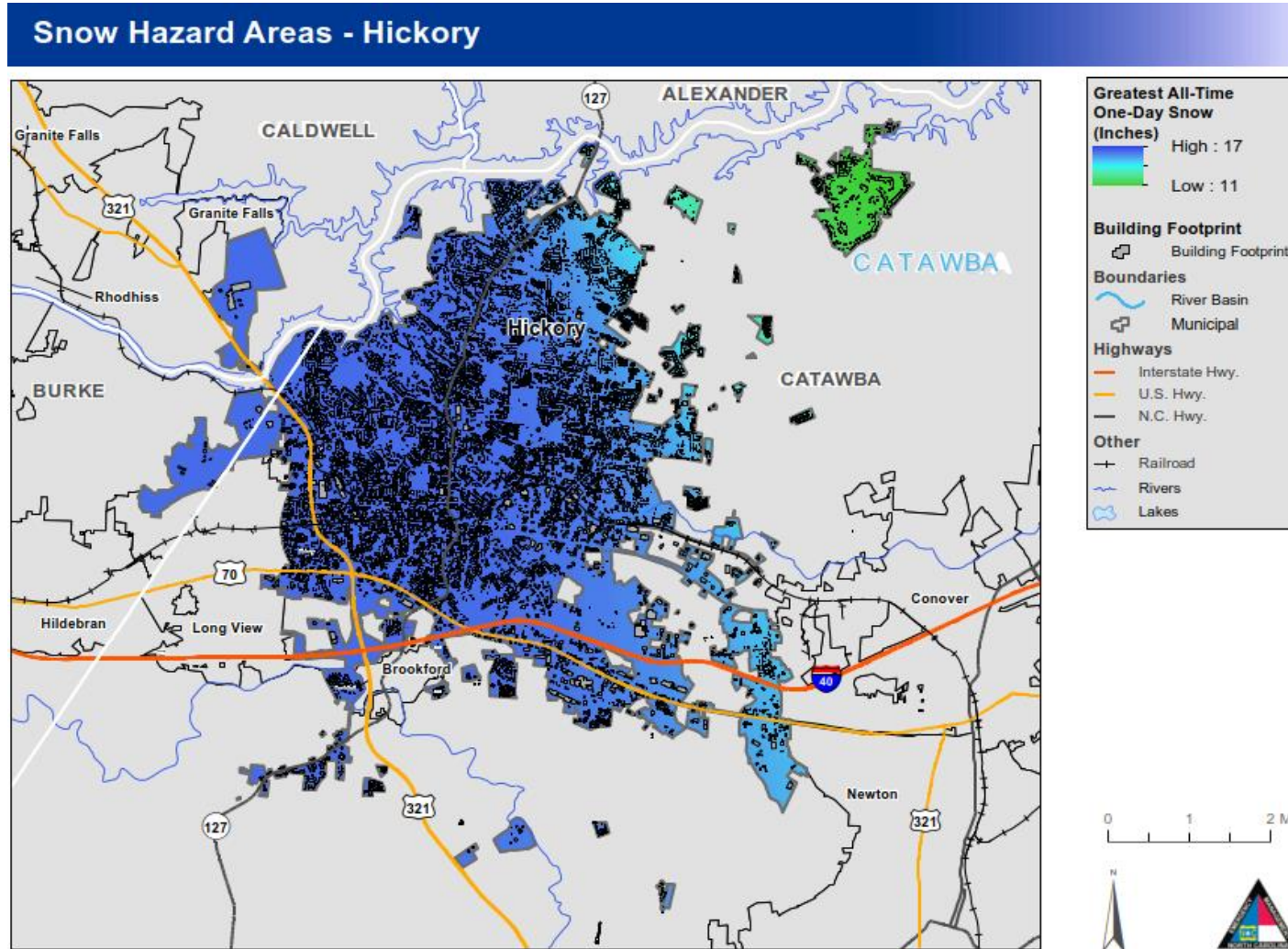


Figure 4.88: Snow Hazard Areas

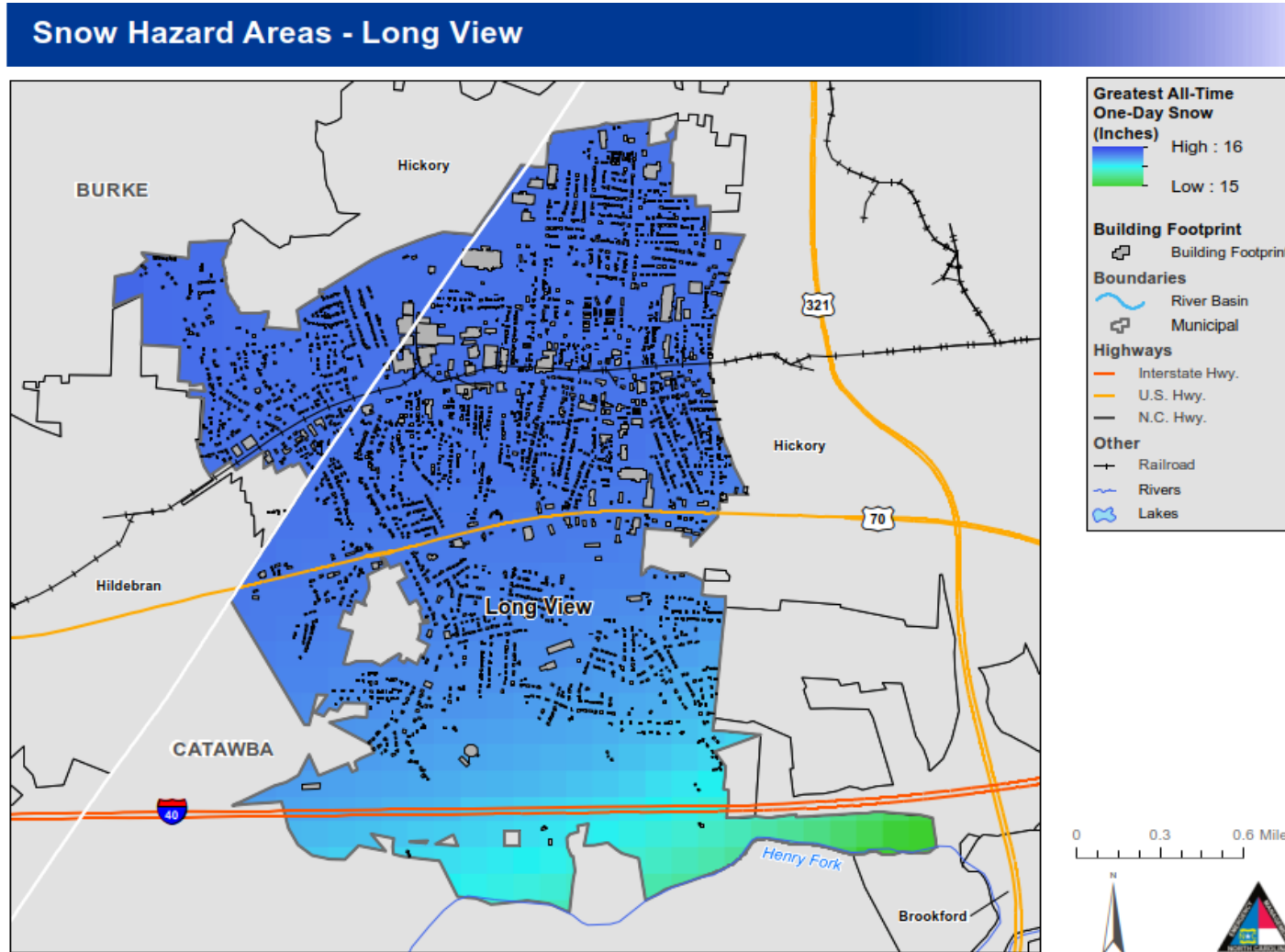


Figure 4.89: Snow Hazard Areas

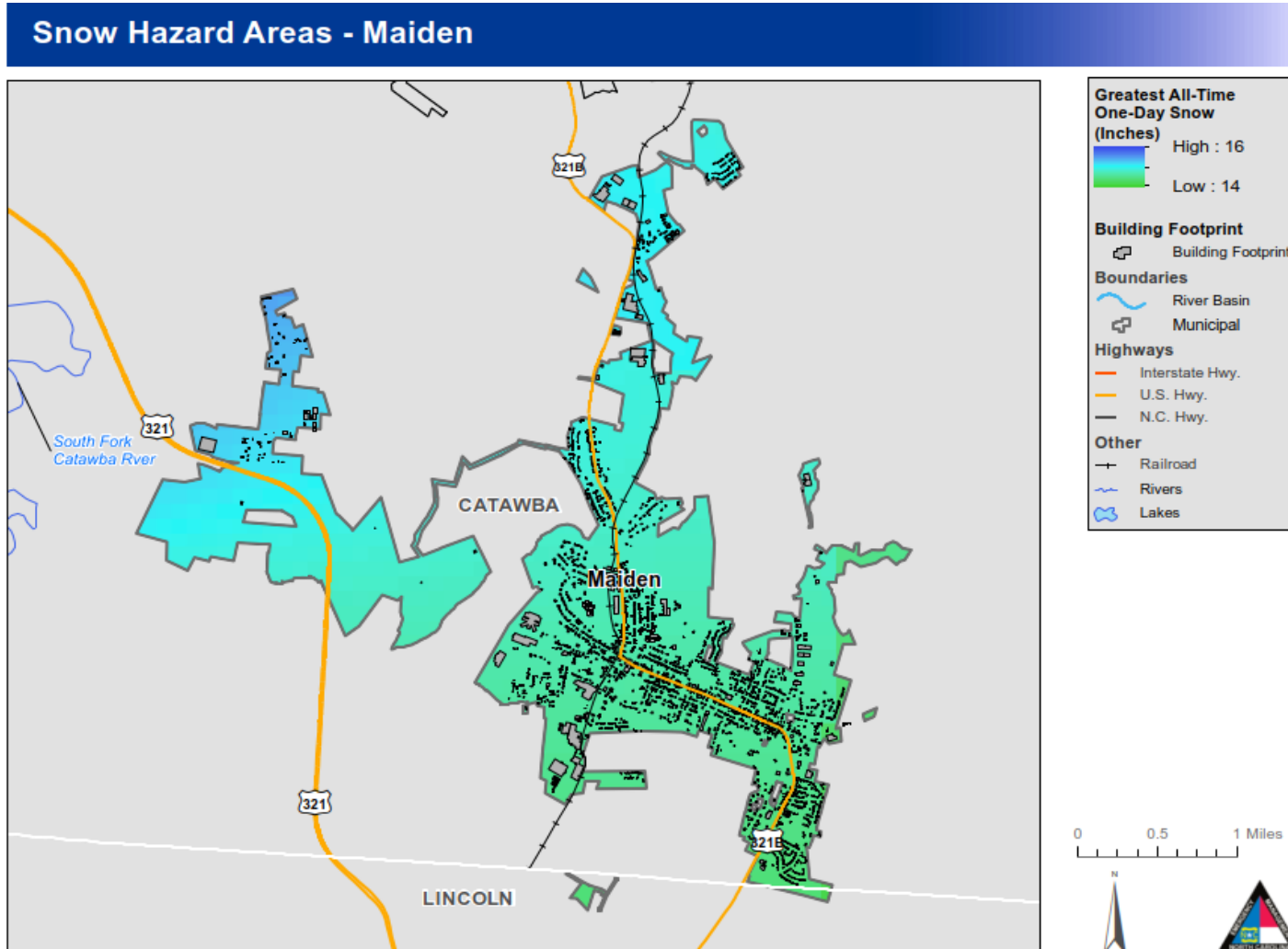
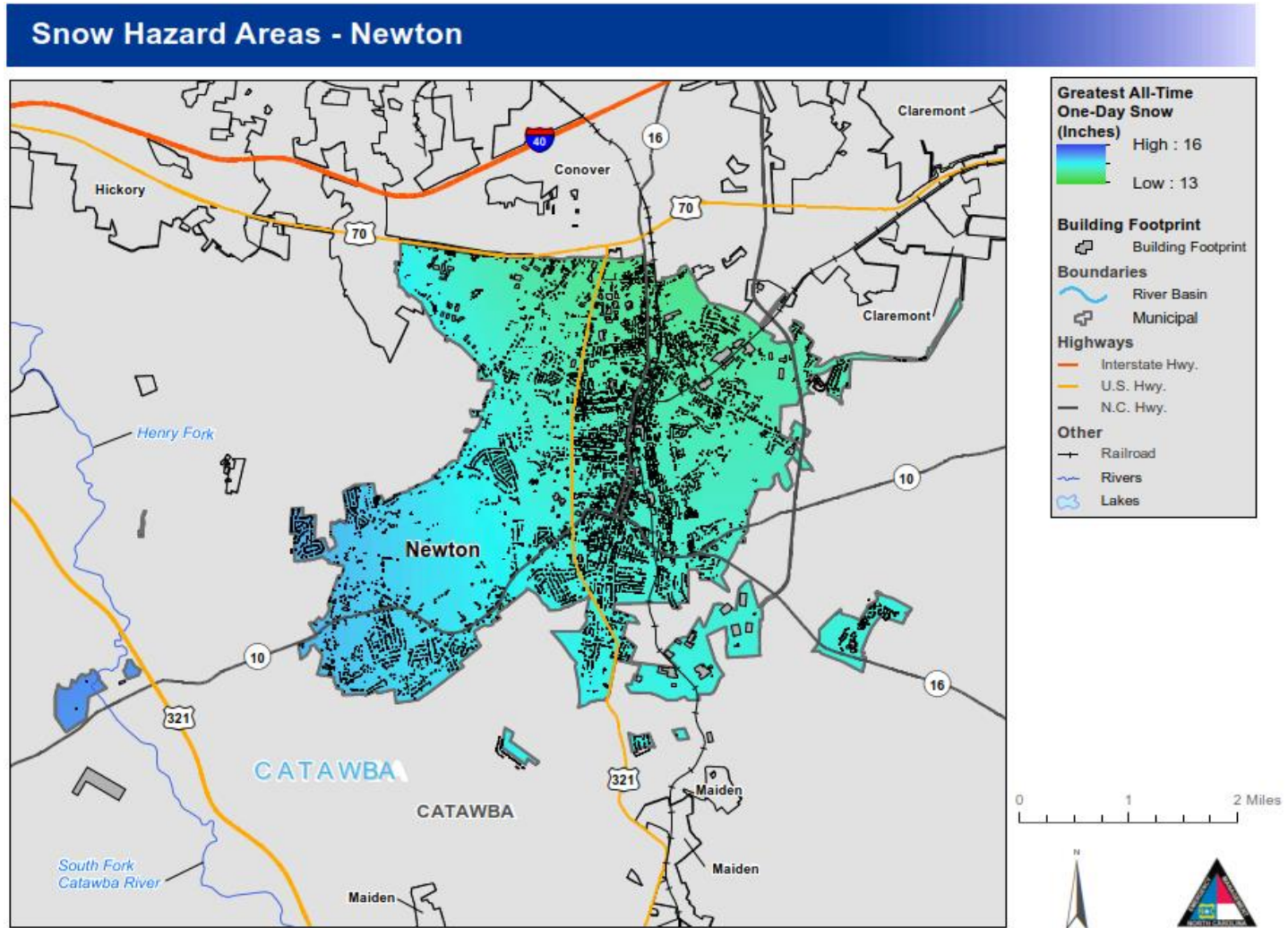


Figure 4.90: Snow Hazard Areas



Extent (Magnitude and Severity)

Definition:

The extent of winter storms can be measured by the amount of snowfall received (in inches).

Extent Event:

The highest recorded event for the planning area occurred in Catawba County in 2004. The area received a total of 12-22 inches of snow across the county with the rate of snowfall at 3-4 inches per hour. This event created an estimated \$2,000 in property damage.

Historical Occurrences

Jurisdiction	Number of Winter Weather Events	Number of Blizzard Events	Number of Heavy Snow Events	Deaths/Injuries	Reported Property Damage	Reported Crop Damage
Alexander County	34	0	22	0	\$0	\$1,000,000
Burke County	30	0	27	0	\$2,000	\$0
Caldwell County	26	0	22	0	\$0	\$0
Catawba County	35	0	22	0	\$2,000	\$1,000,000

Probability of Future Occurrences

The probability of future Snow is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Medium
City of Conover	Medium
City of Hickory	Medium

Jurisdiction	Probability of Future Occurrence
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	Medium
Town of Brookford	Medium
Town of Cahah's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium
Town of Hildebran	Medium
Town of Hudson	Medium
Town of Long View	Medium
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium
Town of Sawmills	Medium
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Snow Hazard Vulnerability

All of the inventoried assets in the Unifour Region are exposed to potential winter weather. Any specific vulnerabilities of individual assets would depend greatly on individual design, building characteristics (such as a flat roof), and any existing mitigation measures currently in place. Such site-specific vulnerability determinations are outside the scope of this risk assessment but may be considered during future plan updates. A qualitative factor in terms of vulnerability is a general lack of awareness on the

part of county residents in preparing for and responding to winter storm conditions, such as snow in a manner that will minimize the danger to themselves and others. This lack of awareness is especially apparent when driving/roadway conditions catch motorists off-guard. Potential losses associated with winter storms, such as snow include the cost of the removal of snow from roadways, debris clean-up, and some indirect losses from power outages, etc. All future structures and infrastructure in the region will be vulnerable to winter storms.

4.5.8 Dam Failure

Worldwide interest in dam and levee safety has risen significantly in recent years. Aging infrastructure, new hydrologic information, and population growth in floodplain areas downstream from dams and near levees have resulted in an increased emphasis on safety, operation and maintenance.

There are approximately 80,000 dams in the United States today, the majority of which are privately owned. Other owners include state and local authorities, public utilities and federal agencies. The benefits of dams are numerous: they provide water for drinking, navigation and agricultural irrigation. Dams also provide hydroelectric power, create lakes for fishing and recreation, and save lives by preventing or reducing floods.

Though dams have many benefits, they also can pose a risk to communities if not designed, operated and maintained properly. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and great property damage if development exists downstream of the dam. If a levee breaks, scores of properties are quickly submerged in floodwaters and residents may become trapped by this rapidly rising water. The failure of dams and levees has the potential to place large numbers of people and great amounts of property in harm's way.

Location within the Planning Area

The figures below show counts and locations of high and intermediate hazard dams in each participating jurisdiction.

Figure 4.91: Dam Failure Hazard Areas

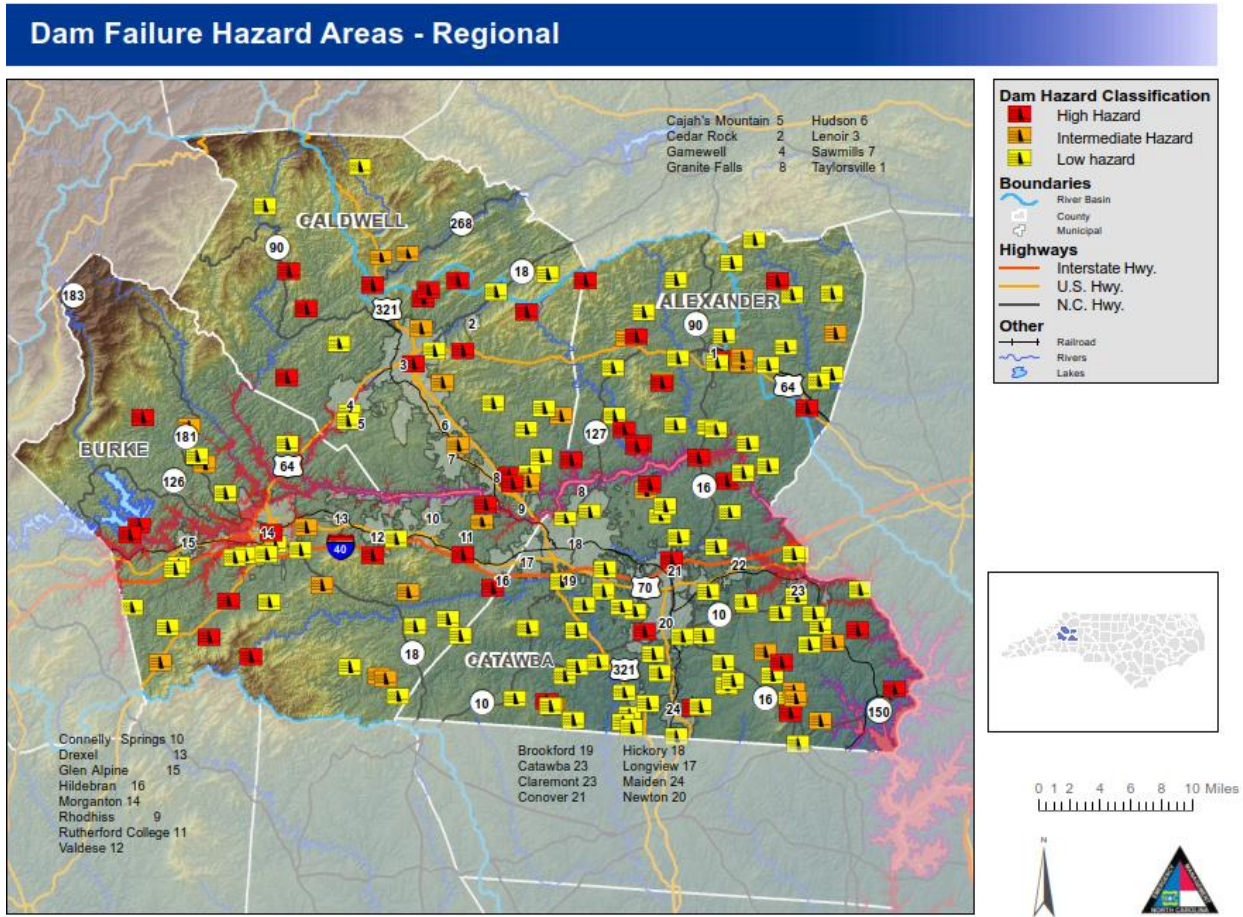


Figure 4.92: Dam Failure Hazard Areas

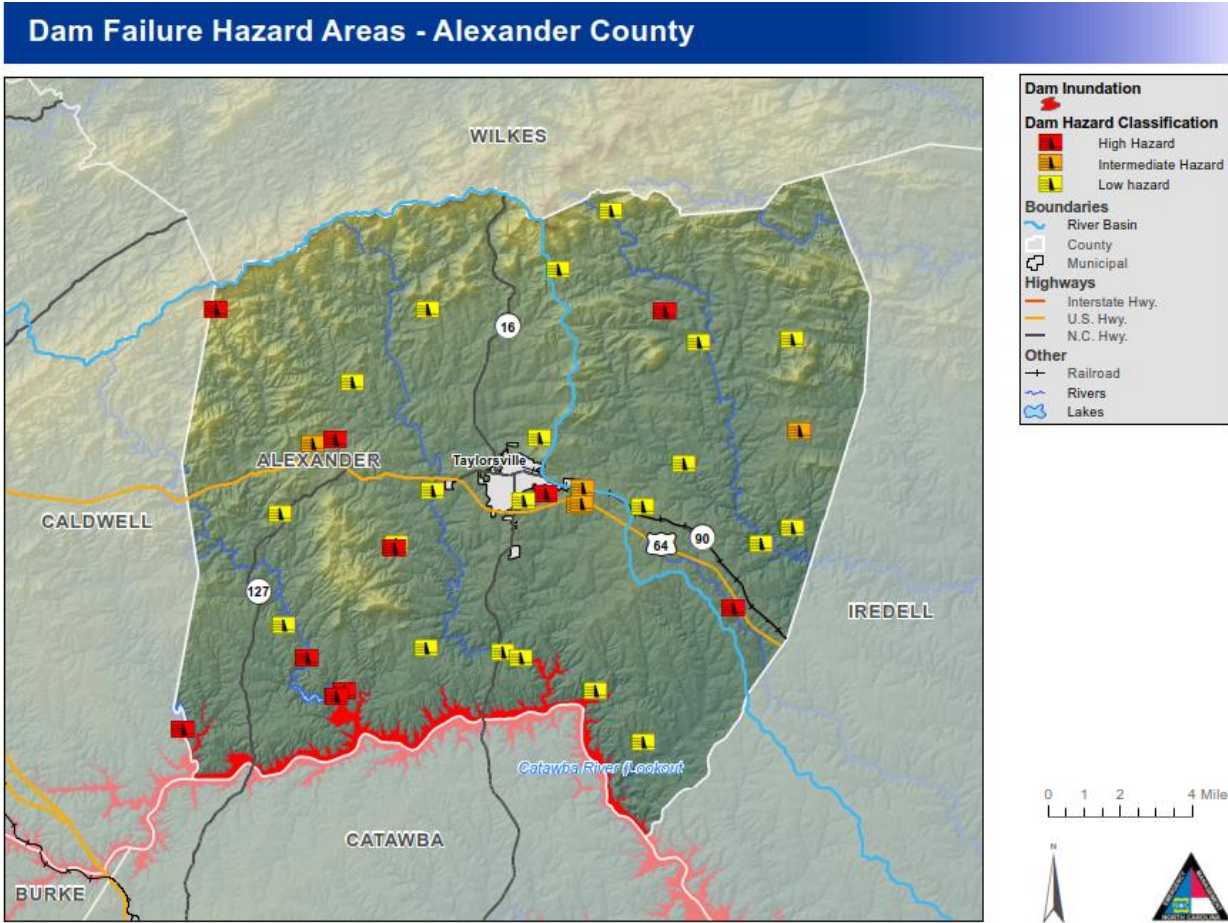


Figure 4.93: Dam Failure Hazard Areas

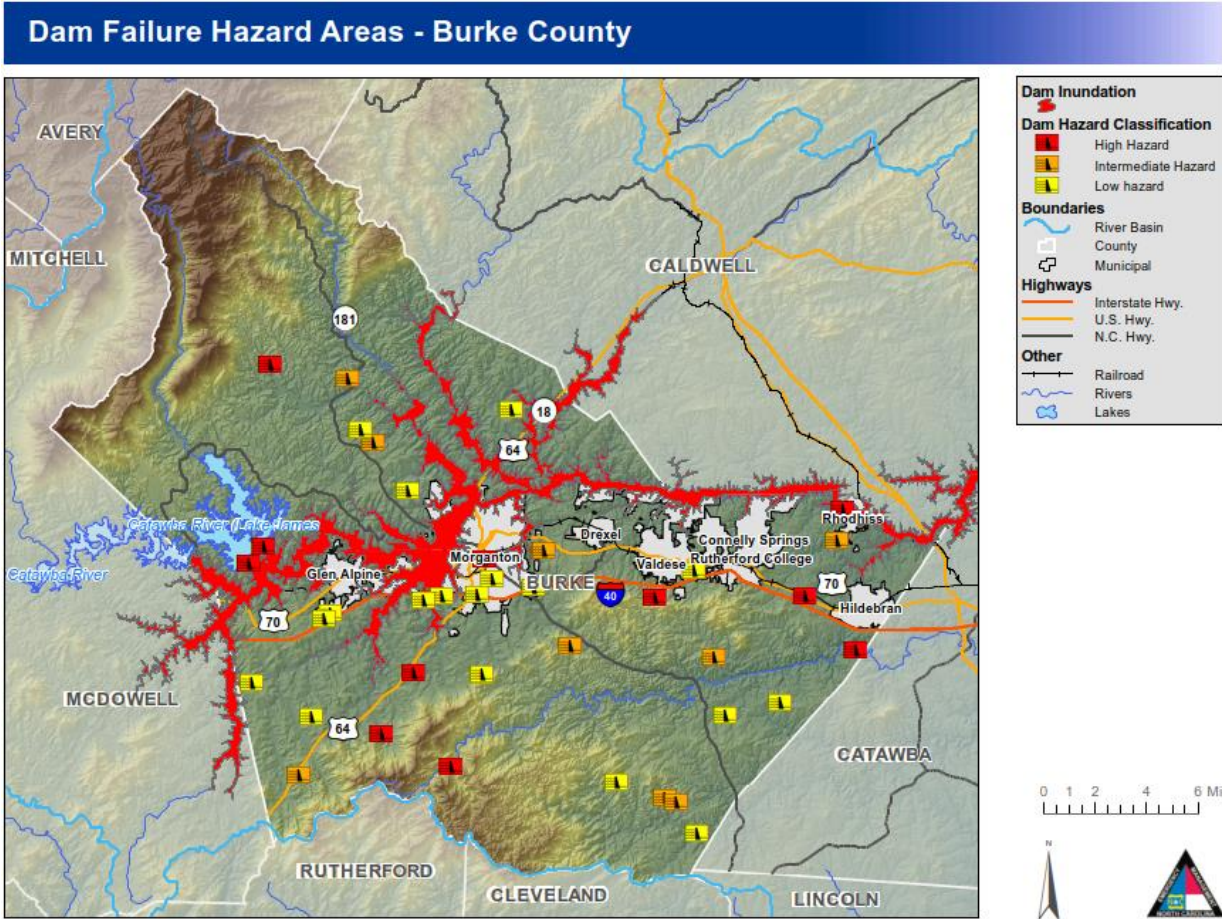


Figure 4.94: Dam Failure Hazard Areas

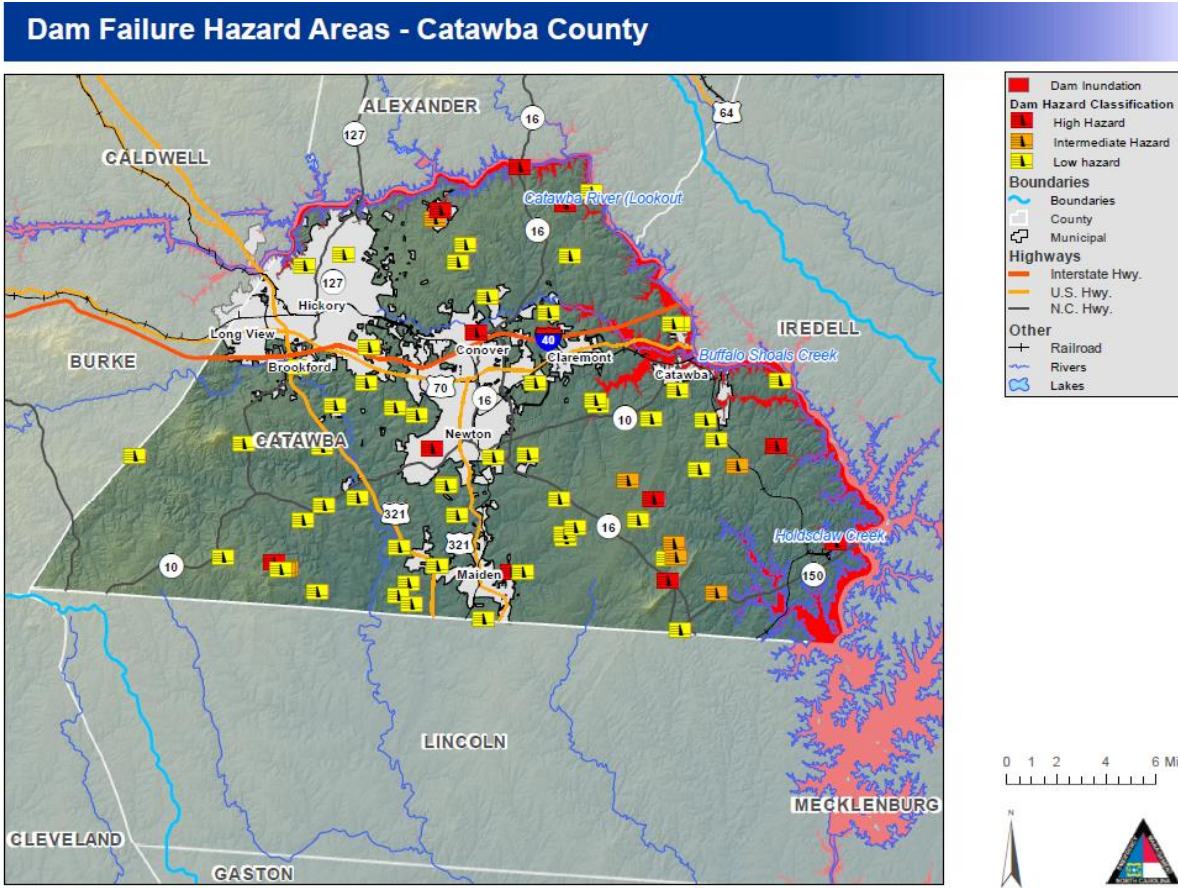


Table 4.244: Counts of High Hazard and Intermediate Hazard Dams by Jurisdiction

Jurisdiction	High	Intermediate
Alexander		
Alexander County (Unincorporated Area)	8	0
Subtotal Alexander	8	0
Burke		
Burke County (Unincorporated Area)	4	5
City of Morganton	0	1
Subtotal Burke	4	6
Caldwell		
Caldwell County (Unincorporated Area)	4	2

Jurisdiction	High	Intermediate
City of Lenoir	2	0
Town of Granite Falls	1	2
Town of Sawmills	0	1
Subtotal Caldwell	7	5
Catawba		
Catawba County (Unincorporated Area)	5	5
City of Conover	1	0
City of Hickory	1	0
City of Newton	1	0
Subtotal Catawba	8	5
TOTAL PLAN	27	16

Source: North Carolina Dams Program, North Carolina Department of Environment and Natural Resources (NCDENR).

Extent (Magnitude and Severity)

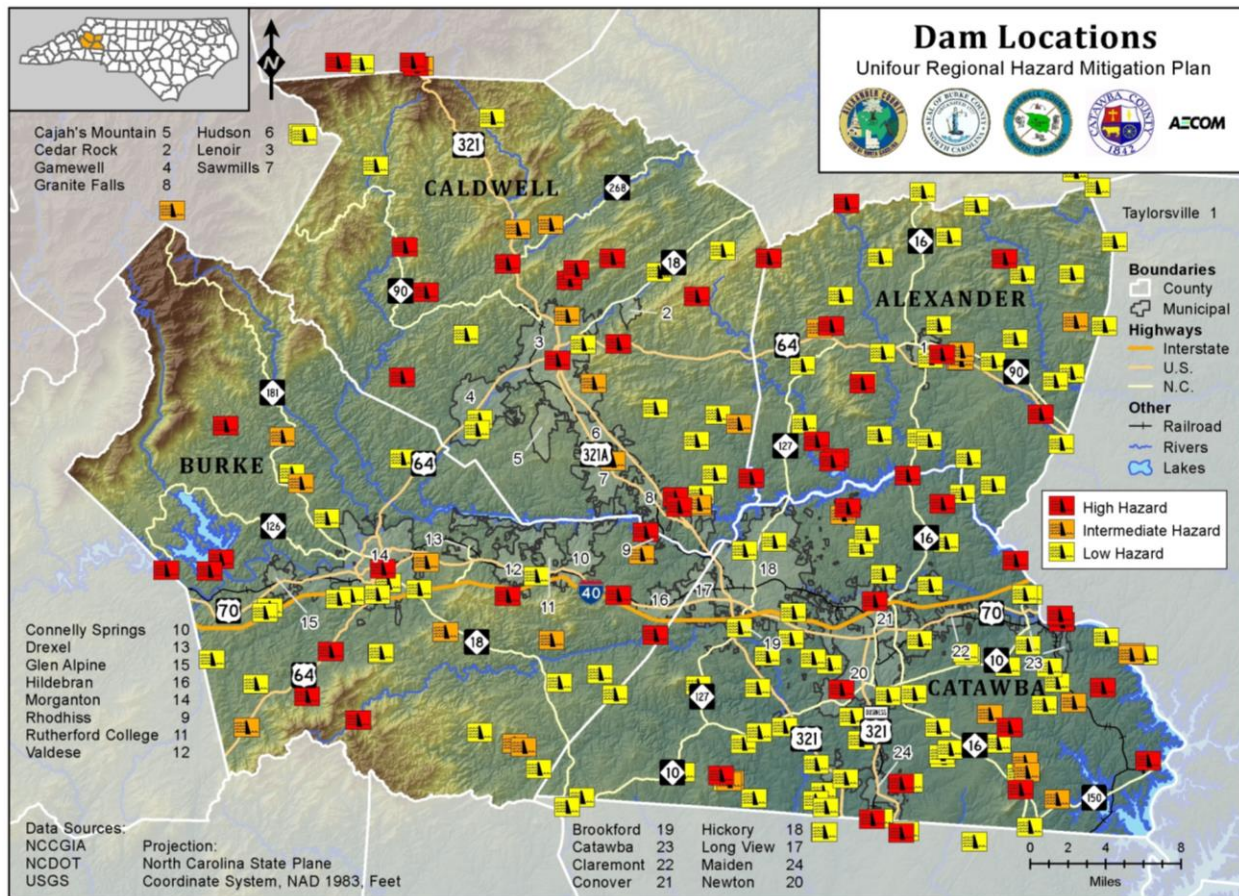
Two factors influence the potential severity of a dam failure: the amount of water impounded, and the density, type, and value of development and infrastructure located downstream. The potential extent of dam failure may be classified according to their “hazard potential,” meaning the probable damage that would occur if the structure failed, in terms of loss of human life and economic loss or environmental damage. The State of North Carolina classifies dam structures under its regulations according to hazard potential as described in **Table 4.245**. **Figure 4.95** provides locations of State-regulated dams. It is important to note that these classifications are not based on the adequacy or structural integrity of existing dam structures.

Table 4.245: Classification of Hazard Potential for North Carolina Dams

Hazard Classification	Description	Quantitative Guidelines
Low	1) Interruption of road service, low volume roads 2) Economic damage	1) Less than 25 vehicles per day 2) Less than \$30,000
Intermediate	1) Damage to highways, interruption of service 2) Economic damage	1) 25 to less than 250 vehicles per day 2) \$30,000 to less than \$200,000
High	1) Probable loss of human life due to breached roadway or bridge on or below the dam 2) Economic damage	1) Probable loss of 1 or more human lives 2) More than \$200,000

Source: North Carolina Dams Program, North Carolina Department of Environment and Natural Resources (NCDENR).

Figure 4.95: Locations of State-Regulated Dams



Historical Occurrences

No historical occurrences were identified in the planning area.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Dam Failure is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cahah's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Dam Failure Hazard Vulnerability

There is a fundamental limitation in the data available for vulnerability assessment for the dam/levee failure hazard in the planning area. Excellent data is available for GIS analysis, including point locations and mapped inundation areas, for the dams owned by Duke Energy Corporation. These include the Bridgewater Dam, Lookout Shoals Dam, Oxford Dam, and Rhodhiss Dam PMF Inundation Areas. These are large facilities that would undoubtedly have a profound impact on the planning area should a failure occur; however, such failures are considered to be extremely unlikely and the HMPC feels strongly that these are not the structures that are of concern to the Unifour Region. The dam structures that are of concern are smaller, privately owned, and unregulated dams for which no GIS data or inventories are currently available. These are the facilities that could and likely would cause the most damage and disruption should a more likely failure occur.

It has been determined therefore that presenting detailed risk assessment results for the Duke Energy facilities, even though data is available, would be misleading and unproductive for the purposes of mitigation planning. It has also been determined that any rudimentary calculations based on the point locations for the dams mapped by NCDENR would also be potentially misleading if any type of buffer or proximity analysis was performed to estimate surrounding impacts should a failure occur.

Any mitigation actions developed for this hazard therefore should be based on addressing data limitations, education and awareness programs, and/or any jurisdiction-specific concerns that may be addressable through an appropriate mitigation project.

The following tables provide counts and values by jurisdiction relevant to Dam Failure hazard vulnerability in the Unifour Regional HMP Area.

Table 4.246: Population Impacted by the Sunny Day Failure Dam Failure

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	0	0%	4,995	0	0%	1,961	0	0%
Town of Taylorsville	4,180	0	0%	632	0	0%	248	0	0%
Subtotal Alexander	37,196	0	0%	5627	0	0%	2209	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke									
Burke County (Unincorporated Area)	49,470	0	0%	7,997	0	0%	2,762	0	0%
City of Hickory	456	0	0%	74	0	0%	25	0	0%
City of Morganton	22,546	0	0%	3,645	0	0%	1,259	0	0%
Town of Connelly Springs	1,659	0	0%	268	0	0%	93	0	0%
Town of Drexel	5,506	0	0%	890	0	0%	307	0	0%
Town of Glen Alpine	1,964	0	0%	318	0	0%	110	0	0%
Town of Hildebran	1,945	0	0%	314	0	0%	109	0	0%
Town of Long View	698	0	0%	113	0	0%	39	0	0%
Town of Rhodhiss	640	0	0%	103	0	0%	36	0	0%
Town of Rutherford College	1,502	0	0%	243	0	0%	84	0	0%
Town of Valdese	4,387	0	0%	709	0	0%	245	0	0%
Subtotal Burke	90,773	0	0%	14674	0	0%	5069	0	0%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	0	0%	5,352	0	0%	1,940	0	0%
City of Hickory	51	0	0%	8	0	0%	3	0	0%
City of Lenoir	20,837	0	0%	3,216	0	0%	1,166	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Blowing Rock	51	0	0%	8	0	0%	3	0	0%
Town of Cahaj's Mountain	2,789	0	0%	430	0	0%	156	0	0%
Town of Gamewell	4,043	0	0%	624	0	0%	226	0	0%
Town of Granite Falls	7,104	0	0%	1,096	0	0%	397	0	0%
Town of Hudson	6,431	0	0%	992	0	0%	360	0	0%
Town of Rhodhiss	385	0	0%	59	0	0%	22	0	0%
Town of Sawmills	6,380	0	0%	985	0	0%	357	0	0%
Village of Cedar Rock	294	0	0%	45	0	0%	16	0	0%
Subtotal Caldwell	83,045	0	0%	12815	0	0%	4646	0	0%
Catawba									
Catawba County (Unincorporated Area)	70,017	0	0%	9,835	0	0%	4,368	0	0%
City of Claremont	1,957	0	0%	275	0	0%	122	0	0%
City of Conover	9,669	0	0%	1,358	0	0%	603	0	0%
City of Hickory	48,481	0	0%	6,810	0	0%	3,024	0	0%
City of Newton	14,214	0	0%	1,997	0	0%	887	0	0%
Town of Brookford	371	0	0%	52	0	0%	23	0	0%
Town of Catawba	1,152	0	0%	162	0	0%	72	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Long View	4,181	0	0%	587	0	0%	261	0	0%
Town of Maiden	4,964	0	0%	697	0	0%	310	0	0%
Subtotal Catawba	155,006	0	0%	21773	0	0%	9670	0	0%
TOTAL PLAN	366,020	0	0%	54889	0	0%	21594	0	0%

Source: GIS Analysis

Table 4.247: Population Impacted by the Overtopping Failure Dam Failure

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	0	0%	4,995	0	0%	1,961	0	0%
Town of Taylorsville	4,180	0	0%	632	0	0%	248	0	0%
Subtotal Alexander	37,196	0	0%	5627	0	0%	2209	0	0%
Burke									
Burke County (Unincorporated Area)	49,470	0	0%	7,997	0	0%	2,762	0	0%
City of Hickory	456	0	0%	74	0	0%	25	0	0%
City of Morganton	22,546	0	0%	3,645	0	0%	1,259	0	0%
Town of Connelly Springs	1,659	0	0%	268	0	0%	93	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Drexel	5,506	0	0%	890	0	0%	307	0	0%
Town of Glen Alpine	1,964	0	0%	318	0	0%	110	0	0%
Town of Hildebran	1,945	0	0%	314	0	0%	109	0	0%
Town of Long View	698	0	0%	113	0	0%	39	0	0%
Town of Rhodhiss	640	0	0%	103	0	0%	36	0	0%
Town of Rutherford College	1,502	0	0%	243	0	0%	84	0	0%
Town of Valdese	4,387	0	0%	709	0	0%	245	0	0%
Subtotal Burke	90,773	0	0%	14674	0	0%	5069	0	0%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	0	0%	5,352	0	0%	1,940	0	0%
City of Hickory	51	0	0%	8	0	0%	3	0	0%
City of Lenoir	20,837	0	0%	3,216	0	0%	1,166	0	0%
Town of Blowing Rock	51	0	0%	8	0	0%	3	0	0%
Town of Cahaj's Mountain	2,789	0	0%	430	0	0%	156	0	0%
Town of Gamewell	4,043	0	0%	624	0	0%	226	0	0%
Town of Granite Falls	7,104	0	0%	1,096	0	0%	397	0	0%
Town of Hudson	6,431	0	0%	992	0	0%	360	0	0%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Rhodhiss	385	0	0%	59	0	0%	22	0	0%
Town of Sawmills	6,380	0	0%	985	0	0%	357	0	0%
Village of Cedar Rock	294	0	0%	45	0	0%	16	0	0%
Subtotal Caldwell	83,045	0	0%	12815	0	0%	4646	0	0%
Catawba									
Catawba County (Unincorporated Area)	70,017	0	0%	9,835	0	0%	4,368	0	0%
City of Claremont	1,957	0	0%	275	0	0%	122	0	0%
City of Conover	9,669	0	0%	1,358	0	0%	603	0	0%
City of Hickory	48,481	0	0%	6,810	0	0%	3,024	0	0%
City of Newton	14,214	0	0%	1,997	0	0%	887	0	0%
Town of Brookford	371	0	0%	52	0	0%	23	0	0%
Town of Catawba	1,152	0	0%	162	0	0%	72	0	0%
Town of Long View	4,181	0	0%	587	0	0%	261	0	0%
Town of Maiden	4,964	0	0%	697	0	0%	310	0	0%
Subtotal Catawba	155,006	0	0%	21773	0	0%	9670	0	0%
TOTAL PLAN	366,020	0	0%	54889	0	0%	21594	0	0%

Source: GIS Analysis

Table 4.248: Buildings Impacted by the Sunny Day Failure Dam Failure

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Taylorsville	2,823	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Alexander	27,486	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Burke															
Burke County (Unincorporated Area)	28,091	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Morganton	10,727	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Connelly Springs	889	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Drexel	2,949	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Glen Alpine	1,086	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hildebran	1,069	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rutherford College	827	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Valdese	2,132	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Burke	47,770	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Caldwell															
Caldwell County (Unincorporated Area)	20,773	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Cahah's Mountain	1,350	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Gamewell	2,062	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Granite Falls	3,394	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hudson	3,116	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rhodhiss	490	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Sawmills	3,234	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Village of Cedar Rock	135	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Caldwell	44,870	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Catawba															
Catawba County (Unincorporated Area)	50,060	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Claremont	1,351	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Conover	5,089	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Hickory	22,507	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Newton	7,657	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Brookford	304	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Catawba	1,016	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Long View	2,716	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Maiden	3,230	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Catawba	93,930	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
TOTAL PLAN	214,056	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Source: GIS Analysis

Table 4.249: Buildings Impacted by the Overtopping Failure Dam Failure

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Taylorsville	2,823	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Alexander	27,486	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Burke															
Burke County (Unincorporated Area)	28,091	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Morganton	10,727	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Connelly Springs	889	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Drexel	2,949	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Glen Alpine	1,086	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hildebran	1,069	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rutherford College	827	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Valdese	2,132	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Burke	47,770	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Caldwell															
Caldwell County (Unincorporated Area)	20,773	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Lenoir	10,316	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Cahaj's Mountain	1,350	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Gamewell	2,062	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Granite Falls	3,394	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Hudson	3,116	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Rhodhiss	490	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Sawmills	3,234	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Village of Cedar Rock	135	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Caldwell	44,870	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Catawba															
Catawba County (Unincorporated Area)	50,060	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Claremont	1,351	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Conover	5,089	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Hickory	22,507	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
City of Newton	7,657	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Brookford	304	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Catawba	1,016	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Long View	2,716	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Town of Maiden	3,230	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
Subtotal Catawba	93,930	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0
TOTAL PLAN	214,056	0	0%	0	0%	\$0	0	0%	\$0	0	0%	\$0	0	0%	\$0

Source: GIS Analysis

4.5.9 Hail

Hailstorms are another potential damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation—as balls or irregularly shaped masses of ice greater than 0.75 in. (1.91 cm) in diameter. The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size.

Hail Hazard Analysis

Hail is a product of thunderstorms or intense showers. Hail is generally white and translucent, consisting of liquid or snow particles encased with layers of ice. Hail is formed within the high portion of a well-organized thunderstorm. When hailstones become too heavy to be caught in an updraft and carried back into the clouds of a thunderstorm (hailstones can be caught in numerous updrafts, adding a coating of ice to the original frozen droplets each time), they then fall as hail, and a hailstorm occurs.

Location within the Planning Area

Thunderstorms are widespread atmospheric disturbances that are not isolated to a specific geographic location. Therefore it is assumed that the entire planning area is exposed to these hazards. However, it is possible to map historic hail reporting by diameter as an indication of where in the plan area these hazards have previously been observed and to what degree.

Figure 4.96: Hail Hazard Areas

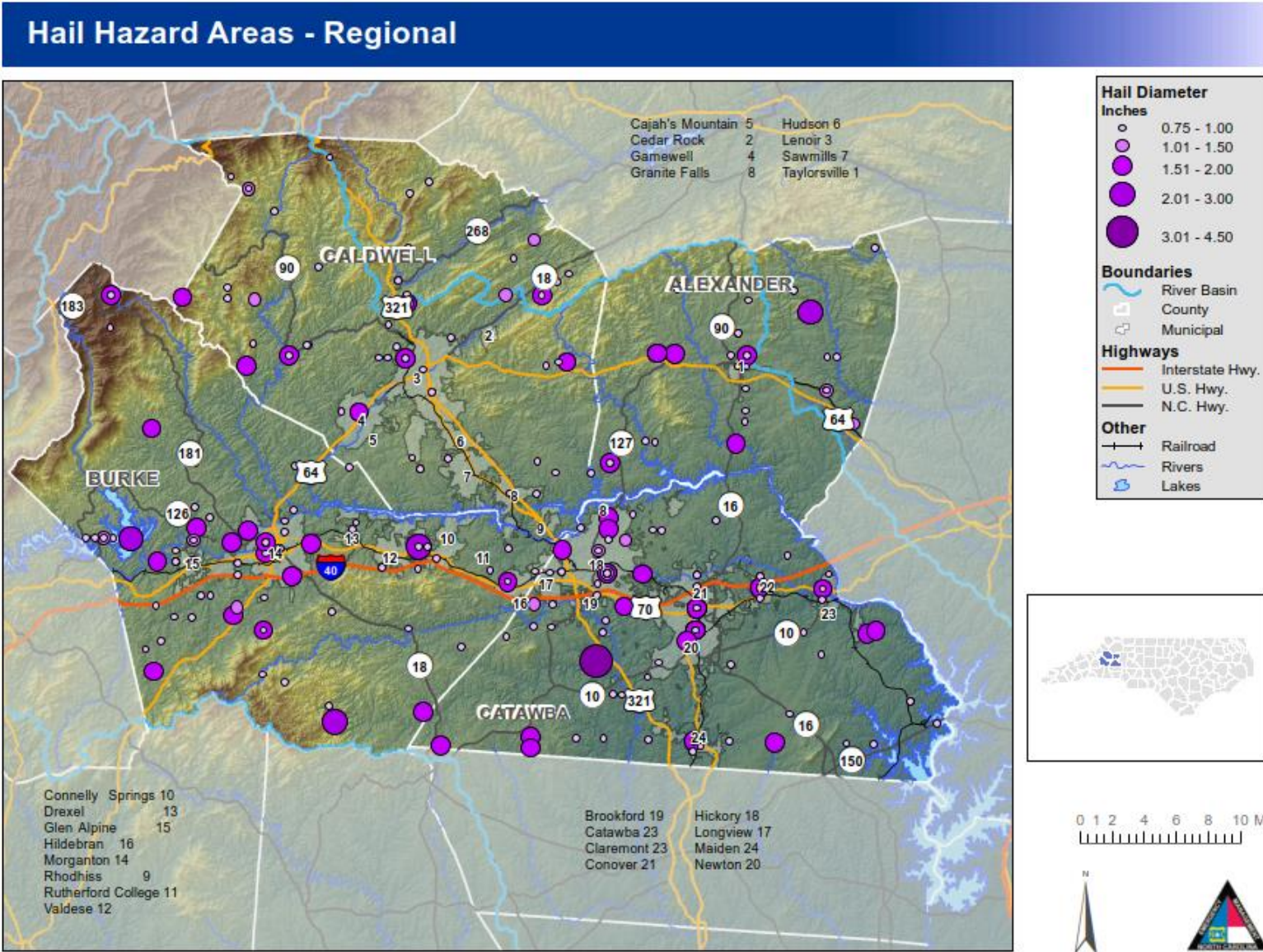


Figure 4.97: Hail Hazard Areas

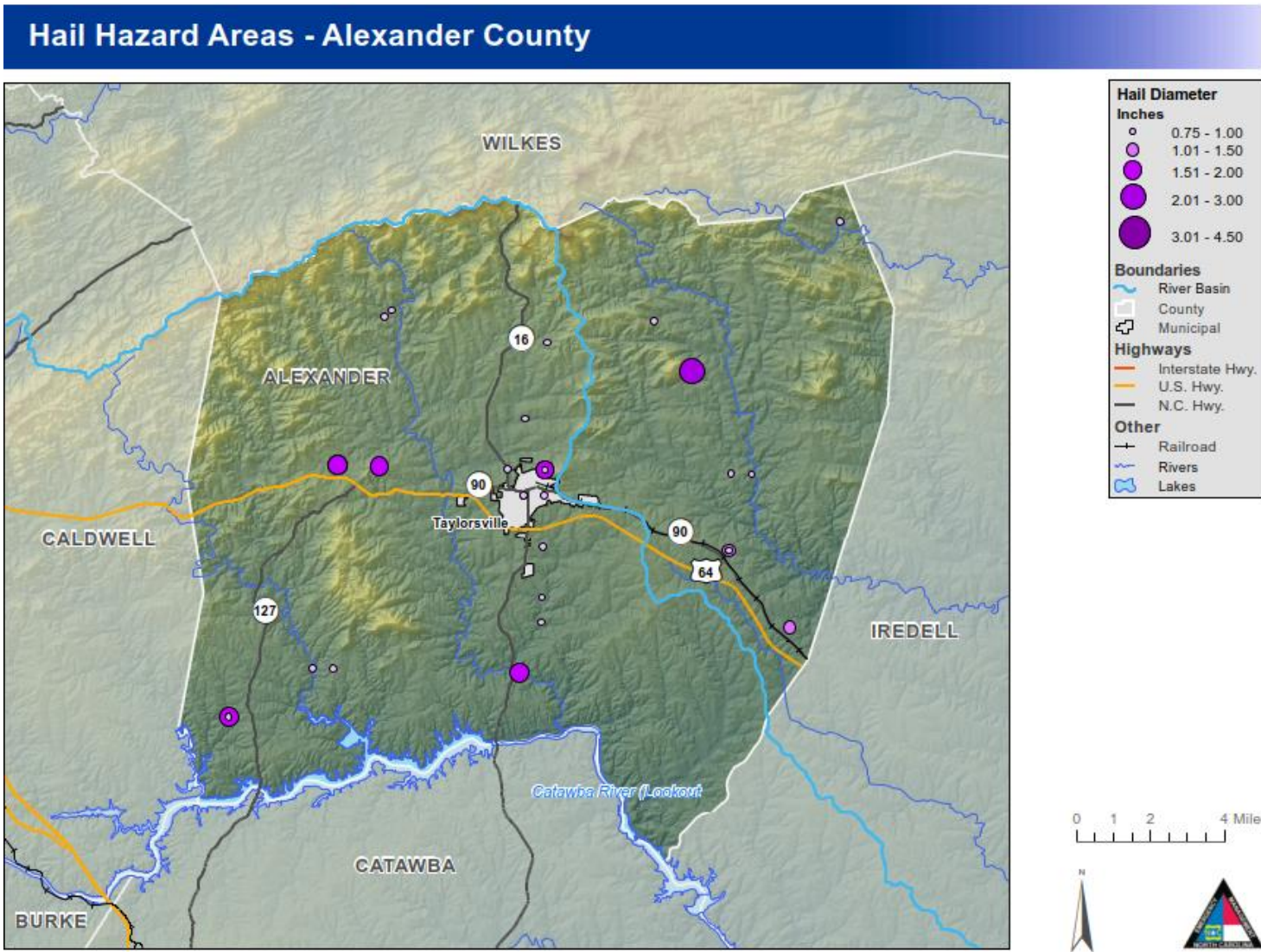


Figure 4.98: Hail Hazard Areas

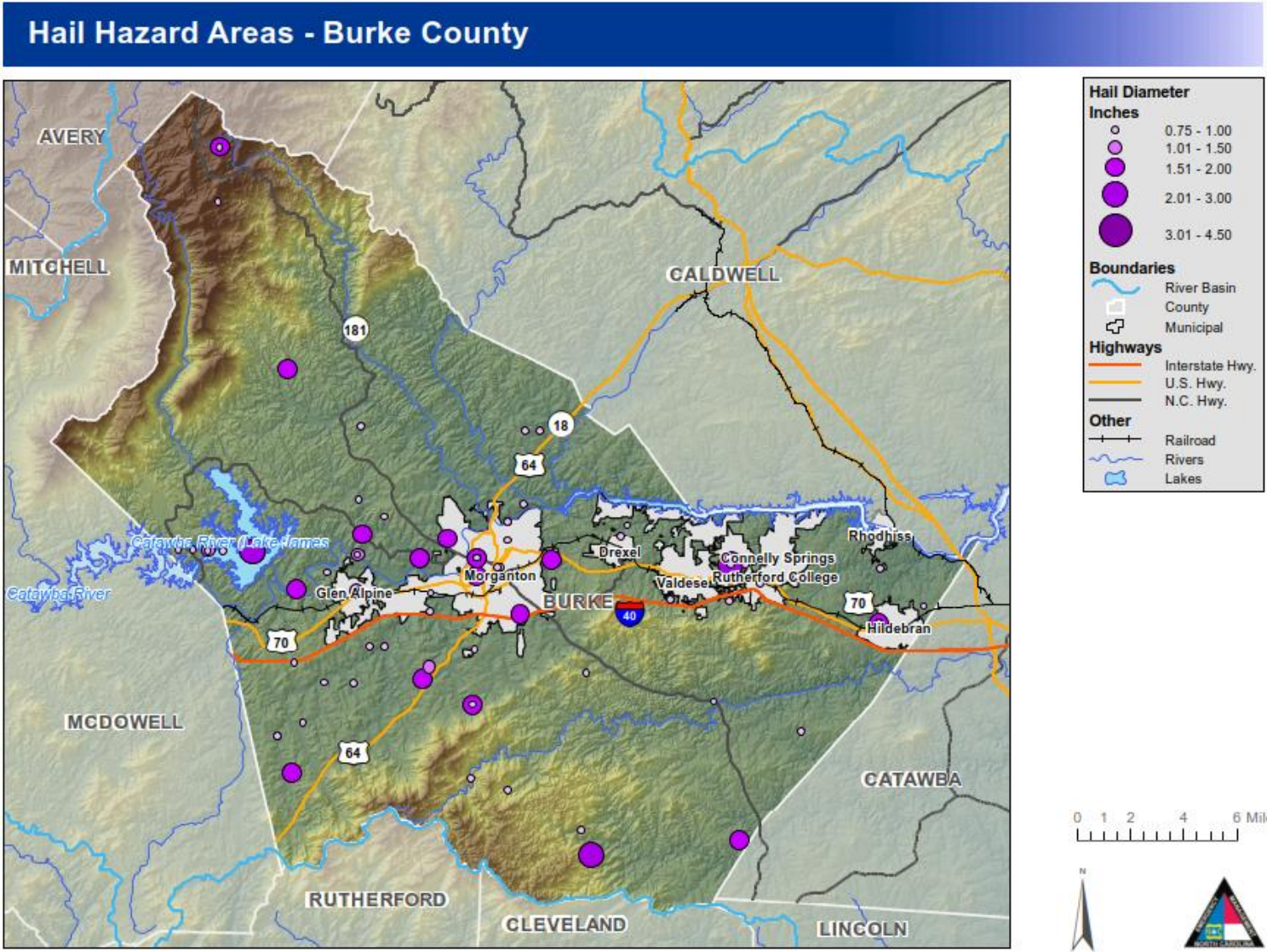


Figure 4.99: Hail Hazard Areas

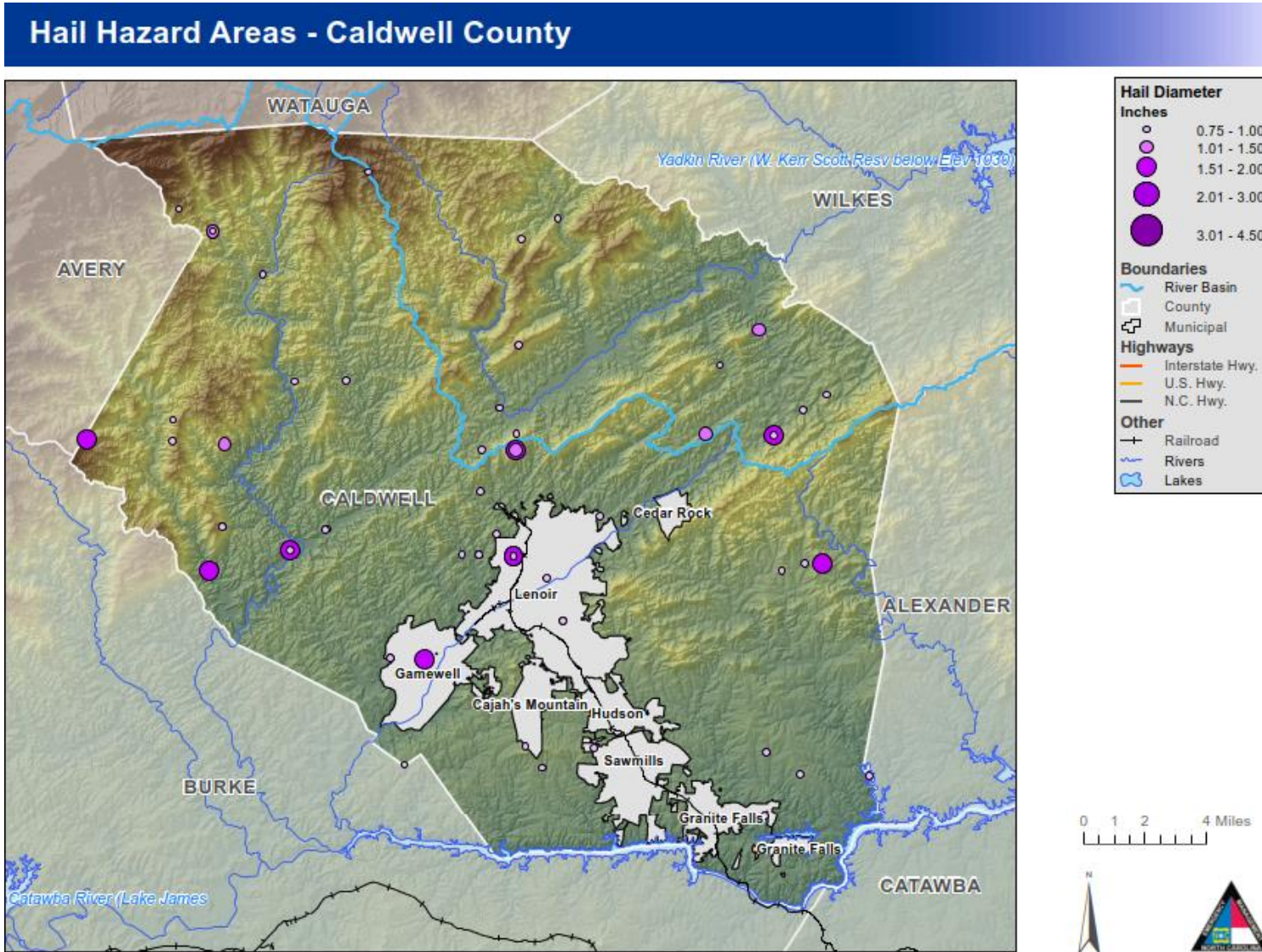
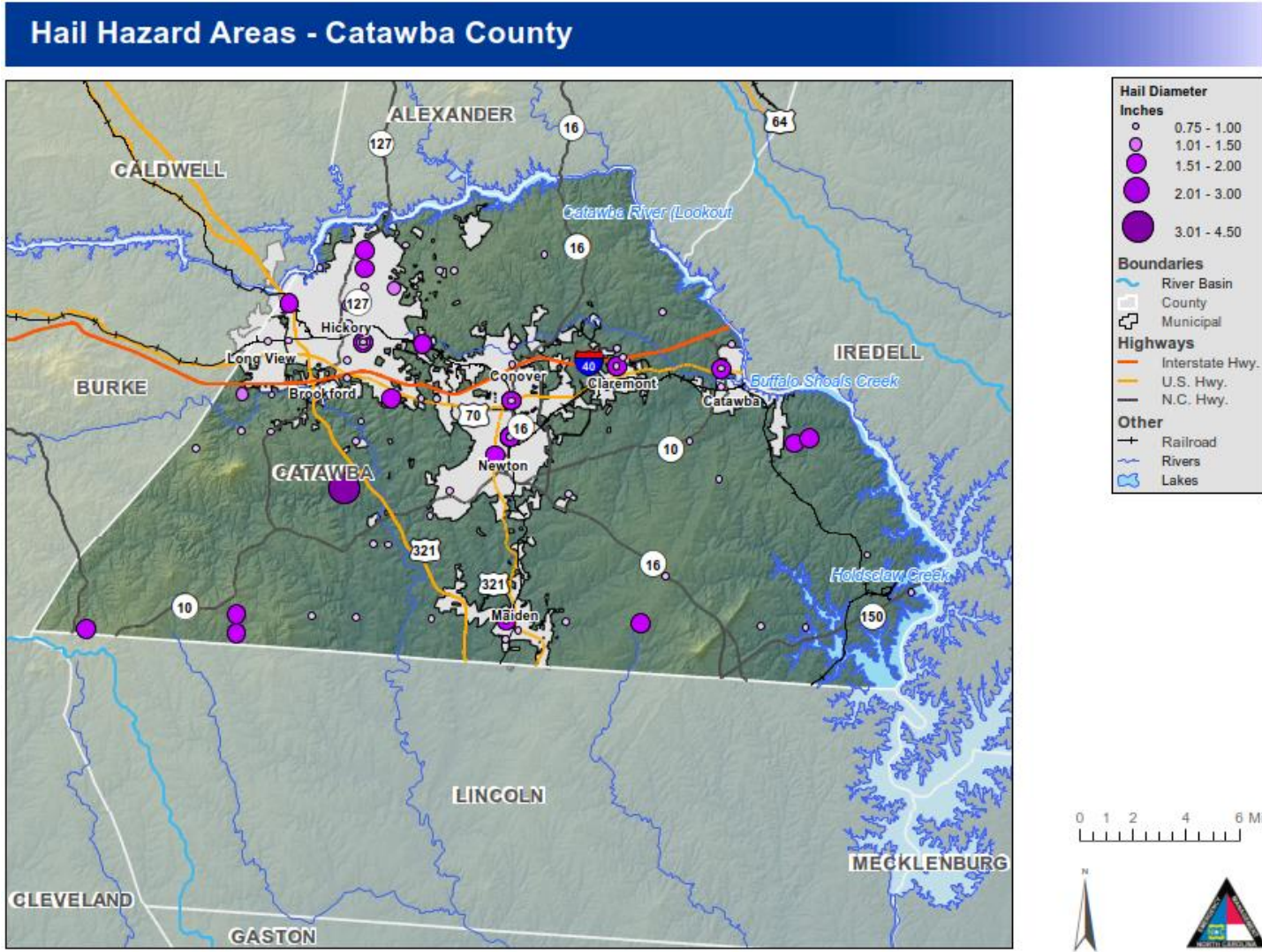


Figure 4.100: Hail Hazard Areas



Extent (Magnitude and Severity)

Definition:

The TORRO Hailstorm Intensity Scale (H0 to H10) in relation to typical damage and hail size codes. Size codes are presented in **Table 4.250**.

Table 4.250: TORRO Hailstorm Intensity Scale

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m2	Typical Damage Impacts
H0	Hard Hail	5	0-20	No damage
H1	Potentially Damaging	5-15	>20	Slight general damage to plants, crops
H2	Significant	10-20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		Severe roof damage, risk of serious injuries
H8	Destructive	60-90		(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75- 100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

* Approximate range (typical maximum size in bold), since other factors (e.g. number and density of hailstones, hail fall speed and surface wind speeds) affect severity.

Table 4.251: Hail Size and Diameter

Size code	Maximum Diameter mm	Description
0	5-9	Pea
1	10-15	Mothball
2	16-20	Marble, grape
3	21-30	Walnut
4	31-40	Pigeon's egg > squash ball
5	41-50	Golf ball > Pullet's egg
6	51-60	Hen's egg
7	61-75	Tennis ball > cricket ball
8	76-90	Large orange > Soft ball
9	91-100	Grapefruit
10	>100	Melon

The Size Code is the maximum reported size code accepted as consistent with other reports and evidence.

Extent Event:

Hail is known to be damaging hazard occurrences in the Unifour Region that can result in multiple injuries and high losses in property damages. The largest recorded size of a hailstone in the planning area (according to NCDC) is 4.5 inches reported in Morganton in Burke County (in 2000) and in Newton in Catawba County (in 1998).

Historical Occurrences

The following historical occurrences have been identified based on the NCDC Storm Events database in **Table 4.252** from 1951-2018. It should be noted that only those historical occurrences listed in the NCDC database are shown here and that other, unrecorded or unreported events may have occurred within the planning area during this timeframe.

Table 4.252: Historical Occurrences of Hail

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Alexander						
Alexander County (Unincorporated Area)	40	0	0	\$0	\$0	
Town of Taylorsville	13	0	0	\$0	\$0	
Subtotal Alexander	53 Events	0	0	\$0	\$0	
Burke						
Burke County (Unincorporated Area)	100	0	0	\$1,000	\$0	
City of Morganton	49	0	0	\$0	\$0	
Town of Connelly Springs	1	0	0	\$0	\$0	
Town of Drexel	6	0	0	\$0	\$0	
Town of Glen Alpine	8	0	0	\$0	\$0	
Town of Hildebran	5	0	0	\$0	\$0	
Town of Rutherford College	3	0	0	\$0	\$0	
Town of Valdese	3	0	0	\$0	\$0	

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Subtotal Burke	175 Events	0	0	\$1,000	\$0	
Caldwell						
Caldwell County (Unincorporated Area)	64	0	0	\$51,000	\$0	
City of Lenoir	28	0	0	\$0	\$0	
Town of Gamewell	3	0	0	\$0	\$0	
Town of Granite Falls	7	0	0	\$0	\$0	
Town of Hudson	2	0	0	\$0	\$0	
Town of Sawmills	2	0	0	\$0	\$0	
Subtotal Caldwell	106 Events	0	0	\$51,000	\$0	
Catawba						
Catawba County (Unincorporated Area)	40	0	0	\$1,000	\$0	
City of Claremont	14	0	0	\$0	\$0	
City of Conover	22	0	0	\$0	\$0	
City of Hickory	53	0	0	\$0	\$0	
City of Newton	16	0	0	\$10,000,000	\$0	
Town of Catawba	5	0	0	\$0	\$0	
Town of Long View	2	0	0	\$0	\$0	

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Town of Maiden	8	0	0	\$0	\$0	
Subtotal Catawba	160 Events	0	0	\$10,001,000	\$0	
TOTAL PLAN	494 Events	0	0	\$10,053,000	\$0	

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

According to NCDC, 494 recorded instances of hail conditions have affected the planning area causing an estimated \$10,053,000 in property damages, \$0 in crop damages, 0 death(s), and 0 reported injuries.

Table 4.253 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.253: Summary of Historical Hail Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander							
Alexander County (Unincorporated Area)	40	0	0	\$0	\$0	\$0	\$0
Town of Taylorsville	13	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	53	0	0	\$0	\$0	\$0	\$0
Burke							
Burke County (Unincorporated Area)	100	0	0	\$1,000	\$450	\$0	\$0
City of Morganton	49	0	0	\$0	\$0	\$0	\$0
Town of Connelly Springs	1	0	0	0	\$0	0	\$0

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Town of Drexel	6	0	0	0	\$0	0	\$0
Town of Glen Alpine	8	0	0	\$0	\$0	\$0	\$0
Town of Hildebran	5	0	0	\$0	\$0	\$0	\$0
Town of Rutherford College	3	0	0	0	\$0	0	\$0
Town of Valdese	3	0	0	0	\$0	0	\$0
Subtotal Burke	175	0	0	\$1,000	\$450	\$0	\$0
Caldwell							
Caldwell County (Unincorporated Area)	64	0	0	\$51,000	\$18,671	\$0	\$0
City of Lenoir	28	0	0	\$0	\$0	\$0	\$0
Town of Gamewell	3	0	0	\$0	\$0	\$0	\$0
Town of Granite Falls	7	0	0	\$0	\$0	\$0	\$0
Town of Hudson	2	0	0	0	\$0	0	\$0
Town of Sawmills	2	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	106	0	0	\$51,000	\$18,671	\$0	\$0
Catawba							
Catawba County (Unincorporated Area)	40	0	0	\$1,000	\$110	\$0	\$0
City of Claremont	14	0	0	\$0	\$0	\$0	\$0
City of Conover	22	0	0	\$0	\$0	\$0	\$0

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
City of Hickory	53	0	0	\$0	\$0	\$0	\$0
City of Newton	16	0	0	\$10,000,000	\$3,102,625	\$0	\$0
Town of Catawba	5	0	0	0	\$0	0	\$0
Town of Long View	2	0	0	\$0	\$0	\$0	\$0
Town of Maiden	8	0	0	\$0	\$0	\$0	\$0
Subtotal Catawba	160	0	0	\$10,001,000	\$3,102,735	\$0	\$0
TOTAL PLAN	494	0	0	\$10,053,000	\$3,121,856	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

Probability of Future Occurrences

The probability of future Hail is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cahj's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low

Jurisdiction	Probability of Future Occurrence
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Hail Hazard Vulnerability

All of the inventoried assets in the Unifour Region are exposed to hail. Any specific vulnerability of individual assets depends greatly on individual design, building characteristics, and any existing mitigation measures currently in place. Such site-specific vulnerability determinations are outside the scope of this risk assessment but may be considered during future plan updates.

4.5.10 Drought

Drought is a natural climatic condition caused by an extended period of limited rainfall beyond that which occurs naturally in a broad geographic area. High temperatures, high winds and low humidity can worsen drought conditions, and can make areas more susceptible to wildfire. Human demands and actions can also hasten drought-related impacts.

Droughts are frequently classified as one of four types: meteorological, agricultural, hydrological or socio-economic. Meteorological droughts are typically defined by the level of “dryness” when compared to an average or normal amount of precipitation over a given period of time. Agricultural droughts relate common characteristics of drought to their specific agricultural-related impacts. Emphasis tends to be placed on factors such as soil water deficits, water needs based on differing stages of crop development, and water reservoir levels. Hydrological drought is directly related to the effect of precipitation shortfalls on surface and groundwater supplies. Human factors, particularly changes in land use, can alter the hydrologic characteristics of a basin. Socio-economic drought is the result of water shortages that limit the ability to supply water-dependent products in the marketplace.

Drought Hazard Analysis

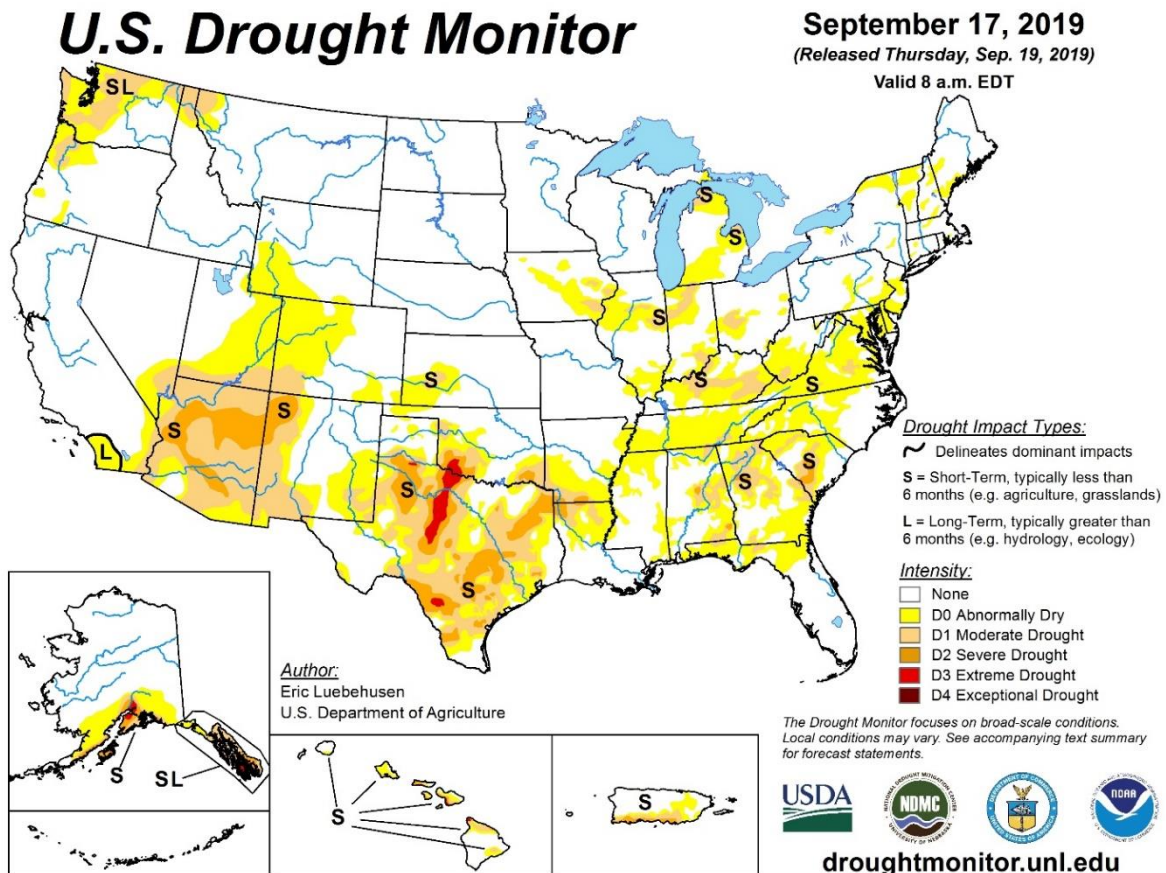
Drought conditions typically do not cause property damages or threaten lives, but rather drought effects are most directly felt by agricultural sectors. At times, drought may also cause community-wide impacts as a result of acute water shortages (regulatory use restrictions, drinking water supply, and salt water intrusion). The magnitude of such impacts correlates directly with local groundwater supplies, reservoir storage, and development densities. Drought conditions can also contribute to or exacerbate extreme heat concerns, particularly with regard to elderly populations.

Location within the Planning Area

Typically the National Weather Service looks at drought and extreme heat as episodes that impact a widespread forecast “zone,” and therefore it is not common to pinpoint a specific location within a planning area that is more susceptible to these hazards than others. From this view point, each county is considered uniformly at risk to drought and extreme heat. However, the most significant financial losses are likely to occur in areas that are primarily agricultural.

The below figure shows the US Drought Monitor summary map for the United States Through September 2019.

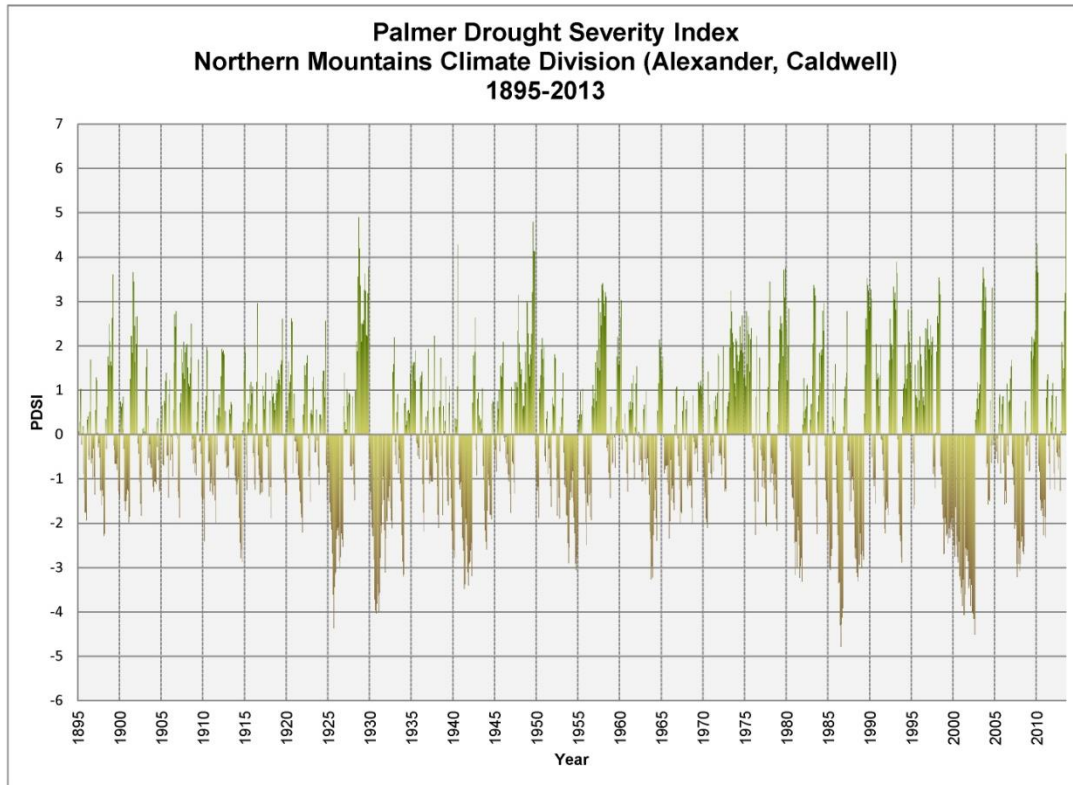
Figure 4.101: U.S. Drought Monitor



Source: NOAA

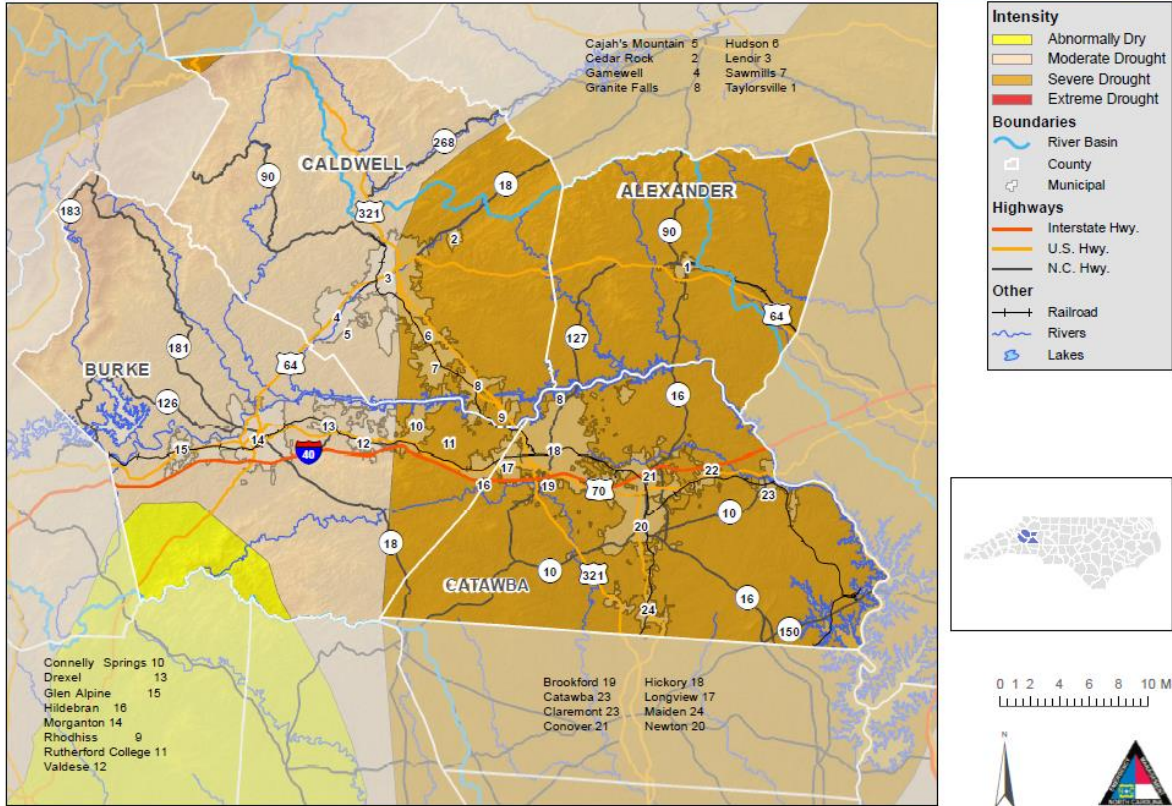
The below figure shows the most recent Palmer Drought Severity Index summary map for the Unifour Region from 1895-2013. PDSI drought classifications are based on observed drought conditions and range from -0.5 (incipient dry spell) to -4.0 (extreme drought). As can be seen, the Eastern United States has historically not seen as many significant long-term droughts as the Central and Western regions of the country.

Figure 4.102: Palmer Drought Severity Index for the Northern Mountains Climate Division

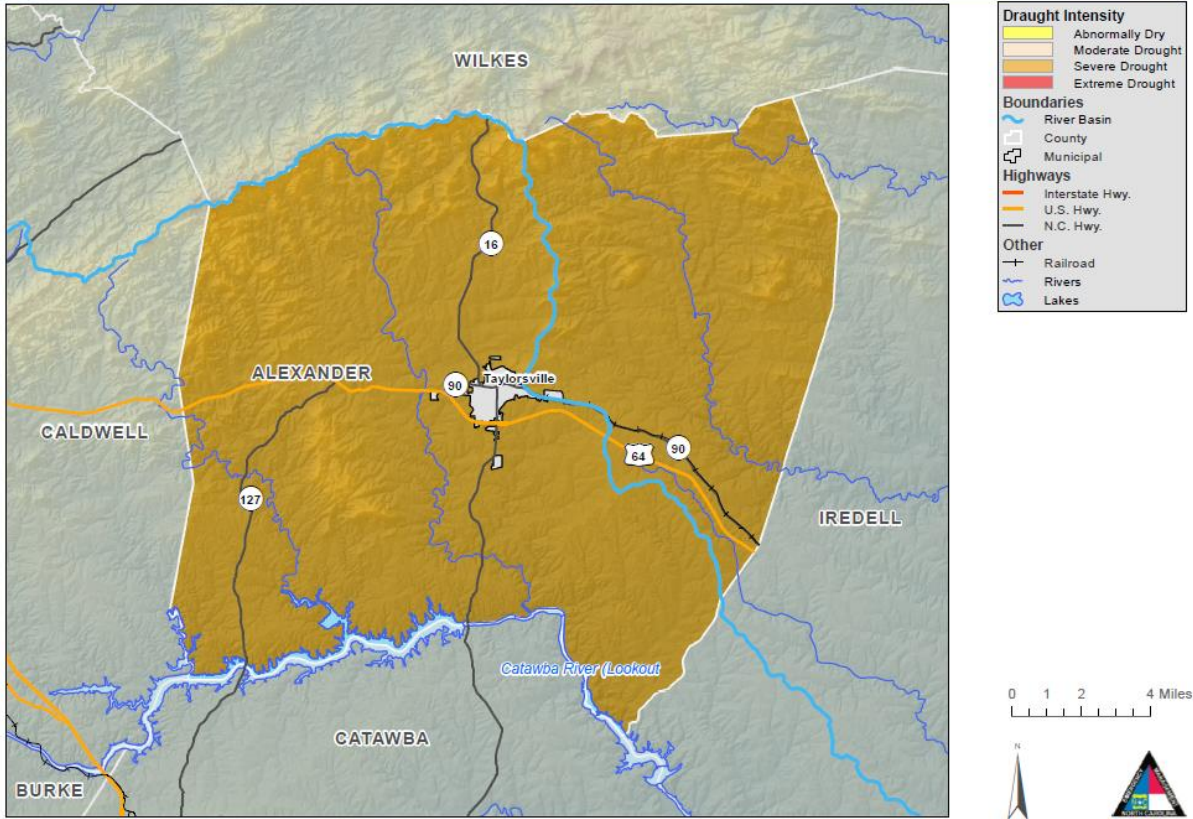


Source: *ClimateDataGuide*

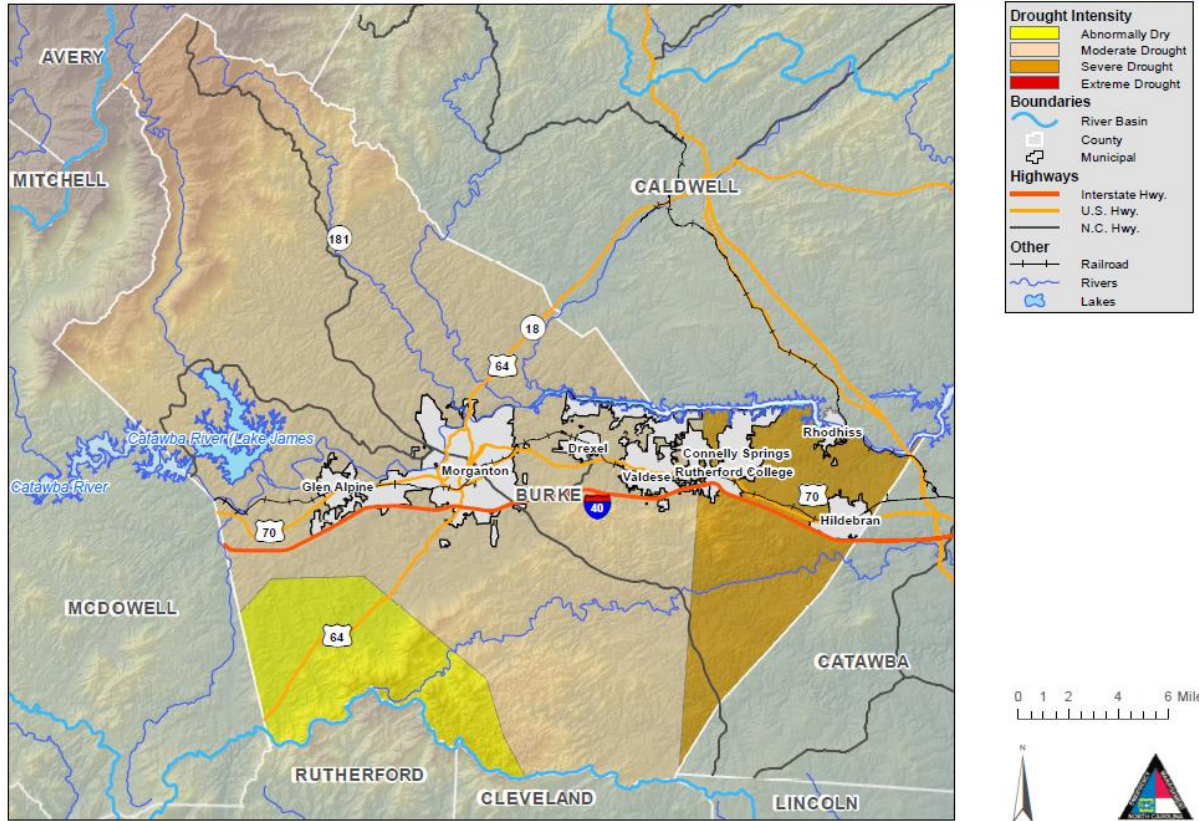
Drought Hazard Areas - Regional



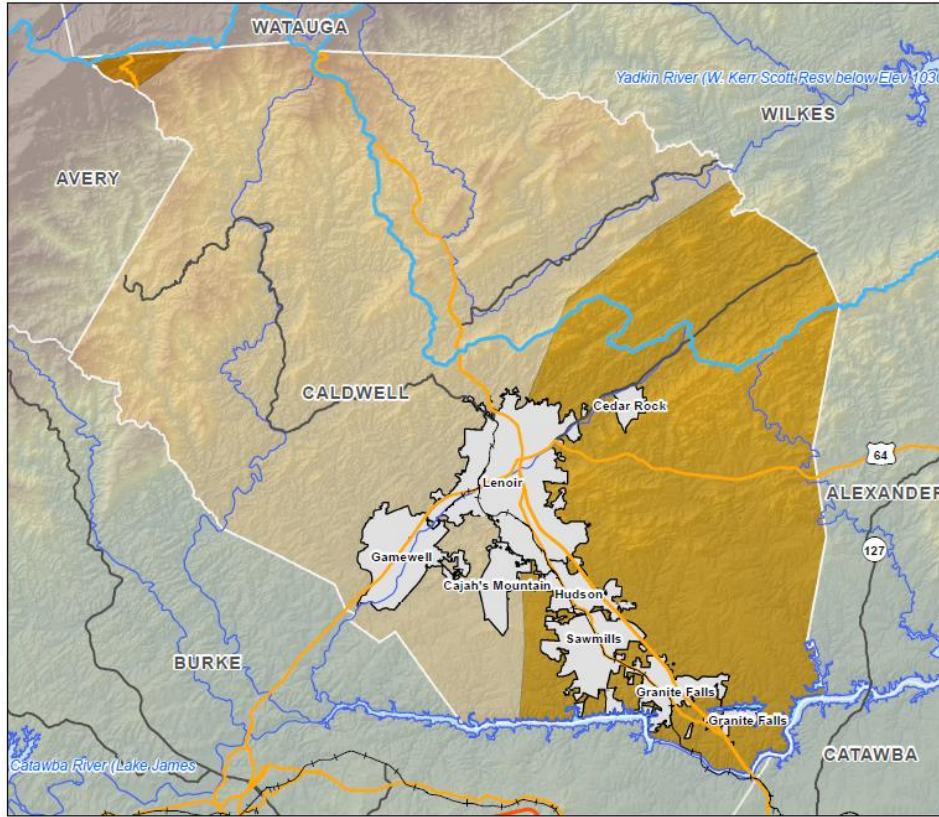
Drought Hazard Areas - Alexander County



Drought Hazard Areas - Burke County



Drought Hazard Areas - Caldwell County



Drought Intensity

- Abnormally Dry
- Moderate Drought
- Severe Drought
- Extreme Drought

Boundaries

- River Basin
- County
- Municipal

Highways

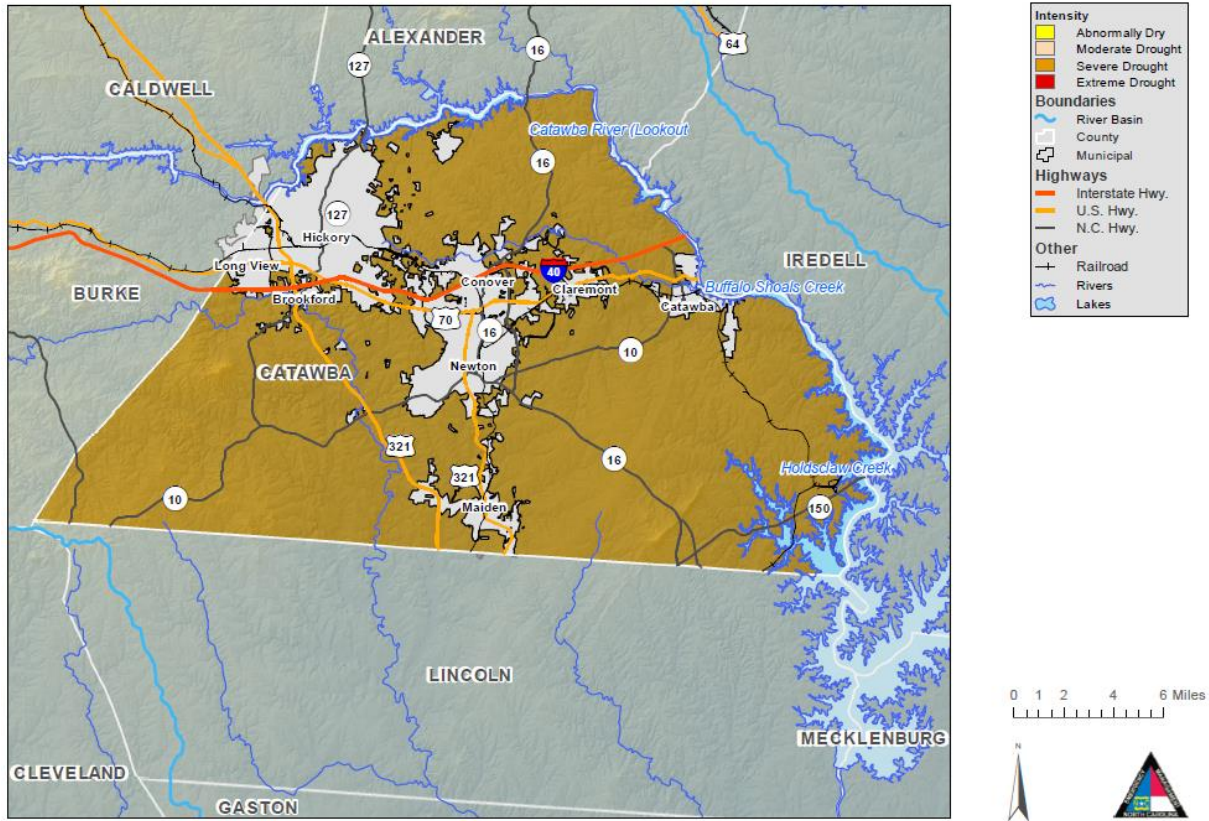
- Interstate Hwy.
- U.S. Hwy.
- N.C. Hwy.

Other

- Railroad
- Rivers
- Lakes



Drought Hazard Areas - Catawba County



Extent (Magnitude and Severity)

Definition:

Drought extent is defined by the North Carolina Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the North Carolina Drought Monitor Classifications, the most severe drought condition is Exceptional.

Extent Event:

The highest recorded event for the planning area was all counties (Alexander, Burke, Caldwell, Catawba) from December 2007-March 2008. According to the North Carolina Drought Monitor, all four counties and twenty four jurisdictions (Taylorsville, Connelly Springs, Drexel, Glen Alpine, Hildebran, Rhodhiss, Morganton, Rutherford College, Valdese, Cahah's Mountain, Cedar Rock, Gamewell, Granite Falls, Hudson, Lenoir, Sawmills, Brookford, Catawba, Claremont, Conover, Hickory, Longview, Maiden, Newton) were in a D4 (Exceptional Drought) for this time period.

Historical Occurrences

The following historical occurrences of drought ranging from 1998 to 2019 have been identified based on the NCDC Storm Events database

Table 4.254. It should be noted that only those historical occurrences listed in the NCDC database are shown here and that other, unrecorded or unreported events may have occurred within the planning area during this timeframe.

Table 4.254: Historical Occurrences of Drought (1998 to 2019)

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander								
Alexander County (Unincorporated Area)	07/01/98	Standard	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	1 Events		0	0	\$0	\$0	\$0	\$0
Burke								
Burke County (Unincorporated Area)	07/01/98	Standard	0	0	\$0	\$0	\$0	\$0
Subtotal Burke	1 Events		0	0	\$0	\$0	\$0	\$0
Caldwell								
Caldwell County (Unincorporated Area)	07/01/98	Standard	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	1 Events		0	0	\$0	\$0	\$0	\$0
Catawba								
Catawba County (Unincorporated Area)	07/01/98	Standard	0	0	\$0	\$0	\$0	\$0
Subtotal Catawba	1 Events		0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4 Events		0	0	\$0	\$0	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

According to NCDC 4 recorded instances of Drought conditions have affected the planning area since 1998 causing an estimated \$0 in losses to property, \$0 in losses to agricultural crops, 0 death(s), and 0 injury(ies).

Table 4.255 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.255: Summary of Historical Drought Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander							
Alexander County (Unincorporated Area)	1	0	0	\$0	\$0	\$0	\$0
Subtotal Alexander	1	0	0	\$0	\$0	\$0	\$0
Burke							
Burke County (Unincorporated Area)	1	0	0	\$0	\$0	\$0	\$0
Subtotal Burke	1	0	0	\$0	\$0	\$0	\$0
Caldwell							
Caldwell County (Unincorporated Area)	1	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	1	0	0	\$0	\$0	\$0	\$0
Catawba							
Catawba County (Unincorporated Area)	1	0	0	\$0	\$0	\$0	\$0
Subtotal Catawba	1	0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4	0	0	\$0	\$0	\$0	\$0

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

Probability of Future Occurrences

The probability of future Drought is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Medium
City of Conover	Medium
City of Hickory	Medium
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	Medium
Town of Brookford	Medium
Town of Cahaj's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium
Town of Hildebran	Medium

Jurisdiction	Probability of Future Occurrence
Town of Hudson	Medium
Town of Long View	Medium
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium
Town of Sawmills	Medium
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Drought Hazard Vulnerability

It is estimated that annualized losses to the drought hazard will decrease over time due to the continued trend of decreasing agricultural production within the Region, much of which has to do with decreases in the number of farms and land available for farming. While future agricultural losses may decrease other sectors of the Region that are dependent on water supply will likely continue to experience future economic impacts during periods of severe to extreme drought conditions.

4.5.11 Hurricane Winds

Hurricanes and tropical storms, along with nor’easters and typhoons, are classified as cyclones and are any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones act as a “safety-valve,” limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation, and tornadoes. Coastal areas are particularly vulnerable to storm surge, wind-driven waves, and tidal flooding which can prove more destructive than cyclone wind.

The key energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Their formation requires a low-pressure disturbance, warm sea surface temperature, rotational force from the spinning of the earth, and the absence of wind shear in the lowest 50,000 feet of the atmosphere. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June

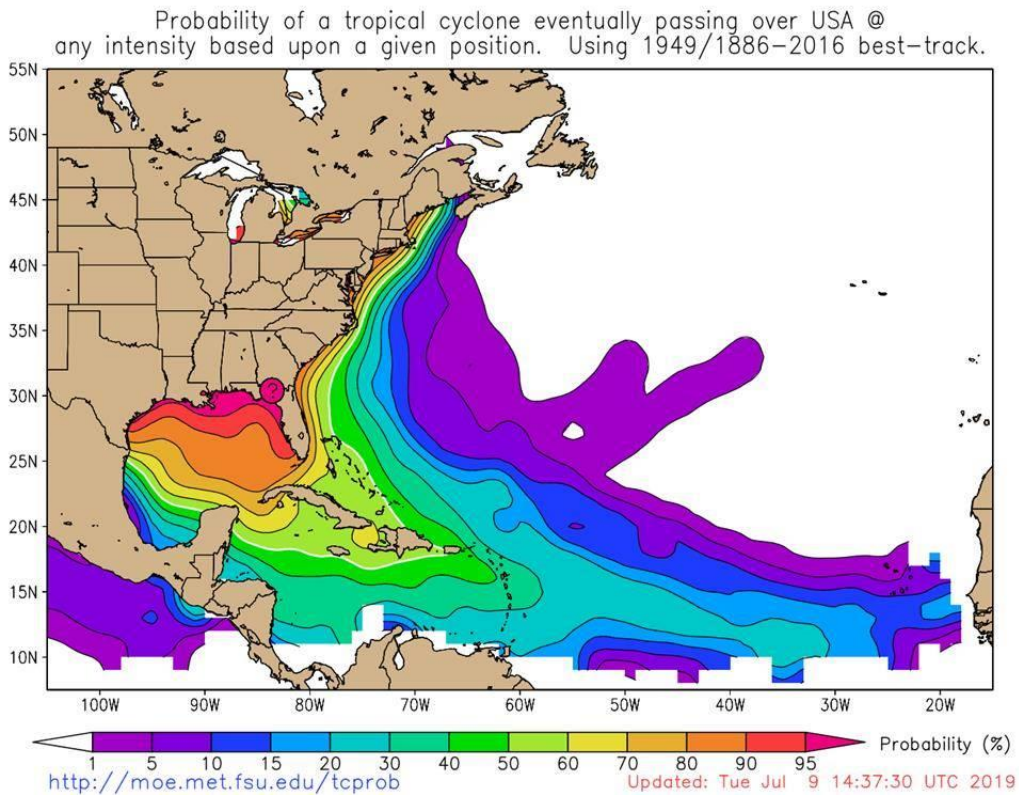
through November. The peak of the Atlantic hurricane season is in early to mid-September. Based on a long-term average, approximately six storms reach hurricane intensity per year.

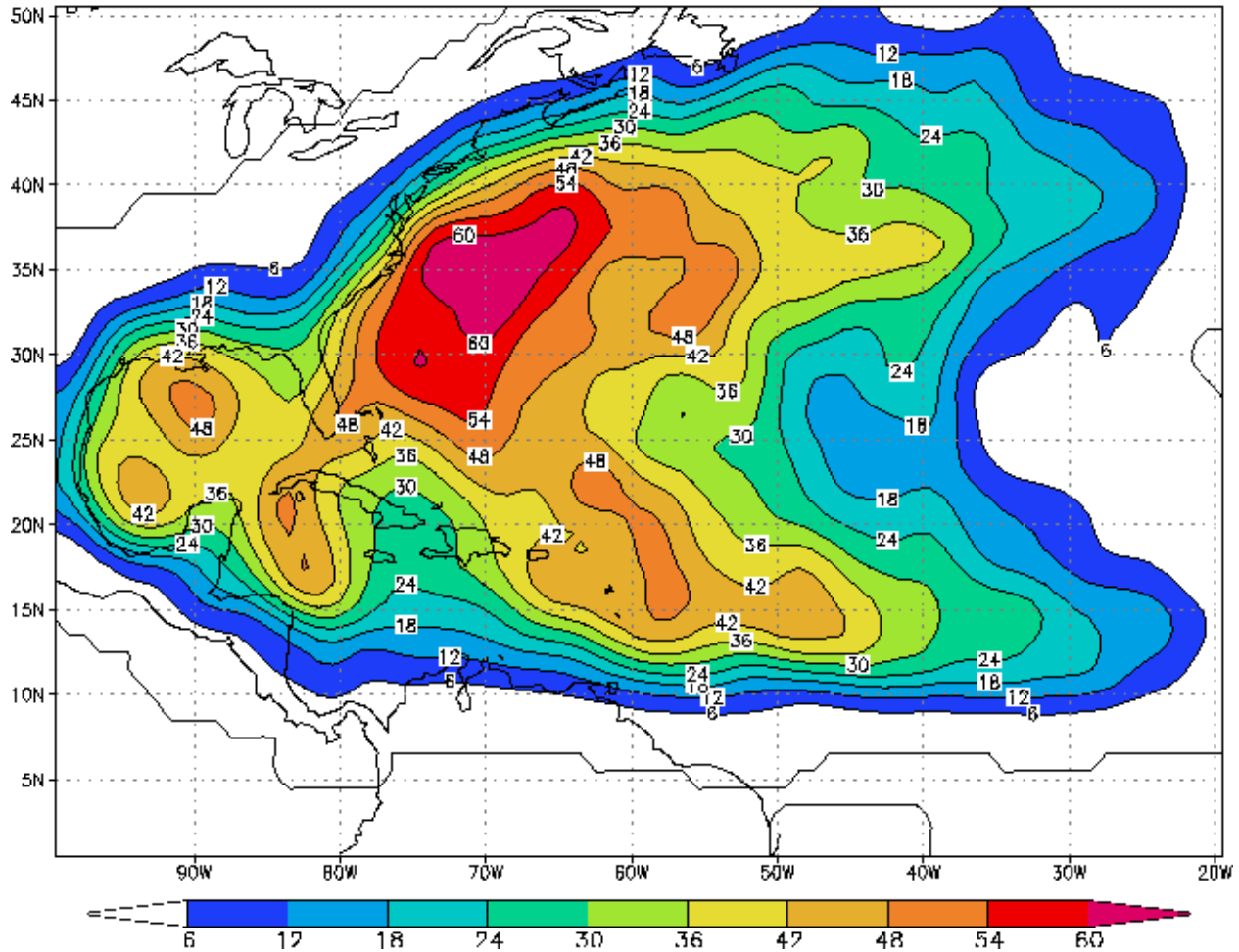
Figure 4.103 shows, for any particular location, the chance of a hurricane or tropical storm affecting the area sometime during the Atlantic hurricane season. The figure was created by the National Oceanic and Atmospheric Administration's (NOAA) Hurricane Research Division, using data from 1949/1886-2016. The figure shows the number of times a storm or hurricane was located within approximately 100 miles (165 kilometers) of a given spot in the Atlantic basin.

Figure 4.103: Empirical Probability of a Named Hurricane or Tropical Storm

FSU Meteorology

Research funded by Risk Prediction Initiative (RPI)/BIOS.





Source: National Oceanic and Atmospheric Administration, Hurricane Research Division

As an incipient hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricane intensity is further classified by the Saffir-Simpson Scale which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense. The Saffir-Simpson Scale is shown in **Table 4.256**.





Table 4.256: Saffir-Simpson Scale


CATEGORY	MAXIMUM SUSTAINED WIND SPEED(MPH)	MINIMUM SURFACE PRESSURE(MILLIBARS)	STORM SURGE (FEET)
1	74-95	Greater than 980	3-5
2	96-110	979-965	6-8
3	111-130	964-945	9-12

CATEGORY	MAXIMUM SUSTAINED WIND SPEED(MPH)	MINIMUM SURFACE PRESSURE(MILLIBARS)	STORM SURGE (FEET)
4	131–155	944–920	13–18
5	155 +	Less than 920	19+

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure, and storm surge potential, which are combined to estimate potential damage. Categories 3, 4, and 5 are classified as “major” hurricanes, and while hurricanes within this range comprise only 20 percent of total tropical cyclones making landfall, they account for over 70 percent of the damage in the United States. **Table 4.257** describes the damage that could be expected for each hurricane category.

Table 4.257: Hurricane Damage Classifications

Storm Category	Damage Level	Description of Damages	Photo Example
1	MINIMAL	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage.	
2	MODERATE	Some roofing material, door, and window damage. Considerable damage to vegetation, mobile homes, etc. Flooding damages piers and small craft in unprotected moorings may break their moorings.	
3	EXTENSIVE	Some structural damage to small residences and utility buildings, with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain may be flooded well inland.	
4	EXTREME	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.	

Storm Category	Damage Level	Description of Damages	Photo Example
5	CATASTROPHIC	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.	

Sources: National Hurricane Center and the Federal Emergency Management Agency

While not directly relevant to the planning area, storm surge is another common element of hurricane activity. A storm surge is a large dome of water often 50 to 100 miles wide and rising anywhere from four to five feet in a Category 1 hurricane up to 20 feet in a Category 5 storm. The storm surge arrives ahead of the storm’s actual landfall and the more intense the hurricane is, the sooner the surge arrives. Water rise can be very rapid, posing a serious threat to those who have not yet evacuated flood-prone areas. A storm surge is a wave that has outrun its generating source and become a long period swell. The surge is always highest in the right-front quadrant of the direction in which the hurricane is moving. As the storm approaches shore, the greatest storm surge will be to the north of the hurricane eye. Such a surge of high water topped by waves driven by hurricane force winds can be devastating to coastal regions, causing severe beach erosion and property damage along the immediate coast.



Hurricane Floyd brought a devastating 15 feet of storm surge that damaged or destroyed hundreds of houses along the ocean front of Long Beach on Oak Island, North Carolina in September 1999. A prime example of successful hazard mitigation, the elevated home (right) survived while the older, ground-level block foundation of the home on the left was undermined and crushed. (Photo by Dave Gatley/FEMA News Photo)

Storm surge heights and associated waves are dependent upon the shape of the continental shelf (narrow or wide) and the depth of the ocean bottom (bathymetry). A narrow shelf, or one that drops steeply from

the shoreline and subsequently produces deep water close to the shoreline, tends to produce a lower surge but higher and more powerful storm waves.

Damage during hurricanes may also result from spawned tornadoes and inland flooding associated with heavy rainfall that usually accompanies these storms. Hurricane Floyd, for example, was at one time a Category 4 hurricane racing towards the North Carolina coast. As far inland as Raleigh, the state capital located more than 100 miles from the coast, communities were preparing for winds exceeding 100 miles per hour. While Floyd made landfall as a Category 2 hurricane it caused the worst inland flooding disaster in North Carolina's history. Rainfall amounts exceeded 20 inches in certain locales and 67 counties sustained damages.

Similar to hurricanes, nor'easters are ocean storms capable of causing substantial damage to coastal areas in the Eastern United States due to their strong winds and heavy surf. Nor'easters are named for the winds that blow in from the northeast and drive the storm up the East Coast along the Gulf Stream, a band of warm water that lies off the Atlantic coast. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful.

Nor'easters are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding. There are two main components to a nor'easter: (1) a Gulf Stream low-pressure system (counter-clockwise winds) generated off the southeastern U.S. coast, gathering warm air and moisture from the Atlantic, and pulled up the East Coast by strong northeasterly winds at the leading edge of the storm; and (2) an Arctic high-pressure system (clockwise winds) which meets the low-pressure system with cold, arctic air blowing down from Canada. When the two systems collide, the moisture and cold air produce a mix of precipitation and have the potential for creating dangerously high winds and heavy seas. As the low-pressure system deepens, the intensity of the winds and waves increase and can cause serious damage to coastal areas as the storm moves northeast.

Location within the Planning Area

The figures below show the probability of future named storms and paths of historic storms in the planning area.

Figure 4.104: Hurricane Winds Hazard Areas

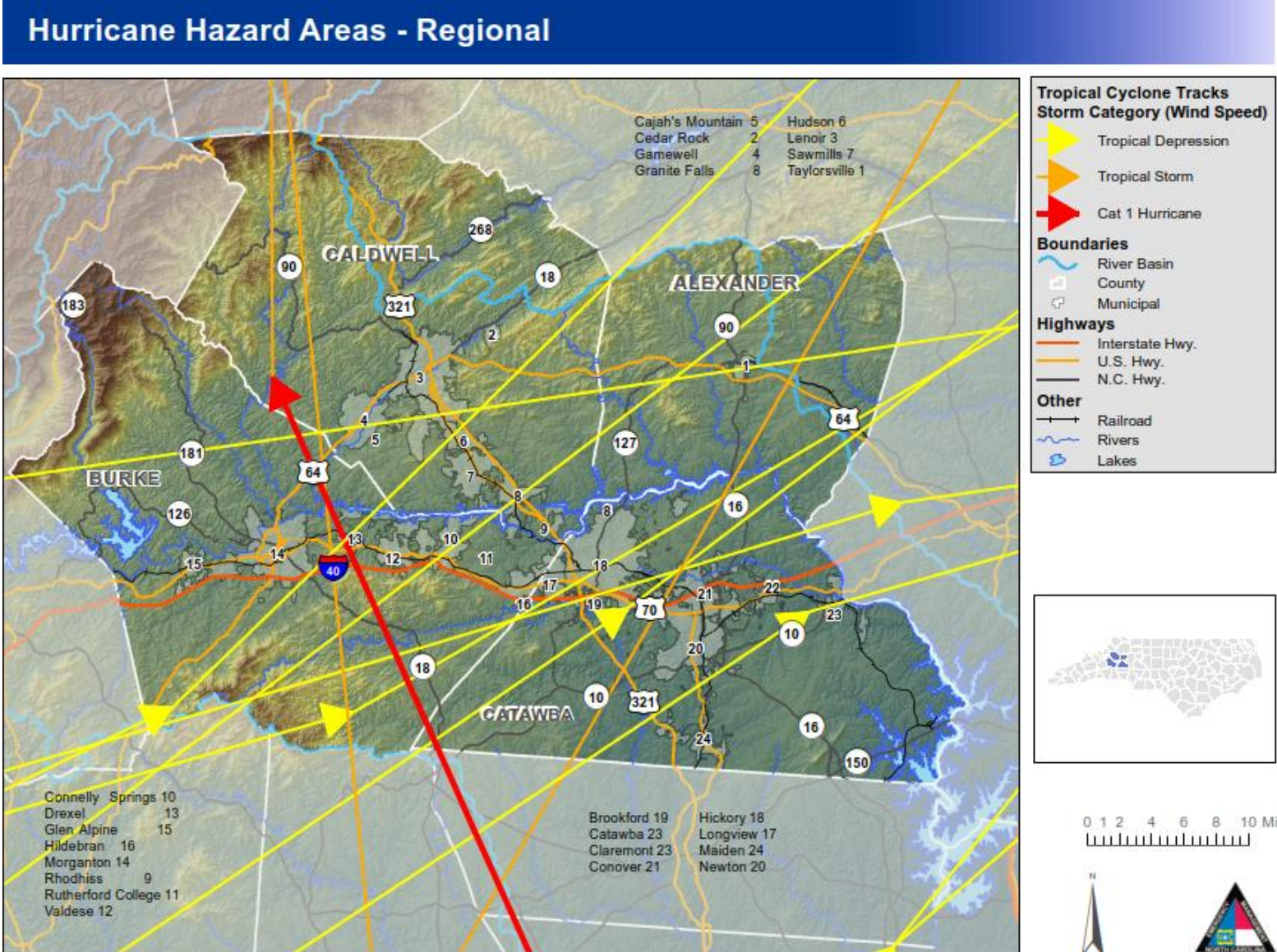


Figure 4.105: Hurricane Winds Hazard Areas

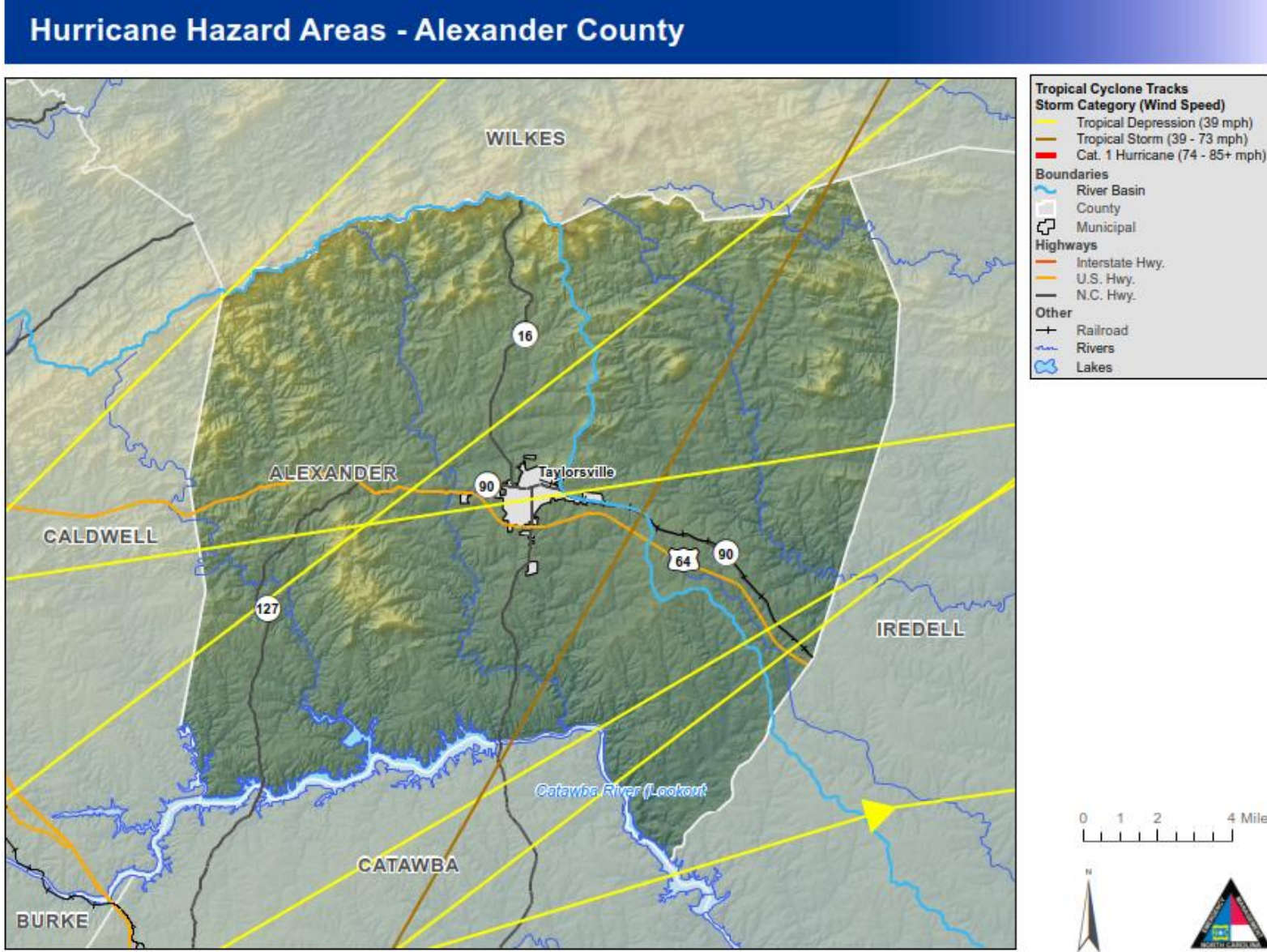


Figure 4.106: Hurricane Winds Hazard Areas

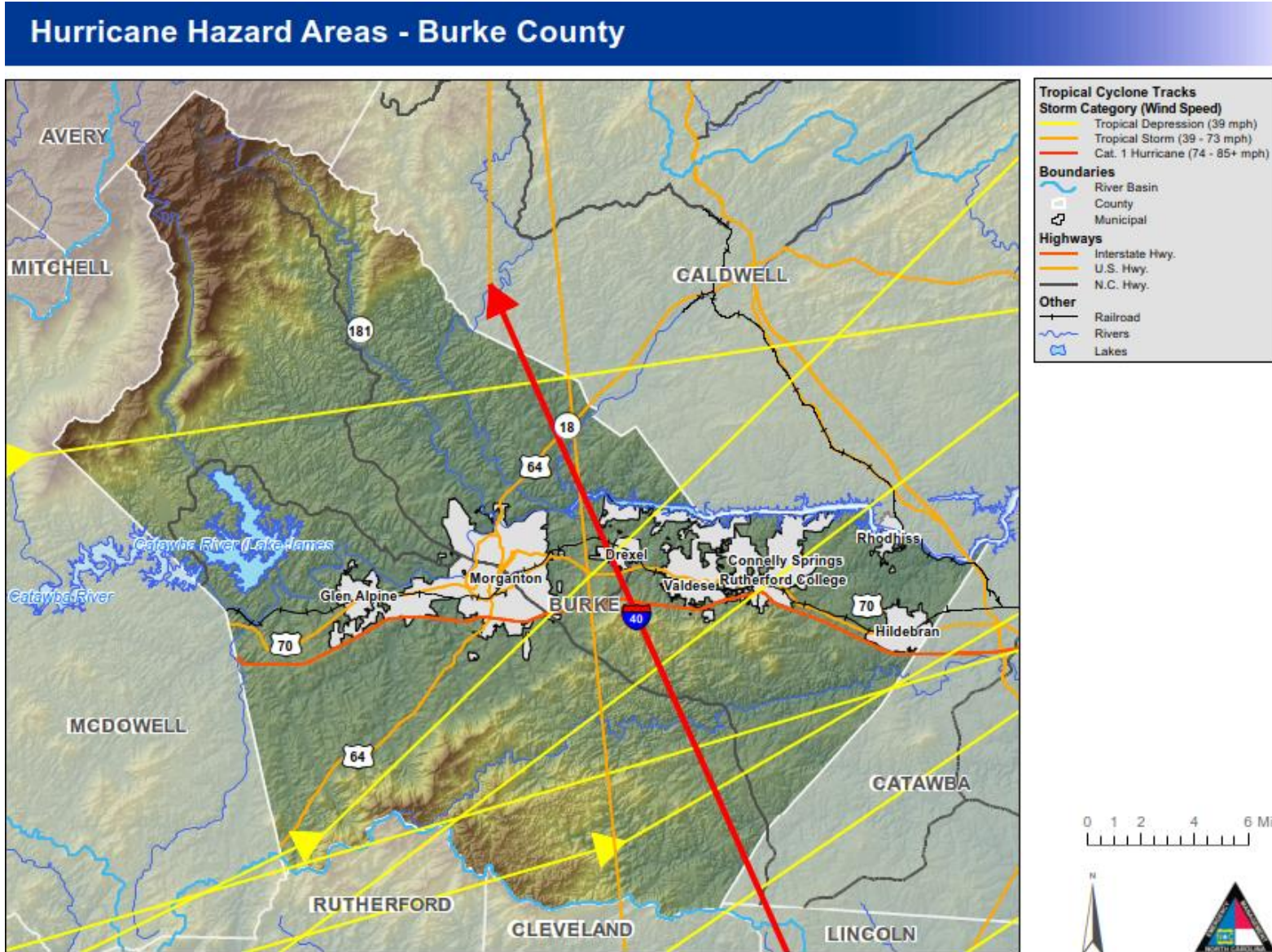


Figure 4.107: Hurricane Winds Hazard Areas

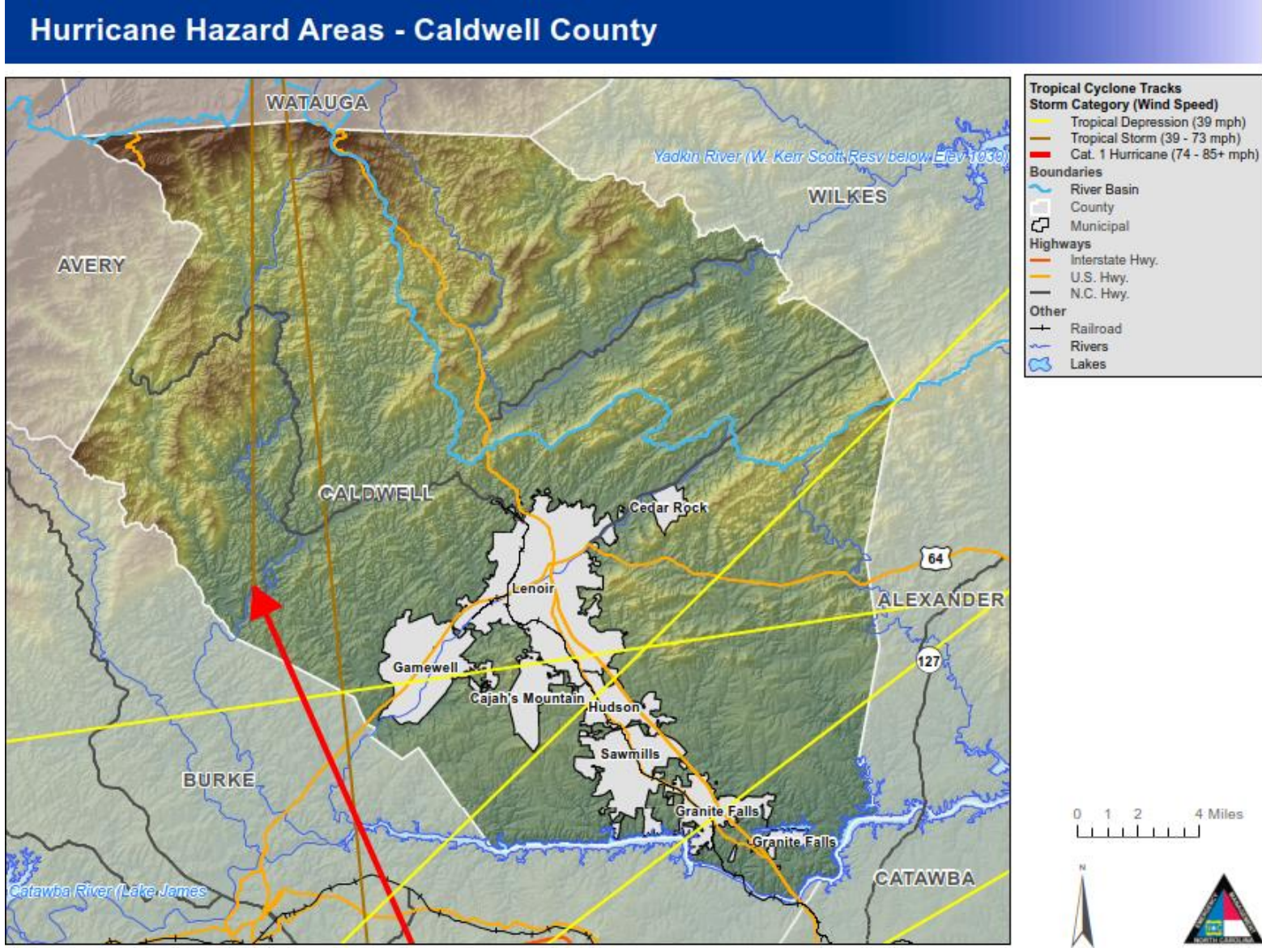
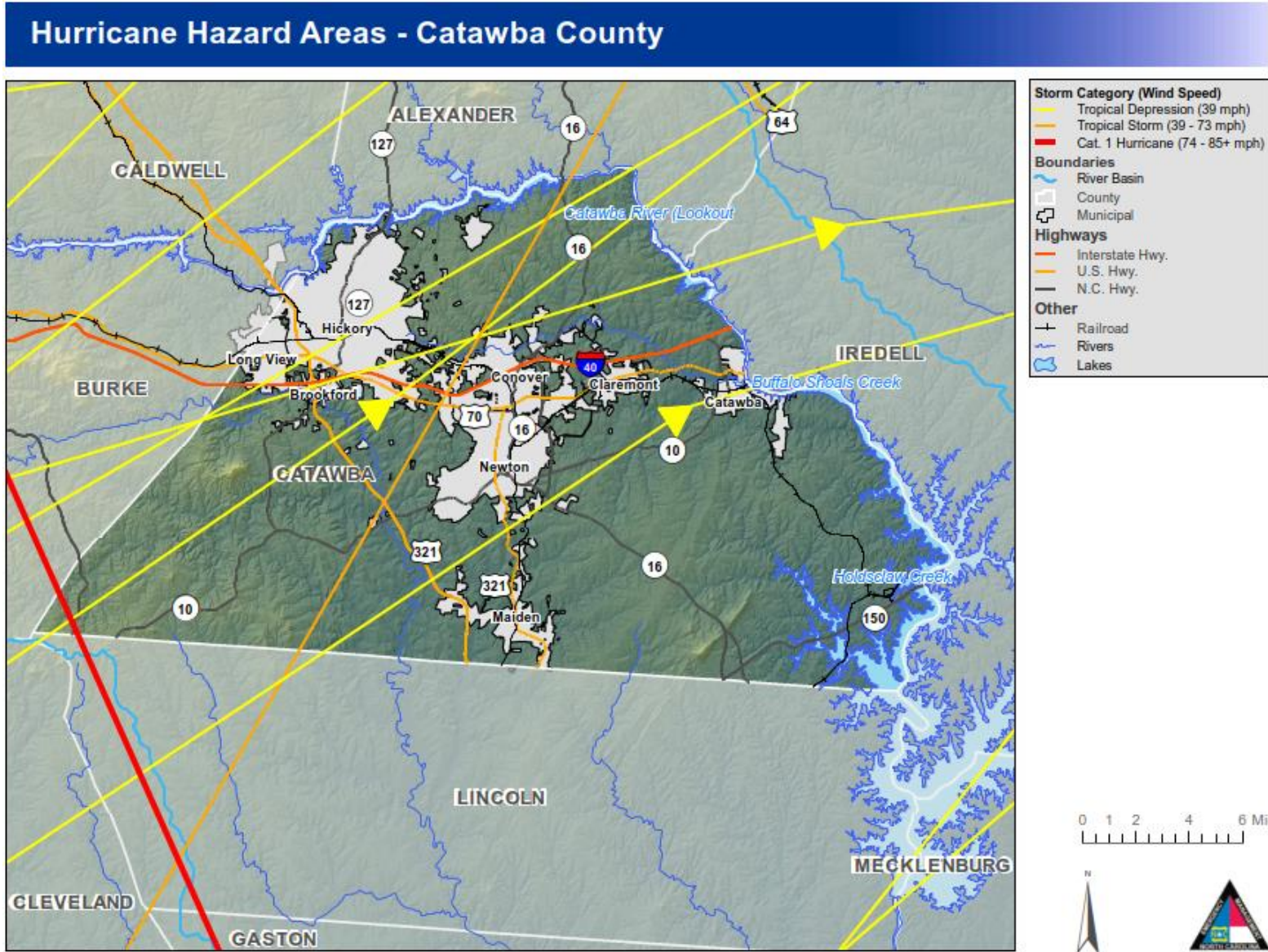


Figure 4.108: Hurricane Winds Hazard Areas



Extent (Magnitude and Severity)

Definition:

Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5.

Extent Event:

Hurricanes and tropical storms of any magnitude and severity are theoretically possible within the planning area, however major hurricanes (Category 3 and greater) are less likely to retain that classification as far inland as the Unifour Region. Since the 1850s, the greatest magnitude hurricane to impact the planning area has been a Category 1 hurricane in 1989 (Hurricane Hugo) (see Historical Occurrences section below). A Category 1 hurricane typically results in minimal damages, including damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage, etc. that is not applicable to the planning area.

Historical Occurrences

Table 4.258 lists the 34 hurricane and tropical storm paths that have crossed within a 75 statute mile radius of the mean center of the planning area from 1859 to 2019.

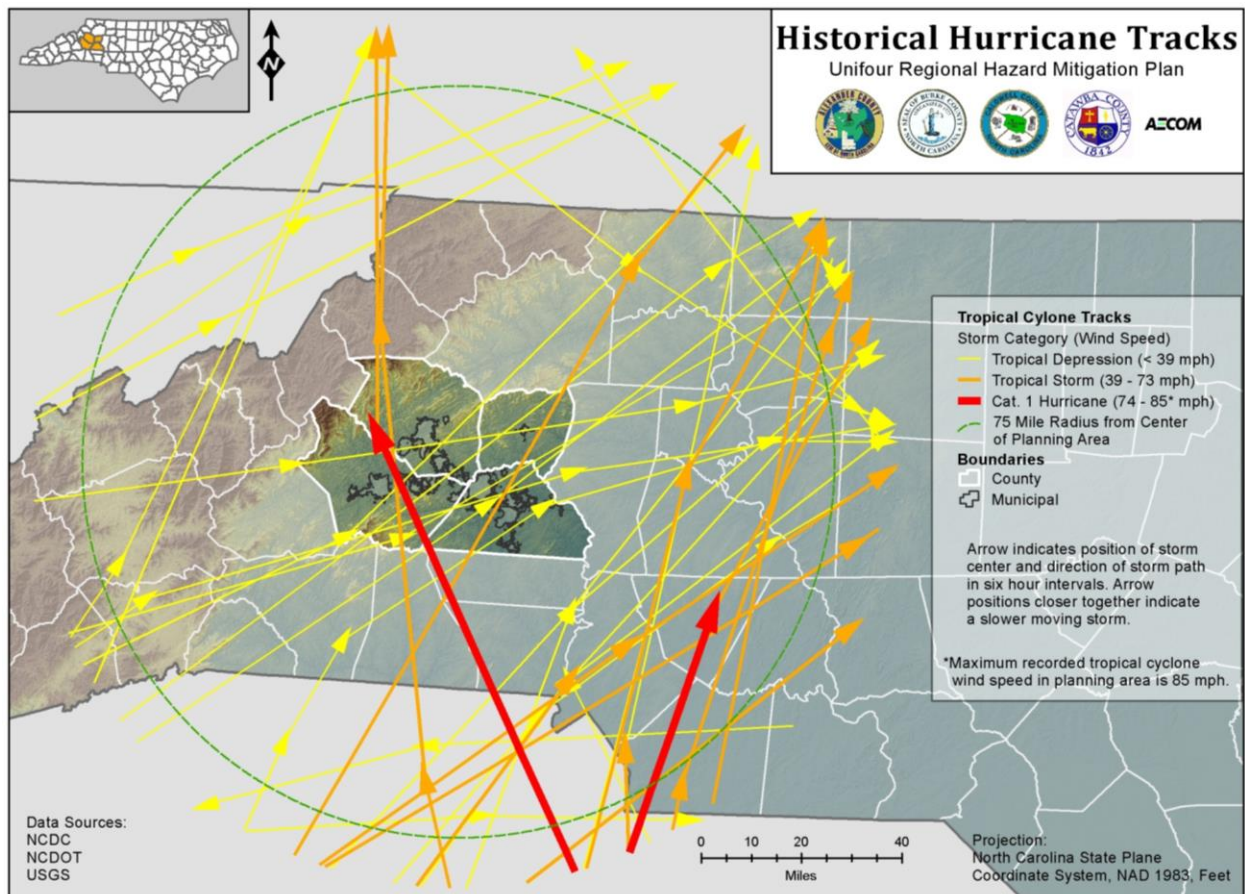
Table 4.258: Historical Occurrences of Hurricane Storm Paths Crossing within 75 Miles of the Planning Area

Name	Date	Magnitude	Maximum Recorded Wind Speed (mph)
Unnamed	09/17/1859	Tropical Storm	45
Unnamed	09/11/1882	Tropical Storm	45
Unnamed	06/22/1886	Tropical Storm	45
Unnamed	09/24/1889	Tropical Storm	50
Unnamed	08/28/1893	Category 1 Hurricane	85
Unnamed	07/19/1901	Tropical Depression	35
Unnamed	10/11/1902	Extra-tropical Storm	35
Unnamed	10/11/1905	Extra-tropical Storm	25
Unnamed	09/23/1907	Extra-tropical Storm	35
Unnamed	08/30/1911	Extra-tropical Storm	30
Unnamed	09/04/1913	Tropical Storm	45
Unnamed	08/03/1915	Tropical Depression	35
Unnamed	09/23/1920	Tropical Storm	65
Unnamed	10/03/1927	Tropical Storm	45
Unnamed	08/11/1928	Extra-tropical Storm	30
Unnamed	08/18/1939	Tropical Depression	30
Unnamed	08/14/1940	Extra-tropical Storm	35
Unnamed	08/28/1949	Tropical Storm	45
Able	08/31/1952	Tropical Storm	50
Gracie	09/30/1959	Tropical Storm	70
Cleo	08/30/1964	Tropical Depression	30

Name	Date	Magnitude	Maximum Recorded Wind Speed (mph)
Abby	06/08/1968	Tropical Depression	30
Babe	09/08/1977	Tropical Depression	30
David	09/05/1979	Tropical Storm	65
Bob	07/25/1985	Tropical Storm	65
Danny	08/18/1985	Tropical Depression	30
Chris	08/29/1988	Tropical Depression	30
Hugo	09/22/1989	Category 1 Hurricane	85
Beryl	08/17/1994	Tropical Depression	15
Bill	07/02/2003	Tropical Depression	25
Ivan	09/09/2004	Tropical Depression	25
Jeanne	09/13/2004	Tropical Depression	25
Cindy	07/03/2005	Extra-tropical Storm	20
Florence	09/10/2018	Tropical Depression	25

Source: NOAA National Hurricane Center

Figure 4.109: Historical Hurricane and Tropical Storm Tracks in the Unifour Region



Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Hurricane Winds is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Medium
City of Conover	Medium
City of Hickory	Medium
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	Medium
Town of Brookford	Medium
Town of Cahah's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium

Jurisdiction	IRISK Probability of Future Occurrence
Town of Hildebran	Medium
Town of Hudson	Medium
Town of Long View	Medium
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium
Town of Sawmills	Medium
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Hurricane Winds Hazard Vulnerability

Continued enforcement of building codes, flood damage prevention ordinances and other local regulatory tools and policies designed to mitigate the effects of high hazard winds is expected to minimize future losses as construction and planning continue to seek higher standards. Based on historical events the most significant local impacts for the Unifour Region regarding future events will likely be damage to trees (and the requisite management of vegetative debris) and widespread power outages to the area.

The following tables provide counts and values by jurisdiction relevant to Hurricane Winds hazard vulnerability in the Unifour Regional HMP Area.

Table 4.259: Population Impacted by the 25-Year Hurricane Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	32,851	99.5%	4,995	4,970	99.5%	1,961	1,951	99.5%
Town of Taylorsville	4,180	4,107	98.3%	632	621	98.3%	248	244	98.4%
Subtotal Alexander	37,196	36,958	99.4%	5627	5591	99.4%	2209	2195	99.4%
Burke									
Burke County (Unincorporated Area)	49,470	49,130	99.3%	7,997	7,942	99.3%	2,762	2,743	99.3%
City of Hickory	456	48,657	10670.4%	74	6,845	9250%	25	3,031	12124%
City of Morganton	22,546	22,490	99.8%	3,645	3,636	99.8%	1,259	1,256	99.8%
Town of Connelly Springs	1,659	1,641	98.9%	268	265	98.9%	93	92	98.9%
Town of Drexel	5,506	5,436	98.7%	890	879	98.8%	307	303	98.7%
Town of Glen Alpine	1,964	1,953	99.4%	318	316	99.4%	110	109	99.1%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Hildebran	1,945	1,943	99.9%	314	314	100%	109	109	100%
Town of Long View	698	4,867	697.3%	113	698	617.7%	39	299	766.7%
Town of Rhodhiss	640	1,023	159.8%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,498	99.7%	243	242	99.6%	84	84	100%
Town of Valdese	4,387	4,369	99.6%	709	706	99.6%	245	244	99.6%
Subtotal Burke	90,773	143,007	157.5%	14674	22005	150%	5069	8328	164.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,520	99.5%	5,352	5,327	99.5%	1,940	1,931	99.5%
City of Hickory	51	48,657	95405.9%	8	6,845	85562.5%	3	3,031	101033.3%
City of Lenoir	20,837	20,776	99.7%	3,216	3,207	99.7%	1,166	1,163	99.7%
Town of Blowing Rock	51	1,358	2662.7%	8	169	2112.5%	3	53	1766.7%
Town of Cahah's Mountain	2,789	2,787	99.9%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,039	99.9%	624	623	99.8%	226	226	100%
Town of Granite Falls	7,104	7,097	99.9%	1,096	1,095	99.9%	397	397	100%
Town of Hudson	6,431	6,408	99.6%	992	989	99.7%	360	359	99.7%
Town of Rhodhiss	385	1,023	265.7%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,378	100%	985	985	100%	357	357	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Village of Cedar Rock	294	292	99.3%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,335	160.6%	12815	19877	155.1%	4646	7747	166.7%
Catawba									
Catawba County (Unincorporated Area)	70,017	69,598	99.4%	9,835	9,776	99.4%	4,368	4,342	99.4%
City of Claremont	1,957	1,946	99.4%	275	274	99.6%	122	121	99.2%
City of Conover	9,669	9,580	99.1%	1,358	1,346	99.1%	603	597	99%
City of Hickory	48,481	48,657	100.4%	6,810	6,845	100.5%	3,024	3,031	100.2%
City of Newton	14,214	14,076	99%	1,997	1,978	99%	887	878	99%
Town of Brookford	371	365	98.4%	52	51	98.1%	23	23	100%
Town of Catawba	1,152	1,135	98.5%	162	160	98.8%	72	71	98.6%
Town of Long View	4,181	4,867	116.4%	587	698	118.9%	261	299	114.6%
Town of Maiden	4,964	4,927	99.3%	697	692	99.3%	310	307	99%
Subtotal Catawba	155,006	155,151	100.1%	21773	21820	100.2%	9670	9669	100%
TOTAL PLAN	366,020	468,451	128%	54889	69293	126.2%	21594	27939	129.4%

Source: GIS Analysis

Table 4.260: Population Impacted by the 50-Year Hurricane Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	32,851	99.5%	4,995	4,970	99.5%	1,961	1,951	99.5%
Town of Taylorsville	4,180	4,107	98.3%	632	621	98.3%	248	244	98.4%
Subtotal Alexander	37,196	36,958	99.4%	5627	5591	99.4%	2209	2195	99.4%
Burke									
Burke County (Unincorporated Area)	49,470	49,130	99.3%	7,997	7,942	99.3%	2,762	2,743	99.3%
City of Hickory	456	48,657	10670.4%	74	6,845	9250%	25	3,031	12124%
City of Morganton	22,546	22,490	99.8%	3,645	3,636	99.8%	1,259	1,256	99.8%
Town of Connelly Springs	1,659	1,641	98.9%	268	265	98.9%	93	92	98.9%
Town of Drexel	5,506	5,436	98.7%	890	879	98.8%	307	303	98.7%
Town of Glen Alpine	1,964	1,953	99.4%	318	316	99.4%	110	109	99.1%
Town of Hildebran	1,945	1,943	99.9%	314	314	100%	109	109	100%
Town of Long View	698	4,867	697.3%	113	698	617.7%	39	299	766.7%
Town of Rhodhiss	640	1,023	159.8%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,498	99.7%	243	242	99.6%	84	84	100%
Town of Valdese	4,387	4,369	99.6%	709	706	99.6%	245	244	99.6%
Subtotal Burke	90,773	143,007	157.5%	14674	22005	150%	5069	8328	164.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,520	99.5%	5,352	5,327	99.5%	1,940	1,931	99.5%
City of Hickory	51	48,657	95405.9%	8	6,845	85562.5%	3	3,031	101033.3%
City of Lenoir	20,837	20,776	99.7%	3,216	3,207	99.7%	1,166	1,163	99.7%
Town of Blowing Rock	51	1,358	2662.7%	8	169	2112.5%	3	53	1766.7%
Town of Cahaj's Mountain	2,789	2,787	99.9%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,039	99.9%	624	623	99.8%	226	226	100%
Town of Granite Falls	7,104	7,097	99.9%	1,096	1,095	99.9%	397	397	100%
Town of Hudson	6,431	6,408	99.6%	992	989	99.7%	360	359	99.7%
Town of Rhodhiss	385	1,023	265.7%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,378	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	292	99.3%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,335	160.6%	12815	19877	155.1%	4646	7747	166.7%
Catawba									
Catawba County (Unincorporated Area)	70,017	69,598	99.4%	9,835	9,776	99.4%	4,368	4,342	99.4%
City of Claremont	1,957	1,946	99.4%	275	274	99.6%	122	121	99.2%
City of Conover	9,669	9,580	99.1%	1,358	1,346	99.1%	603	597	99%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,657	100.4%	6,810	6,845	100.5%	3,024	3,031	100.2%
City of Newton	14,214	14,076	99%	1,997	1,978	99%	887	878	99%
Town of Brookford	371	365	98.4%	52	51	98.1%	23	23	100%
Town of Catawba	1,152	1,135	98.5%	162	160	98.8%	72	71	98.6%
Town of Long View	4,181	4,867	116.4%	587	698	118.9%	261	299	114.6%
Town of Maiden	4,964	4,927	99.3%	697	692	99.3%	310	307	99%
Subtotal Catawba	155,006	155,151	100.1%	21773	21820	100.2%	9670	9669	100%
TOTAL PLAN	366,020	468,451	128%	54889	69293	126.2%	21594	27939	129.4%

Source: GIS Analysis

Table 4.261: Population Impacted by the 100 Year Hurricane Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.262: Population Impacted by the 300 Year Hurricane Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.263: Population Impacted by the 700 Year Hurricane Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.264: Buildings Impacted by the 25 Year Hurricane Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,550	99.5%	22,505	91.3%	\$2,005,445	1,814	7.4%	\$627,646	218	0.9%	\$180,192	24,537	99.5%	\$2,813,283
Town of Taylorsville	2,823	2,780	98.5%	2,393	84.8%	\$194,099	309	10.9%	\$83,511	76	2.7%	\$15,544	2,778	98.4%	\$293,155
Subtotal Alexander	27,486	27,330	99.4%	24,898	90.6%	\$2,199,544	2,123	7.7%	\$711,157	294	1.1%	\$195,736	27,315	99.4%	\$3,106,438

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Burke															
Burke County (Unincorporated Area)	28,091	21,052	74.9%	26,569	94.6%	\$2,020,783	1,102	3.9%	\$563,083	229	0.8%	\$120,622	27,900	99.3%	\$2,704,487
City of Morganton	10,727	8,965	83.6%	9,246	86.2%	\$959,819	1,134	10.6%	\$429,690	301	2.8%	\$135,721	10,681	99.6%	\$1,525,231
Town of Connelly Springs	889	731	82.2%	834	93.8%	\$55,149	38	4.3%	\$12,165	8	0.9%	\$6,132	880	99%	\$73,445
Town of Drexel	2,949	2,393	81.1%	2,788	94.5%	\$229,268	98	3.3%	\$44,362	26	0.9%	\$10,499	2,912	98.7%	\$284,129
Town of Glen Alpine	1,086	846	77.9%	1,027	94.6%	\$71,368	44	4.1%	\$8,051	9	0.8%	\$9,935	1,080	99.4%	\$89,354
Town of Hildebran	1,069	1,046	97.8%	929	86.9%	\$98,131	121	11.3%	\$102,715	16	1.5%	\$78,905	1,066	99.7%	\$279,751
Town of Rutherford College	827	682	82.5%	753	91.1%	\$65,420	49	5.9%	\$14,575	23	2.8%	\$11,555	825	99.8%	\$91,550
Town of Valdese	2,132	1,712	80.3%	1,906	89.4%	\$190,090	175	8.2%	\$70,510	32	1.5%	\$7,824	2,113	99.1%	\$268,424
Subtotal Burke	47,770	37,427	78.3%	44,052	92.2%	\$3,690,028	2,761	5.8%	\$1,245,151	644	1.3%	\$381,193	47,457	99.3%	\$5,316,371
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,682	99.6%	19,628	94.5%	\$1,741,327	887	4.3%	\$425,951	166	0.8%	\$137,966	20,681	99.6%	\$2,305,243
City of Lenoir	10,316	10,289	99.7%	9,174	88.9%	\$997,755	938	9.1%	\$471,629	160	1.6%	\$72,677	10,272	99.6%	\$1,542,062
Town of Cahaj's Mountain	1,350	1,349	99.9%	1,249	92.5%	\$166,455	87	6.4%	\$46,381	13	1%	\$7,576	1,349	99.9%	\$220,412
Town of Gamewell	2,062	2,060	99.9%	1,969	95.5%	\$170,737	78	3.8%	\$31,746	13	0.6%	\$32,988	2,060	99.9%	\$235,471
Town of Granite Falls	3,394	3,391	99.9%	3,060	90.2%	\$331,774	262	7.7%	\$118,591	60	1.8%	\$18,941	3,382	99.6%	\$469,306

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Hudson	3,116	3,106	99.7%	2,838	91.1%	\$229,586	231	7.4%	\$68,046	37	1.2%	\$10,799	3,106	99.7%	\$308,431
Town of Rhodhiss	490	378	77.1%	464	94.7%	\$28,992	17	3.5%	\$3,004	8	1.6%	\$1,301	489	99.8%	\$33,297
Town of Sawmills	3,234	3,233	100%	3,044	94.1%	\$288,764	175	5.4%	\$203,176	14	0.4%	\$15,313	3,233	100%	\$507,253
Village of Cedar Rock	135	134	99.3%	130	96.3%	\$18,653	3	2.2%	\$1,236	1	0.7%	\$132	134	99.3%	\$20,021
Subtotal Caldwell	44,870	44,622	99.4%	41,556	92.6%	\$3,974,043	2,678	6%	\$1,369,760	472	1.1%	\$297,693	44,706	99.6%	\$5,641,496
Catawba															
Catawba County (Unincorporated Area)	50,060	22,048	44%	46,775	93.4%	\$3,930,970	2,695	5.4%	\$723,882	271	0.5%	\$228,360	49,741	99.4%	\$4,883,212
City of Claremont	1,351	1,321	97.8%	1,101	81.5%	\$102,172	230	17%	\$80,233	14	1%	\$3,106	1,345	99.6%	\$185,512
City of Conover	5,089	2,872	56.4%	4,093	80.4%	\$422,495	931	18.3%	\$239,577	21	0.4%	\$47,103	5,045	99.1%	\$709,175
City of Hickory	22,507	14,998	66.6%	18,912	84%	\$2,353,738	3,248	14.4%	\$847,023	184	0.8%	\$117,549	22,344	99.3%	\$3,318,310
City of Newton	7,657	5,569	72.7%	6,630	86.6%	\$583,438	903	11.8%	\$231,115	48	0.6%	\$14,117	7,581	99%	\$828,670
Town of Brookford	304	271	89.1%	263	86.5%	\$17,353	36	11.8%	\$3,689	1	0.3%	\$1	300	98.7%	\$21,043
Town of Catawba	1,016	697	68.6%	888	87.4%	\$59,703	107	10.5%	\$20,486	8	0.8%	\$20,822	1,003	98.7%	\$101,011
Town of Long View	2,716	2,246	82.7%	2,386	87.8%	\$212,862	305	11.2%	\$109,030	19	0.7%	\$11,453	2,710	99.8%	\$333,345
Town of Maiden	3,230	2,168	67.1%	2,763	85.5%	\$261,025	417	12.9%	\$96,041	18	0.6%	\$9,790	3,198	99%	\$366,856
Subtotal Catawba	93,930	52,190	55.6%	83,811	89.2%	\$7,943,756	8,872	9.4%	\$2,351,076	584	0.6%	\$452,301	93,267	99.3%	\$10,747,134

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
TOTAL PLAN	214,056	161,569	75.5%	194,317	90.8%	\$17,807,371	16,434	7.7%	\$5,677,144	1,994	0.9%	\$1,326,923	212,745	99.4%	\$24,811,439

Source: GIS Analysis

Table 4.265: Buildings Impacted by the 50 Year Hurricane Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,550	99.5%	22,505	91.3%	\$2,005,445	1,814	7.4%	\$627,646	218	0.9%	\$180,192	24,537	99.5%	\$2,813,283
Town of Taylorsville	2,823	2,780	98.5%	2,393	84.8%	\$194,099	309	10.9%	\$83,511	76	2.7%	\$15,544	2,778	98.4%	\$293,155
Subtotal Alexander	27,486	27,330	99.4%	24,898	90.6%	\$2,199,544	2,123	7.7%	\$711,157	294	1.1%	\$195,736	27,315	99.4%	\$3,106,438
Burke															
Burke County (Unincorporated Area)	28,091	21,052	74.9%	26,569	94.6%	\$2,020,783	1,102	3.9%	\$563,083	229	0.8%	\$120,622	27,900	99.3%	\$2,704,487
City of Morganton	10,727	8,965	83.6%	9,246	86.2%	\$959,819	1,134	10.6%	\$429,690	301	2.8%	\$135,721	10,681	99.6%	\$1,525,231
Town of Connelly Springs	889	731	82.2%	834	93.8%	\$55,149	38	4.3%	\$12,165	8	0.9%	\$6,132	880	99%	\$73,445
Town of Drexel	2,949	2,393	81.1%	2,788	94.5%	\$229,268	98	3.3%	\$44,362	26	0.9%	\$10,499	2,912	98.7%	\$284,129
Town of Glen Alpine	1,086	846	77.9%	1,027	94.6%	\$71,368	44	4.1%	\$8,051	9	0.8%	\$9,935	1,080	99.4%	\$89,354
Town of Hildebran	1,069	1,046	97.8%	929	86.9%	\$98,131	121	11.3%	\$102,715	16	1.5%	\$78,905	1,066	99.7%	\$279,751

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Rutherford College	827	682	82.5%	753	91.1%	\$65,420	49	5.9%	\$14,575	23	2.8%	\$11,555	825	99.8%	\$91,550
Town of Valdese	2,132	1,712	80.3%	1,906	89.4%	\$190,090	175	8.2%	\$70,510	32	1.5%	\$7,824	2,113	99.1%	\$268,424
Subtotal Burke	47,770	37,427	78.3%	44,052	92.2%	\$3,690,028	2,761	5.8%	\$1,245,151	644	1.3%	\$381,193	47,457	99.3%	\$5,316,371
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,682	99.6%	19,628	94.5%	\$1,741,327	887	4.3%	\$425,951	166	0.8%	\$137,966	20,681	99.6%	\$2,305,243
City of Lenoir	10,316	10,289	99.7%	9,174	88.9%	\$997,755	938	9.1%	\$471,629	160	1.6%	\$72,677	10,272	99.6%	\$1,542,062
Town of Cahaj's Mountain	1,350	1,349	99.9%	1,249	92.5%	\$166,455	87	6.4%	\$46,381	13	1%	\$7,576	1,349	99.9%	\$220,412
Town of Gamewell	2,062	2,060	99.9%	1,969	95.5%	\$170,737	78	3.8%	\$31,746	13	0.6%	\$32,988	2,060	99.9%	\$235,471
Town of Granite Falls	3,394	3,391	99.9%	3,060	90.2%	\$331,774	262	7.7%	\$118,591	60	1.8%	\$18,941	3,382	99.6%	\$469,306
Town of Hudson	3,116	3,106	99.7%	2,838	91.1%	\$229,586	231	7.4%	\$68,046	37	1.2%	\$10,799	3,106	99.7%	\$308,431
Town of Rhodhiss	490	378	77.1%	464	94.7%	\$28,992	17	3.5%	\$3,004	8	1.6%	\$1,301	489	99.8%	\$33,297
Town of Sawmills	3,234	3,233	100%	3,044	94.1%	\$288,764	175	5.4%	\$203,176	14	0.4%	\$15,313	3,233	100%	\$507,253
Village of Cedar Rock	135	134	99.3%	130	96.3%	\$18,653	3	2.2%	\$1,236	1	0.7%	\$132	134	99.3%	\$20,021
Subtotal Caldwell	44,870	44,622	99.4%	41,556	92.6%	\$3,974,043	2,678	6%	\$1,369,760	472	1.1%	\$297,693	44,706	99.6%	\$5,641,496
Catawba															
Catawba County (Unincorporated Area)	50,060	22,048	44%	46,775	93.4%	\$3,930,970	2,695	5.4%	\$723,882	271	0.5%	\$228,360	49,741	99.4%	\$4,883,212

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Claremont	1,351	1,321	97.8%	1,101	81.5%	\$102,172	230	17%	\$80,233	14	1%	\$3,106	1,345	99.6%	\$185,512
City of Conover	5,089	2,872	56.4%	4,093	80.4%	\$422,495	931	18.3%	\$239,577	21	0.4%	\$47,103	5,045	99.1%	\$709,175
City of Hickory	22,507	14,998	66.6%	18,912	84%	\$2,353,738	3,248	14.4%	\$847,023	184	0.8%	\$117,549	22,344	99.3%	\$3,318,310
City of Newton	7,657	5,569	72.7%	6,630	86.6%	\$583,438	903	11.8%	\$231,115	48	0.6%	\$14,117	7,581	99%	\$828,670
Town of Brookford	304	271	89.1%	263	86.5%	\$17,353	36	11.8%	\$3,689	1	0.3%	\$1	300	98.7%	\$21,043
Town of Catawba	1,016	697	68.6%	888	87.4%	\$59,703	107	10.5%	\$20,486	8	0.8%	\$20,822	1,003	98.7%	\$101,011
Town of Long View	2,716	2,246	82.7%	2,386	87.8%	\$212,862	305	11.2%	\$109,030	19	0.7%	\$11,453	2,710	99.8%	\$333,345
Town of Maiden	3,230	2,168	67.1%	2,763	85.5%	\$261,025	417	12.9%	\$96,041	18	0.6%	\$9,790	3,198	99%	\$366,856
Subtotal Catawba	93,930	52,190	55.6%	83,811	89.2%	\$7,943,756	8,872	9.4%	\$2,351,076	584	0.6%	\$452,301	93,267	99.3%	\$10,747,134
TOTAL PLAN	214,056	161,569	75.5%	194,317	90.8%	\$17,807,371	16,434	7.7%	\$5,677,144	1,994	0.9%	\$1,326,923	212,745	99.4%	\$24,811,439

Source: GIS Analysis

Table 4.266: Buildings Impacted by the 100 Year Hurricane Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$6,633,244	1,814	7.4%	\$3,167,729	218	0.9%	\$941,547	24,650	99.9%	\$10,742,520

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$649,263	309	10.9%	\$413,070	76	2.7%	\$61,696	2,821	99.9%	\$1,124,029
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$7,282,507	2,123	7.7%	\$3,580,799	294	1.1%	\$1,003,243	27,471	99.9%	\$11,866,549
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$7,008,388	1,102	3.9%	\$2,818,634	229	0.8%	\$613,184	28,084	100%	\$10,440,206
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$3,202,082	1,134	10.6%	\$1,936,162	301	2.8%	\$648,604	10,704	99.8%	\$5,786,847
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$194,059	38	4.3%	\$61,019	8	0.9%	\$32,275	889	100%	\$287,354
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$770,484	98	3.3%	\$210,306	26	0.9%	\$44,751	2,948	100%	\$1,025,541
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$254,545	44	4.1%	\$40,236	9	0.8%	\$52,738	1,086	100%	\$347,519
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$338,634	121	11.3%	\$480,669	16	1.5%	\$389,899	1,067	99.8%	\$1,209,202
Town of Rutherford College	827	682	82.5%	755	91.3%	\$237,829	49	5.9%	\$64,400	23	2.8%	\$55,935	827	100%	\$358,163
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$654,562	175	8.2%	\$267,317	32	1.5%	\$24,925	2,121	99.5%	\$946,804
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$12,660,583	2,761	5.8%	\$5,878,743	644	1.3%	\$1,862,311	47,726	99.9%	\$20,401,636
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$6,009,878	887	4.3%	\$2,118,809	166	0.8%	\$717,773	20,772	100%	\$8,846,460
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$3,462,039	938	9.1%	\$2,116,334	160	1.6%	\$351,404	10,299	99.8%	\$5,929,777
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$519,561	87	6.4%	\$229,029	13	1%	\$37,752	1,350	100%	\$786,341

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$600,542	78	3.8%	\$159,269	13	0.6%	\$171,923	2,062	100%	\$931,735
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$1,160,785	262	7.7%	\$548,595	60	1.8%	\$79,696	3,385	99.7%	\$1,789,076
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$837,424	231	7.4%	\$289,778	37	1.2%	\$46,406	3,116	100%	\$1,173,609
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$105,985	17	3.5%	\$12,190	8	1.6%	\$3,672	490	100%	\$121,847
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$994,361	175	5.4%	\$1,016,853	14	0.4%	\$71,254	3,234	100%	\$2,082,467
Village of Cedar Rock	135	135	100%	131	97%	\$80,511	3	2.2%	\$6,343	1	0.7%	\$303	135	100%	\$87,158
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$13,771,086	2,678	6%	\$6,497,200	472	1.1%	\$1,480,183	44,843	99.9%	\$21,748,470
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$13,671,328	2,695	5.4%	\$3,631,766	271	0.5%	\$1,168,950	50,023	99.9%	\$18,472,044
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$367,934	230	17%	\$337,226	14	1%	\$12,214	1,351	100%	\$717,373
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$1,437,522	931	18.3%	\$1,025,649	21	0.4%	\$253,488	5,083	99.9%	\$2,716,659
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$7,983,226	3,248	14.4%	\$3,907,775	184	0.8%	\$585,529	22,473	99.8%	\$12,476,529
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$1,969,560	903	11.8%	\$1,099,510	48	0.6%	\$48,248	7,646	99.9%	\$3,117,317
Town of Brookford	304	274	90.1%	267	87.8%	\$60,183	36	11.8%	\$11,066	1	0.3%	\$10	304	100%	\$71,259
Town of Catawba	1,016	706	69.5%	901	88.7%	\$204,036	107	10.5%	\$90,650	8	0.8%	\$110,801	1,016	100%	\$405,488
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$720,069	305	11.2%	\$491,825	19	0.7%	\$38,675	2,716	100%	\$1,250,568

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$860,530	417	12.9%	\$413,083	18	0.6%	\$60,042	3,223	99.8%	\$1,333,656
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$27,274,388	8,872	9.4%	\$11,008,550	584	0.6%	\$2,277,957	93,835	99.9%	\$40,560,893
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$60,988,564	16,434	7.7%	\$26,965,292	1,994	0.9%	\$6,623,694	213,875	99.9%	\$94,577,548

Source: GIS Analysis

Table 4.267: Buildings Impacted by the 300 Year Hurricane Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$45,572,110	1,814	7.4%	\$29,340,830	218	0.9%	\$8,724,059	24,650	99.9%	\$83,637,000
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$5,079,405	309	10.9%	\$4,671,769	76	2.7%	\$641,476	2,821	99.9%	\$10,392,650
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$50,651,515	2,123	7.7%	\$34,012,599	294	1.1%	\$9,365,535	27,471	99.9%	\$94,029,650
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$41,852,688	1,102	3.9%	\$23,278,501	229	0.8%	\$5,897,078	28,084	100%	\$71,028,267
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$21,841,133	1,134	10.6%	\$19,348,182	301	2.8%	\$6,656,334	10,704	99.8%	\$47,845,649
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$1,311,977	38	4.3%	\$493,694	8	0.9%	\$342,072	889	100%	\$2,147,743

Jurisdiction	All Buildings		Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num		Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Drexel	2,949		2,428	82.3%	2,824	95.8%	\$5,020,773	98	3.3%	\$1,875,156	26	0.9%	\$393,741	2,948	100%	\$7,289,670
Town of Glen Alpine	1,086		848	78.1%	1,033	95.1%	\$1,502,178	44	4.1%	\$433,718	9	0.8%	\$498,680	1,086	100%	\$2,434,575
Town of Hildebran	1,069		1,047	97.9%	930	87%	\$2,235,486	121	11.3%	\$4,529,954	16	1.5%	\$2,199,826	1,067	99.8%	\$8,965,266
Town of Rutherford College	827		682	82.5%	755	91.3%	\$1,672,134	49	5.9%	\$656,232	23	2.8%	\$533,890	827	100%	\$2,862,256
Town of Valdese	2,132		1,712	80.3%	1,914	89.8%	\$4,657,515	175	8.2%	\$2,679,726	32	1.5%	\$332,421	2,121	99.5%	\$7,669,663
Subtotal Burke	47,770		37,591	78.7%	44,321	92.8%	\$80,093,884	2,761	5.8%	\$53,295,163	644	1.3%	\$16,854,042	47,726	99.9%	\$150,243,089
Caldwell																
Caldwell County (Unincorporated Area)	20,773		20,773	100%	19,719	94.9%	\$37,305,514	887	4.3%	\$17,535,333	166	0.8%	\$6,151,021	20,772	100%	\$60,991,868
City of Lenoir	10,316		10,316	100%	9,201	89.2%	\$23,444,778	938	9.1%	\$19,534,175	160	1.6%	\$3,903,784	10,299	99.8%	\$46,882,737
Town of Cahah's Mountain	1,350		1,350	100%	1,250	92.6%	\$3,653,683	87	6.4%	\$1,868,007	13	1%	\$326,273	1,350	100%	\$5,847,963
Town of Gamewell	2,062		2,062	100%	1,971	95.6%	\$3,694,595	78	3.8%	\$1,614,933	13	0.6%	\$1,620,910	2,062	100%	\$6,930,438
Town of Granite Falls	3,394		3,394	100%	3,063	90.2%	\$8,966,406	262	7.7%	\$5,827,321	60	1.8%	\$1,003,248	3,385	99.7%	\$15,796,975
Town of Hudson	3,116		3,116	100%	2,848	91.4%	\$5,137,203	231	7.4%	\$3,142,198	37	1.2%	\$583,544	3,116	100%	\$8,862,945
Town of Rhodhiss	490		378	77.1%	465	94.9%	\$752,866	17	3.5%	\$119,753	8	1.6%	\$49,010	490	100%	\$921,629
Town of Sawmills	3,234		3,234	100%	3,045	94.2%	\$7,067,227	175	5.4%	\$6,745,814	14	0.4%	\$606,739	3,234	100%	\$14,419,780
Village of Cedar Rock	135		135	100%	131	97%	\$476,951	3	2.2%	\$56,061	1	0.7%	\$2,985	135	100%	\$535,997

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$90,499,223	2,678	6%	\$56,443,595	472	1.1%	\$14,247,514	44,843	99.9%	\$161,190,332
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$91,917,256	2,695	5.4%	\$33,072,864	271	0.5%	\$10,656,874	50,023	99.9%	\$135,646,995
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$2,379,055	230	17%	\$3,980,025	14	1%	\$141,856	1,351	100%	\$6,500,936
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$9,868,819	931	18.3%	\$11,949,981	21	0.4%	\$2,276,118	5,083	99.9%	\$24,094,917
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$52,429,237	3,248	14.4%	\$41,469,873	184	0.8%	\$5,652,000	22,473	99.8%	\$99,551,110
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$12,533,235	903	11.8%	\$18,962,292	48	0.6%	\$771,685	7,646	99.9%	\$32,267,213
Town of Brookford	304	274	90.1%	267	87.8%	\$377,533	36	11.8%	\$161,302	1	0.3%	\$273	304	100%	\$539,108
Town of Catawba	1,016	706	69.5%	901	88.7%	\$1,297,348	107	10.5%	\$962,232	8	0.8%	\$1,008,794	1,016	100%	\$3,268,374
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$4,475,534	305	11.2%	\$5,024,016	19	0.7%	\$222,279	2,716	100%	\$9,721,829
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$5,550,451	417	12.9%	\$5,443,408	18	0.6%	\$976,140	3,223	99.8%	\$11,969,998
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$180,828,468	8,872	9.4%	\$121,025,993	584	0.6%	\$21,706,019	93,835	99.9%	\$323,560,480
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$402,073,090	16,434	7.7%	\$264,777,350	1,994	0.9%	\$62,173,110	213,875	99.9%	\$729,023,551

Source: GIS Analysis

Table 4.268: Buildings Impacted by the 700 Year Hurricane Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$145,387,959	1,814	7.4%	\$63,468,817	218	0.9%	\$17,501,489	24,650	99.9%	\$226,358,265
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$16,716,159	309	10.9%	\$12,874,091	76	2.7%	\$1,887,932	2,821	99.9%	\$31,478,182
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$162,104,118	2,123	7.7%	\$76,342,908	294	1.1%	\$19,389,421	27,471	99.9%	\$257,836,447
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$126,110,008	1,102	3.9%	\$45,601,884	229	0.8%	\$12,977,286	28,084	100%	\$184,689,178
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$69,433,347	1,134	10.6%	\$47,649,273	301	2.8%	\$16,084,796	10,704	99.8%	\$133,167,416
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$3,842,878	38	4.3%	\$915,904	8	0.9%	\$882,425	889	100%	\$5,641,207
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$15,345,310	98	3.3%	\$3,882,840	26	0.9%	\$918,218	2,948	100%	\$20,146,369
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$4,588,007	44	4.1%	\$1,003,729	9	0.8%	\$1,063,526	1,086	100%	\$6,655,263
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$6,461,298	121	11.3%	\$9,633,456	16	1.5%	\$3,813,831	1,067	99.8%	\$19,908,585
Town of Rutherford College	827	682	82.5%	755	91.3%	\$4,967,011	49	5.9%	\$1,502,247	23	2.8%	\$1,062,005	827	100%	\$7,531,263
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$13,352,233	175	8.2%	\$7,647,246	32	1.5%	\$1,140,842	2,121	99.5%	\$22,140,321
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$244,100,092	2,761	5.8%	\$117,836,579	644	1.3%	\$37,942,929	47,726	99.9%	\$399,879,602
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$115,518,216	887	4.3%	\$35,489,906	166	0.8%	\$12,016,036	20,772	100%	\$163,024,158

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$68,813,577	938	9.1%	\$49,065,916	160	1.6%	\$9,829,065	10,299	99.8%	\$127,708,557
Town of Cahah's Mountain	1,350	1,350	100%	1,250	92.6%	\$12,366,423	87	6.4%	\$3,669,389	13	1%	\$592,077	1,350	100%	\$16,627,889
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$11,745,632	78	3.8%	\$3,688,976	13	0.6%	\$3,218,246	2,062	100%	\$18,652,855
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$28,524,719	262	7.7%	\$14,078,285	60	1.8%	\$2,790,335	3,385	99.7%	\$45,393,340
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$14,562,899	231	7.4%	\$8,159,633	37	1.2%	\$1,684,481	3,116	100%	\$24,407,012
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$2,271,149	17	3.5%	\$328,166	8	1.6%	\$166,416	490	100%	\$2,765,731
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$21,890,663	175	5.4%	\$12,208,319	14	0.4%	\$1,240,895	3,234	100%	\$35,339,877
Village of Cedar Rock	135	135	100%	131	97%	\$1,413,040	3	2.2%	\$94,394	1	0.7%	\$10,437	135	100%	\$1,517,871
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$277,106,318	2,678	6%	\$126,782,984	472	1.1%	\$31,547,988	44,843	99.9%	\$435,437,290
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$285,529,080	2,695	5.4%	\$73,244,181	271	0.5%	\$23,848,721	50,023	99.9%	\$382,621,982
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$7,524,668	230	17%	\$10,636,162	14	1%	\$446,613	1,351	100%	\$18,607,443
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$31,858,925	931	18.3%	\$32,451,168	21	0.4%	\$4,397,169	5,083	99.9%	\$68,707,262
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$167,076,096	3,248	14.4%	\$108,057,397	184	0.8%	\$13,707,229	22,473	99.8%	\$288,840,722
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$39,888,650	903	11.8%	\$56,845,109	48	0.6%	\$2,767,422	7,646	99.9%	\$99,501,182
Town of Brookford	304	274	90.1%	267	87.8%	\$1,161,220	36	11.8%	\$530,805	1	0.3%	\$820	304	100%	\$1,692,845

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Catawba	1,016	706	69.5%	901	88.7%	\$3,862,677	107	10.5%	\$2,416,770	8	0.8%	\$1,747,991	1,016	100%	\$8,027,439
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$14,004,078	305	11.2%	\$12,961,451	19	0.7%	\$467,950	2,716	100%	\$27,433,478
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$17,999,061	417	12.9%	\$16,847,462	18	0.6%	\$3,259,072	3,223	99.8%	\$38,105,595
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$568,904,455	8,872	9.4%	\$313,990,505	584	0.6%	\$50,642,987	93,835	99.9%	\$933,537,948
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$1,252,214,983	16,434	7.7%	\$634,952,976	1,994	0.9%	\$139,523,325	213,875	99.9%	\$2,026,691,287

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.269: Critical Facilities Exposed to the Hurricane Winds - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	19	\$4,484
Banking and Finance	50 Year	19	\$4,484
Banking and Finance	100 Year	19	\$21,578
Banking and Finance	300 Year	19	\$205,403
Banking and Finance	700 Year	19	\$468,507
Commercial Facilities	25 Year	680	\$445,702
Commercial Facilities	50 Year	680	\$445,702
Commercial Facilities	100 Year	680	\$2,319,360
Commercial Facilities	300 Year	680	\$21,031,605
Commercial Facilities	700 Year	680	\$43,162,295
Critical Manufacturing	25 Year	384	\$171,558
Critical Manufacturing	50 Year	384	\$171,558
Critical Manufacturing	100 Year	384	\$837,421
Critical Manufacturing	300 Year	384	\$7,872,170
Critical Manufacturing	700 Year	384	\$16,962,597
Defense Industrial Base	25 Year	1	\$41
Defense Industrial Base	50 Year	1	\$41
Defense Industrial Base	100 Year	1	\$84
Defense Industrial Base	300 Year	1	\$1,008
Defense Industrial Base	700 Year	1	\$4,548
Emergency Services	25 Year	7	\$3,105
Emergency Services	50 Year	7	\$3,105

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	100 Year	7	\$17,799
Emergency Services	300 Year	7	\$184,974
Emergency Services	700 Year	7	\$398,273
Energy	25 Year	14	\$12,000
Energy	50 Year	14	\$12,000
Energy	100 Year	14	\$25,151
Energy	300 Year	14	\$342,618
Energy	700 Year	14	\$1,471,043
Food and Agriculture	25 Year	617	\$3,161
Food and Agriculture	50 Year	617	\$3,161
Food and Agriculture	100 Year	617	\$30,403
Food and Agriculture	300 Year	617	\$740,050
Food and Agriculture	700 Year	617	\$2,132,248
Government Facilities	25 Year	76	\$55,565
Government Facilities	50 Year	76	\$55,565
Government Facilities	100 Year	76	\$280,471
Government Facilities	300 Year	76	\$2,712,098
Government Facilities	700 Year	76	\$5,718,125
Healthcare and Public Health	25 Year	35	\$11,954
Healthcare and Public Health	50 Year	35	\$11,954
Healthcare and Public Health	100 Year	35	\$58,047
Healthcare and Public Health	300 Year	35	\$493,595
Healthcare and Public Health	700 Year	35	\$1,011,057
Transportation Systems	25 Year	207	\$110,977
Transportation Systems	50 Year	207	\$110,977

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	100 Year	207	\$539,348
Transportation Systems	300 Year	207	\$4,757,594
Transportation Systems	700 Year	207	\$10,919,158
All Categories	25 Year	2,040	\$818,547
All Categories	50 Year	2,040	\$818,547
All Categories	100 Year	2,040	\$4,129,662
All Categories	300 Year	2,040	\$38,341,115
All Categories	700 Year	2,040	\$82,247,851

Source: GIS Analysis

Table 4.270: Critical Facilities Exposed to the Hurricane Winds - Town of Taylorsville

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	14	\$2,415
Banking and Finance	50 Year	14	\$2,415
Banking and Finance	100 Year	14	\$12,811
Banking and Finance	300 Year	14	\$166,210
Banking and Finance	700 Year	14	\$455,541
Commercial Facilities	25 Year	195	\$41,226
Commercial Facilities	50 Year	195	\$41,226
Commercial Facilities	100 Year	195	\$192,985
Commercial Facilities	300 Year	195	\$2,093,518
Commercial Facilities	700 Year	195	\$5,561,650
Critical Manufacturing	25 Year	62	\$30,348
Critical Manufacturing	50 Year	62	\$30,348
Critical Manufacturing	100 Year	62	\$161,950
Critical Manufacturing	300 Year	62	\$1,968,413

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	700 Year	62	\$5,564,229
Emergency Services	25 Year	4	\$268
Emergency Services	50 Year	4	\$268
Emergency Services	100 Year	4	\$642
Emergency Services	300 Year	4	\$8,549
Emergency Services	700 Year	4	\$32,875
Energy	25 Year	2	\$5,159
Energy	50 Year	2	\$5,159
Energy	100 Year	2	\$12,156
Energy	300 Year	2	\$191,134
Energy	700 Year	2	\$886,153
Food and Agriculture	25 Year	7	\$34
Food and Agriculture	50 Year	7	\$34
Food and Agriculture	100 Year	7	\$333
Food and Agriculture	300 Year	7	\$8,274
Food and Agriculture	700 Year	7	\$23,960
Government Facilities	25 Year	35	\$4,701
Government Facilities	50 Year	35	\$4,701
Government Facilities	100 Year	35	\$11,469
Government Facilities	300 Year	35	\$185,436
Government Facilities	700 Year	35	\$783,200
Healthcare and Public Health	25 Year	16	\$12,435
Healthcare and Public Health	50 Year	16	\$12,435
Healthcare and Public Health	100 Year	16	\$62,399
Healthcare and Public Health	300 Year	16	\$522,871

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	700 Year	16	\$1,321,460
Transportation Systems	25 Year	44	\$6,526
Transportation Systems	50 Year	44	\$6,526
Transportation Systems	100 Year	44	\$28,917
Transportation Systems	300 Year	44	\$332,523
Transportation Systems	700 Year	44	\$941,785
All Categories	25 Year	379	\$103,112
All Categories	50 Year	379	\$103,112
All Categories	100 Year	379	\$483,662
All Categories	300 Year	379	\$5,476,928
All Categories	700 Year	379	\$15,570,853

Source: GIS Analysis

Table 4.271: Critical Facilities Exposed to the Hurricane Winds - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$158
Banking and Finance	50 Year	4	\$158
Banking and Finance	100 Year	4	\$365
Banking and Finance	300 Year	4	\$4,939
Banking and Finance	700 Year	4	\$22,039
Commercial Facilities	25 Year	599	\$355,363
Commercial Facilities	50 Year	599	\$355,363
Commercial Facilities	100 Year	599	\$1,808,758
Commercial Facilities	300 Year	599	\$14,585,959
Commercial Facilities	700 Year	599	\$28,013,165
Critical Manufacturing	25 Year	316	\$136,386

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	50 Year	316	\$136,386
Critical Manufacturing	100 Year	316	\$675,536
Critical Manufacturing	300 Year	316	\$5,525,441
Critical Manufacturing	700 Year	316	\$10,631,040
Emergency Services	25 Year	13	\$3,943
Emergency Services	50 Year	13	\$3,943
Emergency Services	100 Year	13	\$19,342
Emergency Services	300 Year	13	\$201,367
Emergency Services	700 Year	13	\$470,867
Energy	25 Year	7	\$16,089
Energy	50 Year	7	\$16,089
Energy	100 Year	7	\$33,290
Energy	300 Year	7	\$401,426
Energy	700 Year	7	\$1,814,506
Food and Agriculture	25 Year	59	\$186
Food and Agriculture	50 Year	59	\$186
Food and Agriculture	100 Year	59	\$1,814
Food and Agriculture	300 Year	59	\$48,819
Food and Agriculture	700 Year	59	\$145,922
Government Facilities	25 Year	81	\$48,578
Government Facilities	50 Year	81	\$48,578
Government Facilities	100 Year	81	\$250,112
Government Facilities	300 Year	81	\$2,634,740
Government Facilities	700 Year	81	\$6,225,890
Healthcare and Public Health	25 Year	22	\$28,668

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	22	\$28,668
Healthcare and Public Health	100 Year	22	\$148,247
Healthcare and Public Health	300 Year	22	\$1,243,212
Healthcare and Public Health	700 Year	22	\$2,242,409
Transportation Systems	25 Year	206	\$104,603
Transportation Systems	50 Year	206	\$104,603
Transportation Systems	100 Year	206	\$509,595
Transportation Systems	300 Year	206	\$4,791,276
Transportation Systems	700 Year	206	\$10,479,609
All Categories	25 Year	1,307	\$693,974
All Categories	50 Year	1,307	\$693,974
All Categories	100 Year	1,307	\$3,447,059
All Categories	300 Year	1,307	\$29,437,179
All Categories	700 Year	1,307	\$60,045,447

Source: GIS Analysis

Table 4.272: Critical Facilities Exposed to the Hurricane Winds - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	36	\$7,347
Banking and Finance	50 Year	36	\$7,347
Banking and Finance	100 Year	36	\$31,529
Banking and Finance	300 Year	36	\$333,476
Banking and Finance	700 Year	36	\$868,031
Commercial Facilities	25 Year	622	\$205,200
Commercial Facilities	50 Year	622	\$205,200
Commercial Facilities	100 Year	622	\$951,172

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	300 Year	622	\$9,037,379
Commercial Facilities	700 Year	622	\$20,898,657
Communications	25 Year	2	\$9,319
Communications	50 Year	2	\$9,319
Communications	100 Year	2	\$48,388
Communications	300 Year	2	\$407,406
Communications	700 Year	2	\$664,710
Critical Manufacturing	25 Year	274	\$103,536
Critical Manufacturing	50 Year	274	\$103,536
Critical Manufacturing	100 Year	274	\$450,909
Critical Manufacturing	300 Year	274	\$4,885,799
Critical Manufacturing	700 Year	274	\$12,094,369
Emergency Services	25 Year	6	\$1,168
Emergency Services	50 Year	6	\$1,168
Emergency Services	100 Year	6	\$5,000
Emergency Services	300 Year	6	\$89,348
Emergency Services	700 Year	6	\$264,457
Energy	25 Year	25	\$19,562
Energy	50 Year	25	\$19,562
Energy	100 Year	25	\$45,944
Energy	300 Year	25	\$563,332
Energy	700 Year	25	\$2,404,888
Food and Agriculture	25 Year	5	\$1,449
Food and Agriculture	50 Year	5	\$1,449
Food and Agriculture	100 Year	5	\$3,230

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	300 Year	5	\$55,777
Food and Agriculture	700 Year	5	\$294,513
Government Facilities	25 Year	152	\$95,198
Government Facilities	50 Year	152	\$95,198
Government Facilities	100 Year	152	\$464,590
Government Facilities	300 Year	152	\$4,674,156
Government Facilities	700 Year	152	\$11,180,749
Healthcare and Public Health	25 Year	81	\$20,058
Healthcare and Public Health	50 Year	81	\$20,058
Healthcare and Public Health	100 Year	81	\$73,616
Healthcare and Public Health	300 Year	81	\$893,782
Healthcare and Public Health	700 Year	81	\$2,633,175
Nuclear Reactors, Materials and Waste	25 Year	1	\$473
Nuclear Reactors, Materials and Waste	50 Year	1	\$473
Nuclear Reactors, Materials and Waste	100 Year	1	\$3,071
Nuclear Reactors, Materials and Waste	300 Year	1	\$32,373
Nuclear Reactors, Materials and Waste	700 Year	1	\$76,296
Transportation Systems	25 Year	201	\$105,018
Transportation Systems	50 Year	201	\$105,018
Transportation Systems	100 Year	201	\$494,032
Transportation Systems	300 Year	201	\$4,900,636
Transportation Systems	700 Year	201	\$12,731,320
All Categories	25 Year	1,405	\$568,328
All Categories	50 Year	1,405	\$568,328

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	1,405	\$2,571,481
All Categories	300 Year	1,405	\$25,873,464
All Categories	700 Year	1,405	\$64,111,165

Source: GIS Analysis

Table 4.273: Critical Facilities Exposed to the Hurricane Winds - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	29	\$6,734
Commercial Facilities	50 Year	29	\$6,734
Commercial Facilities	100 Year	29	\$34,421
Commercial Facilities	300 Year	29	\$375,489
Commercial Facilities	700 Year	29	\$998,354
Critical Manufacturing	25 Year	13	\$8,555
Critical Manufacturing	50 Year	13	\$8,555
Critical Manufacturing	100 Year	13	\$43,927
Critical Manufacturing	300 Year	13	\$328,690
Critical Manufacturing	700 Year	13	\$571,190
Government Facilities	25 Year	2	\$754
Government Facilities	50 Year	2	\$754
Government Facilities	100 Year	2	\$3,905
Government Facilities	300 Year	2	\$35,103
Government Facilities	700 Year	2	\$63,120
Transportation Systems	25 Year	2	\$2,254
Transportation Systems	50 Year	2	\$2,254
Transportation Systems	100 Year	2	\$11,041
Transportation Systems	300 Year	2	\$96,484

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	700 Year	2	\$165,665
All Categories	25 Year	46	\$18,297
All Categories	50 Year	46	\$18,297
All Categories	100 Year	46	\$93,294
All Categories	300 Year	46	\$835,766
All Categories	700 Year	46	\$1,798,329

Source: GIS Analysis

Table 4.274: Critical Facilities Exposed to the Hurricane Winds - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	64	\$23,314
Commercial Facilities	50 Year	64	\$23,314
Commercial Facilities	100 Year	64	\$106,033
Commercial Facilities	300 Year	64	\$1,014,140
Commercial Facilities	700 Year	64	\$2,268,181
Critical Manufacturing	25 Year	17	\$3,240
Critical Manufacturing	50 Year	17	\$3,240
Critical Manufacturing	100 Year	17	\$14,678
Critical Manufacturing	300 Year	17	\$147,799
Critical Manufacturing	700 Year	17	\$323,734
Emergency Services	25 Year	2	\$514
Emergency Services	50 Year	2	\$514
Emergency Services	100 Year	2	\$1,984
Emergency Services	300 Year	2	\$34,932
Emergency Services	700 Year	2	\$91,859
Energy	25 Year	2	\$5,993

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	50 Year	2	\$5,993
Energy	100 Year	2	\$11,494
Energy	300 Year	2	\$114,397
Energy	700 Year	2	\$494,799
Government Facilities	25 Year	10	\$2,484
Government Facilities	50 Year	10	\$2,484
Government Facilities	100 Year	10	\$5,776
Government Facilities	300 Year	10	\$71,509
Government Facilities	700 Year	10	\$300,154
Healthcare and Public Health	25 Year	8	\$3,469
Healthcare and Public Health	50 Year	8	\$3,469
Healthcare and Public Health	100 Year	8	\$15,298
Healthcare and Public Health	300 Year	8	\$149,957
Healthcare and Public Health	700 Year	8	\$336,501
Transportation Systems	25 Year	20	\$21,779
Transportation Systems	50 Year	20	\$21,779
Transportation Systems	100 Year	20	\$111,163
Transportation Systems	300 Year	20	\$849,457
Transportation Systems	700 Year	20	\$1,476,821
All Categories	25 Year	123	\$60,793
All Categories	50 Year	123	\$60,793
All Categories	100 Year	123	\$266,426
All Categories	300 Year	123	\$2,382,191
All Categories	700 Year	123	\$5,292,049

Source: GIS Analysis

Table 4.275: Critical Facilities Exposed to the Hurricane Winds - Town of Glen Alpine

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	19	\$3,153
Commercial Facilities	50 Year	19	\$3,153
Commercial Facilities	100 Year	19	\$14,400
Commercial Facilities	300 Year	19	\$168,294
Commercial Facilities	700 Year	19	\$444,058
Critical Manufacturing	25 Year	5	\$238
Critical Manufacturing	50 Year	5	\$238
Critical Manufacturing	100 Year	5	\$855
Critical Manufacturing	300 Year	5	\$14,816
Critical Manufacturing	700 Year	5	\$45,633
Emergency Services	25 Year	1	\$47
Emergency Services	50 Year	1	\$47
Emergency Services	100 Year	1	\$362
Emergency Services	300 Year	1	\$4,874
Emergency Services	700 Year	1	\$11,726
Government Facilities	25 Year	5	\$8,935
Government Facilities	50 Year	5	\$8,935
Government Facilities	100 Year	5	\$49,504
Government Facilities	300 Year	5	\$470,418
Government Facilities	700 Year	5	\$982,213
Healthcare and Public Health	25 Year	1	\$319
Healthcare and Public Health	50 Year	1	\$319
Healthcare and Public Health	100 Year	1	\$1,918
Healthcare and Public Health	300 Year	1	\$22,517

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	700 Year	1	\$67,612
Transportation Systems	25 Year	21	\$4,625
Transportation Systems	50 Year	21	\$4,625
Transportation Systems	100 Year	21	\$23,871
Transportation Systems	300 Year	21	\$240,264
Transportation Systems	700 Year	21	\$486,724
All Categories	25 Year	52	\$17,317
All Categories	50 Year	52	\$17,317
All Categories	100 Year	52	\$90,910
All Categories	300 Year	52	\$921,183
All Categories	700 Year	52	\$2,037,966

Source: GIS Analysis

Table 4.276: Critical Facilities Exposed to the Hurricane Winds - Town of Hildebran

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$69
Banking and Finance	50 Year	1	\$69
Banking and Finance	100 Year	1	\$149
Banking and Finance	300 Year	1	\$1,996
Banking and Finance	700 Year	1	\$9,199
Commercial Facilities	25 Year	63	\$93,739
Commercial Facilities	50 Year	63	\$93,739
Commercial Facilities	100 Year	63	\$450,330
Commercial Facilities	300 Year	63	\$2,879,297
Commercial Facilities	700 Year	63	\$5,755,072
Critical Manufacturing	25 Year	45	\$75,304

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	50 Year	45	\$75,304
Critical Manufacturing	100 Year	45	\$365,253
Critical Manufacturing	300 Year	45	\$3,313,425
Critical Manufacturing	700 Year	45	\$6,334,842
Emergency Services	25 Year	1	\$310
Emergency Services	50 Year	1	\$310
Emergency Services	100 Year	1	\$776
Emergency Services	300 Year	1	\$25,777
Emergency Services	700 Year	1	\$135,440
Energy	25 Year	2	\$2,028
Energy	50 Year	2	\$2,028
Energy	100 Year	2	\$4,432
Energy	300 Year	2	\$59,714
Energy	700 Year	2	\$275,653
Government Facilities	25 Year	5	\$2,989
Government Facilities	50 Year	5	\$2,989
Government Facilities	100 Year	5	\$10,104
Government Facilities	300 Year	5	\$165,118
Government Facilities	700 Year	5	\$465,899
Healthcare and Public Health	25 Year	8	\$6,187
Healthcare and Public Health	50 Year	8	\$6,187
Healthcare and Public Health	100 Year	8	\$29,845
Healthcare and Public Health	300 Year	8	\$172,675
Healthcare and Public Health	700 Year	8	\$301,780
Transportation Systems	25 Year	13	\$2,765

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	50 Year	13	\$2,765
Transportation Systems	100 Year	13	\$13,439
Transportation Systems	300 Year	13	\$165,667
Transportation Systems	700 Year	13	\$429,581
All Categories	25 Year	138	\$183,391
All Categories	50 Year	138	\$183,391
All Categories	100 Year	138	\$874,328
All Categories	300 Year	138	\$6,783,669
All Categories	700 Year	138	\$13,707,466

Source: GIS Analysis

Table 4.277: Critical Facilities Exposed to the Hurricane Winds - Town of Rutherford College

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$77
Banking and Finance	50 Year	1	\$77
Banking and Finance	100 Year	1	\$200
Banking and Finance	300 Year	1	\$5,008
Banking and Finance	700 Year	1	\$26,712
Commercial Facilities	25 Year	26	\$5,020
Commercial Facilities	50 Year	26	\$5,020
Commercial Facilities	100 Year	26	\$23,596
Commercial Facilities	300 Year	26	\$266,852
Commercial Facilities	700 Year	26	\$626,547
Critical Manufacturing	25 Year	14	\$3,072
Critical Manufacturing	50 Year	14	\$3,072
Critical Manufacturing	100 Year	14	\$7,868

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	300 Year	14	\$111,902
Critical Manufacturing	700 Year	14	\$398,275
Government Facilities	25 Year	13	\$10,178
Government Facilities	50 Year	13	\$10,178
Government Facilities	100 Year	13	\$50,733
Government Facilities	300 Year	13	\$465,492
Government Facilities	700 Year	13	\$865,700
Healthcare and Public Health	25 Year	10	\$5,641
Healthcare and Public Health	50 Year	10	\$5,641
Healthcare and Public Health	100 Year	10	\$28,297
Healthcare and Public Health	300 Year	10	\$249,674
Healthcare and Public Health	700 Year	10	\$453,562
Transportation Systems	25 Year	4	\$1,349
Transportation Systems	50 Year	4	\$1,349
Transportation Systems	100 Year	4	\$6,475
Transportation Systems	300 Year	4	\$59,537
Transportation Systems	700 Year	4	\$119,285
All Categories	25 Year	68	\$25,337
All Categories	50 Year	68	\$25,337
All Categories	100 Year	68	\$117,169
All Categories	300 Year	68	\$1,158,465
All Categories	700 Year	68	\$2,490,081

Source: GIS Analysis

Table 4.278: Critical Facilities Exposed to the Hurricane Winds - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	2	\$333
Banking and Finance	50 Year	2	\$333
Banking and Finance	100 Year	2	\$984
Banking and Finance	300 Year	2	\$15,096
Banking and Finance	700 Year	2	\$48,629
Commercial Facilities	25 Year	85	\$15,950
Commercial Facilities	50 Year	85	\$15,950
Commercial Facilities	100 Year	85	\$64,862
Commercial Facilities	300 Year	85	\$604,280
Commercial Facilities	700 Year	85	\$1,675,822
Critical Manufacturing	25 Year	50	\$27,525
Critical Manufacturing	50 Year	50	\$27,525
Critical Manufacturing	100 Year	50	\$84,532
Critical Manufacturing	300 Year	50	\$1,216,934
Critical Manufacturing	700 Year	50	\$3,988,431
Emergency Services	25 Year	3	\$351
Emergency Services	50 Year	3	\$351
Emergency Services	100 Year	3	\$791
Emergency Services	300 Year	3	\$8,929
Emergency Services	700 Year	3	\$31,437
Energy	25 Year	11	\$12,157
Energy	50 Year	11	\$12,157
Energy	100 Year	11	\$26,184
Energy	300 Year	11	\$343,195

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	700 Year	11	\$1,576,405
Government Facilities	25 Year	9	\$5,896
Government Facilities	50 Year	9	\$5,896
Government Facilities	100 Year	9	\$17,788
Government Facilities	300 Year	9	\$228,514
Government Facilities	700 Year	9	\$831,681
Healthcare and Public Health	25 Year	20	\$20,918
Healthcare and Public Health	50 Year	20	\$20,918
Healthcare and Public Health	100 Year	20	\$100,399
Healthcare and Public Health	300 Year	20	\$681,638
Healthcare and Public Health	700 Year	20	\$1,477,479
Transportation Systems	25 Year	31	\$7,256
Transportation Systems	50 Year	31	\$7,256
Transportation Systems	100 Year	31	\$22,660
Transportation Systems	300 Year	31	\$254,425
Transportation Systems	700 Year	31	\$726,423
All Categories	25 Year	211	\$90,386
All Categories	50 Year	211	\$90,386
All Categories	100 Year	211	\$318,200
All Categories	300 Year	211	\$3,353,011
All Categories	700 Year	211	\$10,356,307

Source: GIS Analysis

Table 4.279: Critical Facilities Exposed to the Hurricane Winds - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$145
Banking and Finance	50 Year	1	\$145
Banking and Finance	100 Year	1	\$461
Banking and Finance	300 Year	1	\$7,340
Banking and Finance	700 Year	1	\$24,356
Commercial Facilities	25 Year	484	\$272,443
Commercial Facilities	50 Year	484	\$272,443
Commercial Facilities	100 Year	484	\$1,374,210
Commercial Facilities	300 Year	484	\$11,075,346
Commercial Facilities	700 Year	484	\$22,332,794
Critical Manufacturing	25 Year	275	\$103,474
Critical Manufacturing	50 Year	275	\$103,474
Critical Manufacturing	100 Year	275	\$505,311
Critical Manufacturing	300 Year	275	\$4,348,655
Critical Manufacturing	700 Year	275	\$8,830,167
Energy	25 Year	1	\$1,000
Energy	50 Year	1	\$1,000
Energy	100 Year	1	\$1,986
Energy	300 Year	1	\$21,760
Energy	700 Year	1	\$96,354
Food and Agriculture	25 Year	63	\$188
Food and Agriculture	50 Year	63	\$188
Food and Agriculture	100 Year	63	\$1,851
Food and Agriculture	300 Year	63	\$46,646

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	700 Year	63	\$135,460
Government Facilities	25 Year	49	\$87,629
Government Facilities	50 Year	49	\$87,629
Government Facilities	100 Year	49	\$456,987
Government Facilities	300 Year	49	\$3,886,359
Government Facilities	700 Year	49	\$7,277,108
Healthcare and Public Health	25 Year	19	\$10,629
Healthcare and Public Health	50 Year	19	\$10,629
Healthcare and Public Health	100 Year	19	\$55,417
Healthcare and Public Health	300 Year	19	\$474,757
Healthcare and Public Health	700 Year	19	\$969,623
Transportation Systems	25 Year	156	\$89,016
Transportation Systems	50 Year	156	\$89,016
Transportation Systems	100 Year	156	\$441,407
Transportation Systems	300 Year	156	\$3,838,008
Transportation Systems	700 Year	156	\$7,907,879
All Categories	25 Year	1,048	\$564,524
All Categories	50 Year	1,048	\$564,524
All Categories	100 Year	1,048	\$2,837,630
All Categories	300 Year	1,048	\$23,698,871
All Categories	700 Year	1,048	\$47,573,741

Source: GIS Analysis

Table 4.280: Critical Facilities Exposed to the Hurricane Winds - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	24	\$4,081
Banking and Finance	50 Year	24	\$4,081
Banking and Finance	100 Year	24	\$18,349
Banking and Finance	300 Year	24	\$221,915
Banking and Finance	700 Year	24	\$640,100
Commercial Facilities	25 Year	617	\$186,321
Commercial Facilities	50 Year	617	\$186,321
Commercial Facilities	100 Year	617	\$835,721
Commercial Facilities	300 Year	617	\$8,025,444
Commercial Facilities	700 Year	617	\$20,991,437
Communications	25 Year	1	\$144
Communications	50 Year	1	\$144
Communications	100 Year	1	\$315
Communications	300 Year	1	\$4,279
Communications	700 Year	1	\$19,776
Critical Manufacturing	25 Year	207	\$200,605
Critical Manufacturing	50 Year	207	\$200,605
Critical Manufacturing	100 Year	207	\$954,709
Critical Manufacturing	300 Year	207	\$8,377,640
Critical Manufacturing	700 Year	207	\$19,911,740
Energy	25 Year	4	\$997
Energy	50 Year	4	\$997
Energy	100 Year	4	\$1,939
Energy	300 Year	4	\$20,106

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	700 Year	4	\$87,886
Food and Agriculture	25 Year	3	\$1,150
Food and Agriculture	50 Year	3	\$1,150
Food and Agriculture	100 Year	3	\$2,971
Food and Agriculture	300 Year	3	\$74,309
Food and Agriculture	700 Year	3	\$376,064
Government Facilities	25 Year	53	\$43,161
Government Facilities	50 Year	53	\$43,161
Government Facilities	100 Year	53	\$215,975
Government Facilities	300 Year	53	\$2,431,487
Government Facilities	700 Year	53	\$6,051,782
Healthcare and Public Health	25 Year	57	\$34,462
Healthcare and Public Health	50 Year	57	\$34,462
Healthcare and Public Health	100 Year	57	\$157,320
Healthcare and Public Health	300 Year	57	\$1,458,982
Healthcare and Public Health	700 Year	57	\$3,270,709
Transportation Systems	25 Year	115	\$70,488
Transportation Systems	50 Year	115	\$70,488
Transportation Systems	100 Year	115	\$270,467
Transportation Systems	300 Year	115	\$2,750,098
Transportation Systems	700 Year	115	\$7,380,712
Water	25 Year	13	\$8,862
Water	50 Year	13	\$8,862
Water	100 Year	13	\$17,927
Water	300 Year	13	\$206,062

Sector	Event	Number of Buildings At Risk	Estimated Damages
Water	700 Year	13	\$919,229
All Categories	25 Year	1,094	\$550,271
All Categories	50 Year	1,094	\$550,271
All Categories	100 Year	1,094	\$2,475,693
All Categories	300 Year	1,094	\$23,570,322
All Categories	700 Year	1,094	\$59,649,435

Source: GIS Analysis

Table 4.281: Critical Facilities Exposed to the Hurricane Winds - Town of Cahaj's Mountain

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	2	\$310
Banking and Finance	50 Year	2	\$310
Banking and Finance	100 Year	2	\$979
Banking and Finance	300 Year	2	\$8,680
Banking and Finance	700 Year	2	\$19,851
Commercial Facilities	25 Year	43	\$25,828
Commercial Facilities	50 Year	43	\$25,828
Commercial Facilities	100 Year	43	\$132,620
Commercial Facilities	300 Year	43	\$1,073,095
Commercial Facilities	700 Year	43	\$2,027,660
Critical Manufacturing	25 Year	26	\$3,949
Critical Manufacturing	50 Year	26	\$3,949
Critical Manufacturing	100 Year	26	\$18,319
Critical Manufacturing	300 Year	26	\$180,765
Critical Manufacturing	700 Year	26	\$383,176
Government Facilities	25 Year	2	\$111

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	50 Year	2	\$111
Government Facilities	100 Year	2	\$296
Government Facilities	300 Year	2	\$4,319
Government Facilities	700 Year	2	\$15,844
Healthcare and Public Health	25 Year	7	\$6,475
Healthcare and Public Health	50 Year	7	\$6,475
Healthcare and Public Health	100 Year	7	\$30,672
Healthcare and Public Health	300 Year	7	\$295,098
Healthcare and Public Health	700 Year	7	\$613,371
Transportation Systems	25 Year	16	\$14,260
Transportation Systems	50 Year	16	\$14,260
Transportation Systems	100 Year	16	\$69,997
Transportation Systems	300 Year	16	\$520,140
Transportation Systems	700 Year	16	\$1,000,245
All Categories	25 Year	96	\$50,933
All Categories	50 Year	96	\$50,933
All Categories	100 Year	96	\$252,883
All Categories	300 Year	96	\$2,082,097
All Categories	700 Year	96	\$4,060,147

Source: GIS Analysis

Table 4.282: Critical Facilities Exposed to the Hurricane Winds - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	45	\$18,583
Commercial Facilities	50 Year	45	\$18,583

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	45	\$90,678
Commercial Facilities	300 Year	45	\$889,311
Commercial Facilities	700 Year	45	\$2,054,603
Critical Manufacturing	25 Year	24	\$12,050
Critical Manufacturing	50 Year	24	\$12,050
Critical Manufacturing	100 Year	24	\$60,089
Critical Manufacturing	300 Year	24	\$591,040
Critical Manufacturing	700 Year	24	\$1,213,779
Government Facilities	25 Year	5	\$29,823
Government Facilities	50 Year	5	\$29,823
Government Facilities	100 Year	5	\$156,556
Government Facilities	300 Year	5	\$1,477,590
Government Facilities	700 Year	5	\$2,908,371
Healthcare and Public Health	25 Year	4	\$968
Healthcare and Public Health	50 Year	4	\$968
Healthcare and Public Health	100 Year	4	\$4,929
Healthcare and Public Health	300 Year	4	\$58,271
Healthcare and Public Health	700 Year	4	\$159,470
Transportation Systems	25 Year	13	\$3,311
Transportation Systems	50 Year	13	\$3,311
Transportation Systems	100 Year	13	\$18,942
Transportation Systems	300 Year	13	\$219,631
Transportation Systems	700 Year	13	\$570,999
All Categories	25 Year	91	\$64,735
All Categories	50 Year	91	\$64,735

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	91	\$331,194
All Categories	300 Year	91	\$3,235,843
All Categories	700 Year	91	\$6,907,222

Source: GIS Analysis

Table 4.283: Critical Facilities Exposed to the Hurricane Winds - Town of Granite Falls

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	8	\$708
Banking and Finance	50 Year	8	\$708
Banking and Finance	100 Year	8	\$1,609
Banking and Finance	300 Year	8	\$24,495
Banking and Finance	700 Year	8	\$118,315
Commercial Facilities	25 Year	154	\$64,495
Commercial Facilities	50 Year	154	\$64,495
Commercial Facilities	100 Year	154	\$295,972
Commercial Facilities	300 Year	154	\$3,513,444
Commercial Facilities	700 Year	154	\$9,062,463
Critical Manufacturing	25 Year	70	\$20,424
Critical Manufacturing	50 Year	70	\$20,424
Critical Manufacturing	100 Year	70	\$98,721
Critical Manufacturing	300 Year	70	\$979,088
Critical Manufacturing	700 Year	70	\$2,263,724
Energy	25 Year	1	\$12,141
Energy	50 Year	1	\$12,141
Energy	100 Year	1	\$29,583
Energy	300 Year	1	\$803,135

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	700 Year	1	\$4,053,811
Government Facilities	25 Year	24	\$9,455
Government Facilities	50 Year	24	\$9,455
Government Facilities	100 Year	24	\$33,826
Government Facilities	300 Year	24	\$510,827
Government Facilities	700 Year	24	\$1,546,658
Healthcare and Public Health	25 Year	9	\$1,115
Healthcare and Public Health	50 Year	9	\$1,115
Healthcare and Public Health	100 Year	9	\$3,400
Healthcare and Public Health	300 Year	9	\$56,001
Healthcare and Public Health	700 Year	9	\$199,511
Transportation Systems	25 Year	52	\$38,462
Transportation Systems	50 Year	52	\$38,462
Transportation Systems	100 Year	52	\$181,794
Transportation Systems	300 Year	52	\$1,655,234
Transportation Systems	700 Year	52	\$3,522,748
Water	25 Year	8	\$7,964
Water	50 Year	8	\$7,964
Water	100 Year	8	\$16,036
Water	300 Year	8	\$181,629
Water	700 Year	8	\$810,248
All Categories	25 Year	326	\$154,764
All Categories	50 Year	326	\$154,764
All Categories	100 Year	326	\$660,941
All Categories	300 Year	326	\$7,723,853

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	700 Year	326	\$21,577,478

Source: GIS Analysis

Table 4.284: Critical Facilities Exposed to the Hurricane Winds - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$1,791
Banking and Finance	50 Year	4	\$1,791
Banking and Finance	100 Year	4	\$8,460
Banking and Finance	300 Year	4	\$79,429
Banking and Finance	700 Year	4	\$158,358
Commercial Facilities	25 Year	122	\$27,026
Commercial Facilities	50 Year	122	\$27,026
Commercial Facilities	100 Year	122	\$110,781
Commercial Facilities	300 Year	122	\$1,287,348
Commercial Facilities	700 Year	122	\$3,630,202
Critical Manufacturing	25 Year	66	\$21,644
Critical Manufacturing	50 Year	66	\$21,644
Critical Manufacturing	100 Year	66	\$89,229
Critical Manufacturing	300 Year	66	\$920,105
Critical Manufacturing	700 Year	66	\$2,300,956
Government Facilities	25 Year	24	\$6,552
Government Facilities	50 Year	24	\$6,552
Government Facilities	100 Year	24	\$29,123
Government Facilities	300 Year	24	\$410,842
Government Facilities	700 Year	24	\$1,233,815
Healthcare and Public Health	25 Year	15	\$8,819

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	15	\$8,819
Healthcare and Public Health	100 Year	15	\$43,299
Healthcare and Public Health	300 Year	15	\$361,556
Healthcare and Public Health	700 Year	15	\$682,554
Transportation Systems	25 Year	37	\$13,013
Transportation Systems	50 Year	37	\$13,013
Transportation Systems	100 Year	37	\$55,292
Transportation Systems	300 Year	37	\$666,462
Transportation Systems	700 Year	37	\$1,838,229
All Categories	25 Year	268	\$78,845
All Categories	50 Year	268	\$78,845
All Categories	100 Year	268	\$336,184
All Categories	300 Year	268	\$3,725,742
All Categories	700 Year	268	\$9,844,114

Source: GIS Analysis

Table 4.285: Critical Facilities Exposed to the Hurricane Winds - Town of Rhodhiss

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	8	\$2,224
Commercial Facilities	50 Year	8	\$2,224
Commercial Facilities	100 Year	8	\$10,840
Commercial Facilities	300 Year	8	\$104,748
Commercial Facilities	700 Year	8	\$238,744
Critical Manufacturing	25 Year	8	\$869
Critical Manufacturing	50 Year	8	\$869
Critical Manufacturing	100 Year	8	\$1,876

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	300 Year	8	\$24,290
Critical Manufacturing	700 Year	8	\$108,893
Emergency Services	25 Year	2	\$38
Emergency Services	50 Year	2	\$38
Emergency Services	100 Year	2	\$104
Emergency Services	300 Year	2	\$2,340
Emergency Services	700 Year	2	\$10,643
Government Facilities	25 Year	4	\$1,075
Government Facilities	50 Year	4	\$1,075
Government Facilities	100 Year	4	\$2,796
Government Facilities	300 Year	4	\$34,331
Government Facilities	700 Year	4	\$126,042
Transportation Systems	25 Year	3	\$100
Transportation Systems	50 Year	3	\$100
Transportation Systems	100 Year	3	\$246
Transportation Systems	300 Year	3	\$3,053
Transportation Systems	700 Year	3	\$10,260
All Categories	25 Year	25	\$4,306
All Categories	50 Year	25	\$4,306
All Categories	100 Year	25	\$15,862
All Categories	300 Year	25	\$168,762
All Categories	700 Year	25	\$494,582

Source: GIS Analysis

Table 4.286: Critical Facilities Exposed to the Hurricane Winds - Town of Sawmills

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	91	\$99,143
Commercial Facilities	50 Year	91	\$99,143
Commercial Facilities	100 Year	91	\$500,073
Commercial Facilities	300 Year	91	\$3,774,903
Commercial Facilities	700 Year	91	\$7,064,598
Critical Manufacturing	25 Year	61	\$96,344
Critical Manufacturing	50 Year	61	\$96,344
Critical Manufacturing	100 Year	61	\$482,435
Critical Manufacturing	300 Year	61	\$2,753,081
Critical Manufacturing	700 Year	61	\$4,507,903
Food and Agriculture	25 Year	4	\$19
Food and Agriculture	50 Year	4	\$19
Food and Agriculture	100 Year	4	\$191
Food and Agriculture	300 Year	4	\$4,012
Food and Agriculture	700 Year	4	\$10,591
Government Facilities	25 Year	4	\$7,855
Government Facilities	50 Year	4	\$7,855
Government Facilities	100 Year	4	\$32,866
Government Facilities	300 Year	4	\$262,217
Government Facilities	700 Year	4	\$571,881
Healthcare and Public Health	25 Year	4	\$4,949
Healthcare and Public Health	50 Year	4	\$4,949
Healthcare and Public Health	100 Year	4	\$23,696
Healthcare and Public Health	300 Year	4	\$119,350

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	700 Year	4	\$192,075
Transportation Systems	25 Year	25	\$10,179
Transportation Systems	50 Year	25	\$10,179
Transportation Systems	100 Year	25	\$48,847
Transportation Systems	300 Year	25	\$438,990
Transportation Systems	700 Year	25	\$1,102,165
All Categories	25 Year	189	\$218,489
All Categories	50 Year	189	\$218,489
All Categories	100 Year	189	\$1,088,108
All Categories	300 Year	189	\$7,352,553
All Categories	700 Year	189	\$13,449,213

Source: GIS Analysis

Table 4.287: Critical Facilities Exposed to the Hurricane Winds - Village of Cedar Rock

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	1	\$39
Commercial Facilities	50 Year	1	\$39
Commercial Facilities	100 Year	1	\$86
Commercial Facilities	300 Year	1	\$806
Commercial Facilities	700 Year	1	\$2,790
Government Facilities	25 Year	1	\$132
Government Facilities	50 Year	1	\$132
Government Facilities	100 Year	1	\$303
Government Facilities	300 Year	1	\$2,985
Government Facilities	700 Year	1	\$10,437
Healthcare and Public Health	25 Year	1	\$1,174

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	1	\$1,174
Healthcare and Public Health	100 Year	1	\$6,216
Healthcare and Public Health	300 Year	1	\$54,999
Healthcare and Public Health	700 Year	1	\$90,845
Transportation Systems	25 Year	1	\$23
Transportation Systems	50 Year	1	\$23
Transportation Systems	100 Year	1	\$42
Transportation Systems	300 Year	1	\$256
Transportation Systems	700 Year	1	\$758
All Categories	25 Year	4	\$1,368
All Categories	50 Year	4	\$1,368
All Categories	100 Year	4	\$6,647
All Categories	300 Year	4	\$59,046
All Categories	700 Year	4	\$104,830

Source: GIS Analysis

Table 4.288: Critical Facilities Exposed to the Hurricane Winds - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	7	\$1,094
Banking and Finance	50 Year	7	\$1,094
Banking and Finance	100 Year	7	\$5,799
Banking and Finance	300 Year	7	\$63,123
Banking and Finance	700 Year	7	\$141,948
Commercial Facilities	25 Year	1,760	\$437,703
Commercial Facilities	50 Year	1,760	\$437,703

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1,760	\$2,236,048
Commercial Facilities	300 Year	1,760	\$20,465,872
Commercial Facilities	700 Year	1,760	\$45,197,321
Critical Manufacturing	25 Year	623	\$182,273
Critical Manufacturing	50 Year	623	\$182,273
Critical Manufacturing	100 Year	623	\$912,954
Critical Manufacturing	300 Year	623	\$7,709,228
Critical Manufacturing	700 Year	623	\$15,885,656
Emergency Services	25 Year	12	\$13,289
Emergency Services	50 Year	12	\$13,289
Emergency Services	100 Year	12	\$65,259
Emergency Services	300 Year	12	\$464,491
Emergency Services	700 Year	12	\$941,005
Energy	25 Year	36	\$70,574
Energy	50 Year	36	\$70,574
Energy	100 Year	36	\$174,268
Energy	300 Year	36	\$3,256,267
Energy	700 Year	36	\$14,296,938
Food and Agriculture	25 Year	141	\$675
Food and Agriculture	50 Year	141	\$675
Food and Agriculture	100 Year	141	\$6,575
Food and Agriculture	300 Year	141	\$162,062
Food and Agriculture	700 Year	141	\$466,917
Government Facilities	25 Year	86	\$174,249
Government Facilities	50 Year	86	\$174,249

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	100 Year	86	\$890,881
Government Facilities	300 Year	86	\$8,074,484
Government Facilities	700 Year	86	\$17,941,386
Healthcare and Public Health	25 Year	28	\$5,290
Healthcare and Public Health	50 Year	28	\$5,290
Healthcare and Public Health	100 Year	28	\$25,648
Healthcare and Public Health	300 Year	28	\$214,737
Healthcare and Public Health	700 Year	28	\$459,413
Postal and Shipping	25 Year	1	\$228
Postal and Shipping	50 Year	1	\$228
Postal and Shipping	100 Year	1	\$445
Postal and Shipping	300 Year	1	\$4,617
Postal and Shipping	700 Year	1	\$20,185
Transportation Systems	25 Year	290	\$133,497
Transportation Systems	50 Year	290	\$133,497
Transportation Systems	100 Year	290	\$640,932
Transportation Systems	300 Year	290	\$6,439,465
Transportation Systems	700 Year	290	\$15,748,785
Water	25 Year	1	\$30
Water	50 Year	1	\$30
Water	100 Year	1	\$59
Water	300 Year	1	\$641
Water	700 Year	1	\$2,832
All Categories	25 Year	2,985	\$1,018,902
All Categories	50 Year	2,985	\$1,018,902

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	2,985	\$4,958,868
All Categories	300 Year	2,985	\$46,854,987
All Categories	700 Year	2,985	\$111,102,386

Source: GIS Analysis

Table 4.289: Critical Facilities Exposed to the Hurricane Winds - City of Claremont

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	120	\$29,395
Commercial Facilities	50 Year	120	\$29,395
Commercial Facilities	100 Year	120	\$128,633
Commercial Facilities	300 Year	120	\$1,327,457
Commercial Facilities	700 Year	120	\$3,170,672
Critical Manufacturing	25 Year	104	\$46,394
Critical Manufacturing	50 Year	104	\$46,394
Critical Manufacturing	100 Year	104	\$180,985
Critical Manufacturing	300 Year	104	\$2,332,154
Critical Manufacturing	700 Year	104	\$6,747,882
Emergency Services	25 Year	1	\$302
Emergency Services	50 Year	1	\$302
Emergency Services	100 Year	1	\$837
Emergency Services	300 Year	1	\$25,769
Emergency Services	700 Year	1	\$118,059
Food and Agriculture	25 Year	1	\$2,056
Food and Agriculture	50 Year	1	\$2,056
Food and Agriculture	100 Year	1	\$15,714
Food and Agriculture	300 Year	1	\$208,155

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	700 Year	1	\$500,649
Government Facilities	25 Year	7	\$2,624
Government Facilities	50 Year	7	\$2,624
Government Facilities	100 Year	7	\$10,928
Government Facilities	300 Year	7	\$111,049
Government Facilities	700 Year	7	\$311,646
Transportation Systems	25 Year	7	\$2,415
Transportation Systems	50 Year	7	\$2,415
Transportation Systems	100 Year	7	\$11,983
Transportation Systems	300 Year	7	\$114,037
Transportation Systems	700 Year	7	\$223,801
All Categories	25 Year	240	\$83,186
All Categories	50 Year	240	\$83,186
All Categories	100 Year	240	\$349,080
All Categories	300 Year	240	\$4,118,621
All Categories	700 Year	240	\$11,072,709

Source: GIS Analysis

Table 4.290: Critical Facilities Exposed to the Hurricane Winds - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$14
Banking and Finance	50 Year	1	\$14
Banking and Finance	100 Year	1	\$40
Banking and Finance	300 Year	1	\$1,278
Banking and Finance	700 Year	1	\$5,319
Commercial Facilities	25 Year	592	\$103,896

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	50 Year	592	\$103,896
Commercial Facilities	100 Year	592	\$453,502
Commercial Facilities	300 Year	592	\$5,297,185
Commercial Facilities	700 Year	592	\$14,429,890
Critical Manufacturing	25 Year	305	\$121,011
Critical Manufacturing	50 Year	305	\$121,011
Critical Manufacturing	100 Year	305	\$486,703
Critical Manufacturing	300 Year	305	\$5,551,553
Critical Manufacturing	700 Year	305	\$15,025,722
Emergency Services	25 Year	2	\$1,190
Emergency Services	50 Year	2	\$1,190
Emergency Services	100 Year	2	\$7,803
Emergency Services	300 Year	2	\$107,565
Emergency Services	700 Year	2	\$307,072
Energy	25 Year	6	\$5,664
Energy	50 Year	6	\$5,664
Energy	100 Year	6	\$13,959
Energy	300 Year	6	\$252,645
Energy	700 Year	6	\$1,128,694
Government Facilities	25 Year	11	\$43,764
Government Facilities	50 Year	11	\$43,764
Government Facilities	100 Year	11	\$233,373
Government Facilities	300 Year	11	\$2,051,071
Government Facilities	700 Year	11	\$3,838,273
Healthcare and Public Health	25 Year	3	\$1,063

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	3	\$1,063
Healthcare and Public Health	100 Year	3	\$5,135
Healthcare and Public Health	300 Year	3	\$43,086
Healthcare and Public Health	700 Year	3	\$82,042
Transportation Systems	25 Year	36	\$15,691
Transportation Systems	50 Year	36	\$15,691
Transportation Systems	100 Year	36	\$92,450
Transportation Systems	300 Year	36	\$1,173,090
Transportation Systems	700 Year	36	\$3,156,409
All Categories	25 Year	956	\$292,293
All Categories	50 Year	956	\$292,293
All Categories	100 Year	956	\$1,292,965
All Categories	300 Year	956	\$14,477,473
All Categories	700 Year	956	\$37,973,421

Source: GIS Analysis

Table 4.291: Critical Facilities Exposed to the Hurricane Winds - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	17	\$842
Banking and Finance	50 Year	17	\$842
Banking and Finance	100 Year	17	\$3,043
Banking and Finance	300 Year	17	\$51,971
Banking and Finance	700 Year	17	\$197,916
Commercial Facilities	25 Year	2,533	\$604,555
Commercial Facilities	50 Year	2,533	\$604,555
Commercial Facilities	100 Year	2,533	\$2,847,874

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	300 Year	2,533	\$30,114,549
Commercial Facilities	700 Year	2,533	\$76,029,049
Critical Manufacturing	25 Year	567	\$197,200
Critical Manufacturing	50 Year	567	\$197,200
Critical Manufacturing	100 Year	567	\$875,523
Critical Manufacturing	300 Year	567	\$9,433,931
Critical Manufacturing	700 Year	567	\$26,538,132
Defense Industrial Base	25 Year	1	\$422
Defense Industrial Base	50 Year	1	\$422
Defense Industrial Base	100 Year	1	\$962
Defense Industrial Base	300 Year	1	\$16,238
Defense Industrial Base	700 Year	1	\$81,648
Emergency Services	25 Year	13	\$2,074
Emergency Services	50 Year	13	\$2,074
Emergency Services	100 Year	13	\$10,481
Emergency Services	300 Year	13	\$133,952
Emergency Services	700 Year	13	\$375,597
Energy	25 Year	35	\$17,058
Energy	50 Year	35	\$17,058
Energy	100 Year	35	\$34,381
Energy	300 Year	35	\$386,619
Energy	700 Year	35	\$1,715,178
Food and Agriculture	25 Year	1	\$11
Food and Agriculture	50 Year	1	\$11
Food and Agriculture	100 Year	1	\$26

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	300 Year	1	\$390
Food and Agriculture	700 Year	1	\$1,937
Government Facilities	25 Year	90	\$93,635
Government Facilities	50 Year	90	\$93,635
Government Facilities	100 Year	90	\$472,257
Government Facilities	300 Year	90	\$4,402,122
Government Facilities	700 Year	90	\$10,522,101
Healthcare and Public Health	25 Year	65	\$19,716
Healthcare and Public Health	50 Year	65	\$19,716
Healthcare and Public Health	100 Year	65	\$59,451
Healthcare and Public Health	300 Year	65	\$810,022
Healthcare and Public Health	700 Year	65	\$3,111,939
Transportation Systems	25 Year	119	\$40,138
Transportation Systems	50 Year	119	\$40,138
Transportation Systems	100 Year	119	\$199,411
Transportation Systems	300 Year	119	\$1,991,844
Transportation Systems	700 Year	119	\$4,563,124
All Categories	25 Year	3,441	\$975,651
All Categories	50 Year	3,441	\$975,651
All Categories	100 Year	3,441	\$4,503,409
All Categories	300 Year	3,441	\$47,341,638
All Categories	700 Year	3,441	\$123,136,621

Source: GIS Analysis

Table 4.292: Critical Facilities Exposed to the Hurricane Winds - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$1,644
Banking and Finance	50 Year	4	\$1,644
Banking and Finance	100 Year	4	\$5,396
Banking and Finance	300 Year	4	\$71,286
Banking and Finance	700 Year	4	\$299,401
Commercial Facilities	25 Year	684	\$148,221
Commercial Facilities	50 Year	684	\$148,221
Commercial Facilities	100 Year	684	\$737,447
Commercial Facilities	300 Year	684	\$14,218,707
Commercial Facilities	700 Year	684	\$42,662,086
Critical Manufacturing	25 Year	192	\$64,953
Critical Manufacturing	50 Year	192	\$64,953
Critical Manufacturing	100 Year	192	\$273,320
Critical Manufacturing	300 Year	192	\$3,612,138
Critical Manufacturing	700 Year	192	\$10,857,622
Defense Industrial Base	25 Year	1	\$4,144
Defense Industrial Base	50 Year	1	\$4,144
Defense Industrial Base	100 Year	1	\$13,184
Defense Industrial Base	300 Year	1	\$209,924
Defense Industrial Base	700 Year	1	\$696,498
Emergency Services	25 Year	7	\$1,475
Emergency Services	50 Year	7	\$1,475
Emergency Services	100 Year	7	\$4,657
Emergency Services	300 Year	7	\$121,715

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	700 Year	7	\$611,751
Energy	25 Year	11	\$8,052
Energy	50 Year	11	\$8,052
Energy	100 Year	11	\$16,342
Energy	300 Year	11	\$188,589
Energy	700 Year	11	\$844,703
Food and Agriculture	25 Year	1	\$0
Food and Agriculture	50 Year	1	\$0
Food and Agriculture	100 Year	1	\$4
Food and Agriculture	300 Year	1	\$114
Food and Agriculture	700 Year	1	\$337
Government Facilities	25 Year	24	\$10,985
Government Facilities	50 Year	24	\$10,985
Government Facilities	100 Year	24	\$37,122
Government Facilities	300 Year	24	\$570,696
Government Facilities	700 Year	24	\$1,931,221
Healthcare and Public Health	25 Year	9	\$9,498
Healthcare and Public Health	50 Year	9	\$9,498
Healthcare and Public Health	100 Year	9	\$56,760
Healthcare and Public Health	300 Year	9	\$752,144
Healthcare and Public Health	700 Year	9	\$2,157,508
Transportation Systems	25 Year	26	\$3,861
Transportation Systems	50 Year	26	\$3,861
Transportation Systems	100 Year	26	\$18,633
Transportation Systems	300 Year	26	\$162,785

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	700 Year	26	\$351,306
All Categories	25 Year	959	\$252,833
All Categories	50 Year	959	\$252,833
All Categories	100 Year	959	\$1,162,865
All Categories	300 Year	959	\$19,908,098
All Categories	700 Year	959	\$60,412,433

Source: GIS Analysis

Table 4.293: Critical Facilities Exposed to the Hurricane Winds - Town of Brookford

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	28	\$1,513
Commercial Facilities	50 Year	28	\$1,513
Commercial Facilities	100 Year	28	\$5,059
Commercial Facilities	300 Year	28	\$67,883
Commercial Facilities	700 Year	28	\$199,515
Critical Manufacturing	25 Year	7	\$822
Critical Manufacturing	50 Year	7	\$822
Critical Manufacturing	100 Year	7	\$2,025
Critical Manufacturing	300 Year	7	\$25,875
Critical Manufacturing	700 Year	7	\$92,098
Transportation Systems	25 Year	2	\$1,354
Transportation Systems	50 Year	2	\$1,354
Transportation Systems	100 Year	2	\$3,992
Transportation Systems	300 Year	2	\$67,816
Transportation Systems	700 Year	2	\$240,013
All Categories	25 Year	37	\$3,689

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	50 Year	37	\$3,689
All Categories	100 Year	37	\$11,076
All Categories	300 Year	37	\$161,574
All Categories	700 Year	37	\$531,626

Source: GIS Analysis

Table 4.294: Critical Facilities Exposed to the Hurricane Winds - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$28
Banking and Finance	50 Year	1	\$28
Banking and Finance	100 Year	1	\$191
Banking and Finance	300 Year	1	\$2,715
Banking and Finance	700 Year	1	\$7,901
Commercial Facilities	25 Year	77	\$13,148
Commercial Facilities	50 Year	77	\$13,148
Commercial Facilities	100 Year	77	\$61,147
Commercial Facilities	300 Year	77	\$679,650
Commercial Facilities	700 Year	77	\$1,721,019
Critical Manufacturing	25 Year	25	\$7,147
Critical Manufacturing	50 Year	25	\$7,147
Critical Manufacturing	100 Year	25	\$28,185
Critical Manufacturing	300 Year	25	\$261,014
Critical Manufacturing	700 Year	25	\$631,931
Emergency Services	25 Year	2	\$130
Emergency Services	50 Year	2	\$130
Emergency Services	100 Year	2	\$280

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	300 Year	2	\$2,604
Emergency Services	700 Year	2	\$8,993
Government Facilities	25 Year	3	\$20,451
Government Facilities	50 Year	3	\$20,451
Government Facilities	100 Year	3	\$109,369
Government Facilities	300 Year	3	\$993,665
Government Facilities	700 Year	3	\$1,707,408
Transportation Systems	25 Year	7	\$403
Transportation Systems	50 Year	7	\$403
Transportation Systems	100 Year	7	\$2,280
Transportation Systems	300 Year	7	\$31,378
Transportation Systems	700 Year	7	\$87,510
All Categories	25 Year	115	\$41,307
All Categories	50 Year	115	\$41,307
All Categories	100 Year	115	\$201,452
All Categories	300 Year	115	\$1,971,026
All Categories	700 Year	115	\$4,164,762

Source: GIS Analysis

Table 4.295: Critical Facilities Exposed to the Hurricane Winds - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	3	\$588
Banking and Finance	50 Year	3	\$588
Banking and Finance	100 Year	3	\$2,931
Banking and Finance	300 Year	3	\$25,824
Banking and Finance	700 Year	3	\$48,170

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	215	\$51,326
Commercial Facilities	50 Year	215	\$51,326
Commercial Facilities	100 Year	215	\$238,058
Commercial Facilities	300 Year	215	\$2,316,812
Commercial Facilities	700 Year	215	\$5,931,363
Critical Manufacturing	25 Year	86	\$53,030
Critical Manufacturing	50 Year	86	\$53,030
Critical Manufacturing	100 Year	86	\$233,238
Critical Manufacturing	300 Year	86	\$2,431,046
Critical Manufacturing	700 Year	86	\$6,308,619
Emergency Services	25 Year	1	\$65
Emergency Services	50 Year	1	\$65
Emergency Services	100 Year	1	\$502
Emergency Services	300 Year	1	\$8,431
Emergency Services	700 Year	1	\$24,332
Government Facilities	25 Year	8	\$9,138
Government Facilities	50 Year	8	\$9,138
Government Facilities	100 Year	8	\$28,178
Government Facilities	300 Year	8	\$148,648
Government Facilities	700 Year	8	\$292,976
Healthcare and Public Health	25 Year	1	\$46
Healthcare and Public Health	50 Year	1	\$46
Healthcare and Public Health	100 Year	1	\$349
Healthcare and Public Health	300 Year	1	\$6,444
Healthcare and Public Health	700 Year	1	\$19,662

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	25 Year	10	\$6,290
Transportation Systems	50 Year	10	\$6,290
Transportation Systems	100 Year	10	\$27,246
Transportation Systems	300 Year	10	\$309,090
Transportation Systems	700 Year	10	\$804,278
All Categories	25 Year	324	\$120,483
All Categories	50 Year	324	\$120,483
All Categories	100 Year	324	\$530,502
All Categories	300 Year	324	\$5,246,295
All Categories	700 Year	324	\$13,429,400

Source: GIS Analysis

Table 4.296: Critical Facilities Exposed to the Hurricane Winds - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$54
Banking and Finance	50 Year	1	\$54
Banking and Finance	100 Year	1	\$128
Banking and Finance	300 Year	1	\$1,316
Banking and Finance	700 Year	1	\$4,646
Commercial Facilities	25 Year	271	\$41,503
Commercial Facilities	50 Year	271	\$41,503
Commercial Facilities	100 Year	271	\$187,092
Commercial Facilities	300 Year	271	\$2,525,420
Commercial Facilities	700 Year	271	\$7,162,629
Critical Manufacturing	25 Year	138	\$53,303
Critical Manufacturing	50 Year	138	\$53,303

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	100 Year	138	\$222,008
Critical Manufacturing	300 Year	138	\$2,897,671
Critical Manufacturing	700 Year	138	\$9,648,226
Emergency Services	25 Year	1	\$60
Emergency Services	50 Year	1	\$60
Emergency Services	100 Year	1	\$138
Emergency Services	300 Year	1	\$1,997
Emergency Services	700 Year	1	\$9,336
Energy	25 Year	5	\$11,650
Energy	50 Year	5	\$11,650
Energy	100 Year	5	\$29,260
Energy	300 Year	5	\$595,300
Energy	700 Year	5	\$2,527,093
Government Facilities	25 Year	10	\$9,089
Government Facilities	50 Year	10	\$9,089
Government Facilities	100 Year	10	\$55,682
Government Facilities	300 Year	10	\$909,607
Government Facilities	700 Year	10	\$3,054,713
Healthcare and Public Health	25 Year	1	\$50
Healthcare and Public Health	50 Year	1	\$50
Healthcare and Public Health	100 Year	1	\$153
Healthcare and Public Health	300 Year	1	\$2,321
Healthcare and Public Health	700 Year	1	\$7,507
Transportation Systems	25 Year	13	\$1,772
Transportation Systems	50 Year	13	\$1,772

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	100 Year	13	\$7,926
Transportation Systems	300 Year	13	\$81,216
Transportation Systems	700 Year	13	\$219,477
Water	25 Year	2	\$2,246
Water	50 Year	2	\$2,246
Water	100 Year	2	\$4,648
Water	300 Year	2	\$56,092
Water	700 Year	2	\$253,579
All Categories	25 Year	442	\$119,727
All Categories	50 Year	442	\$119,727
All Categories	100 Year	442	\$507,035
All Categories	300 Year	442	\$7,070,940
All Categories	700 Year	442	\$22,887,206

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event.

Table 4.297: Critical Facilities Exposed to the Hurricane Winds (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	5,542	\$8,828,808
Banking and Finance	50 Year	5,542	\$24,336,777
Banking and Finance	100 Year	5,542	\$61,819,115
Banking and Finance	300 Year	5,542	\$258,531,036
Banking and Finance	700 Year	5,542	\$516,815,216
Chemical	25 Year	64	\$675,334
Chemical	50 Year	64	\$2,670,702

Sector	Event	Number of Buildings At Risk	Estimated Damages
Chemical	100 Year	64	\$7,754,300
Chemical	300 Year	64	\$50,667,379
Chemical	700 Year	64	\$115,822,730
Commercial Facilities	25 Year	197,144	\$230,360,220
Commercial Facilities	50 Year	197,144	\$607,069,862
Commercial Facilities	100 Year	197,147	\$1,563,504,260
Commercial Facilities	300 Year	197,148	\$5,967,482,345
Commercial Facilities	700 Year	197,148	\$11,697,933,439
Communications	25 Year	227	\$1,153,656
Communications	50 Year	227	\$3,255,900
Communications	100 Year	227	\$8,370,712
Communications	300 Year	227	\$32,646,679
Communications	700 Year	227	\$61,293,241
Critical Manufacturing	25 Year	61,923	\$79,005,031
Critical Manufacturing	50 Year	61,924	\$183,663,910
Critical Manufacturing	100 Year	61,924	\$466,351,445
Critical Manufacturing	300 Year	61,924	\$1,946,373,885
Critical Manufacturing	700 Year	61,924	\$4,016,752,718
Defense Industrial Base	25 Year	77	\$491,589
Defense Industrial Base	50 Year	77	\$3,046,866
Defense Industrial Base	100 Year	77	\$5,765,765
Defense Industrial Base	300 Year	77	\$26,491,978
Defense Industrial Base	700 Year	77	\$51,595,615
Emergency Services	25 Year	2,495	\$4,319,215
Emergency Services	50 Year	2,495	\$14,270,269

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	100 Year	2,495	\$40,788,404
Emergency Services	300 Year	2,495	\$190,760,186
Emergency Services	700 Year	2,495	\$386,910,763
Energy	25 Year	1,630	\$10,625,577
Energy	50 Year	1,631	\$38,792,327
Energy	100 Year	1,631	\$139,472,941
Energy	300 Year	1,631	\$1,006,590,159
Energy	700 Year	1,631	\$2,412,324,564
Food and Agriculture	25 Year	152,090	\$9,386,064
Food and Agriculture	50 Year	152,092	\$36,921,448
Food and Agriculture	100 Year	152,092	\$111,789,855
Food and Agriculture	300 Year	152,092	\$396,684,351
Food and Agriculture	700 Year	152,092	\$764,463,333
Government Facilities	25 Year	38,876	\$139,074,127
Government Facilities	50 Year	38,877	\$336,852,861
Government Facilities	100 Year	38,877	\$796,206,038
Government Facilities	300 Year	38,877	\$2,751,273,779
Government Facilities	700 Year	38,877	\$5,023,168,207
Healthcare and Public Health	25 Year	13,613	\$24,077,879
Healthcare and Public Health	50 Year	13,613	\$64,524,115
Healthcare and Public Health	100 Year	13,613	\$177,369,289
Healthcare and Public Health	300 Year	13,613	\$795,369,191
Healthcare and Public Health	700 Year	13,613	\$1,572,522,538
Information Technology	25 Year	3	\$1,669
Information Technology	50 Year	3	\$1,669

Sector	Event	Number of Buildings At Risk	Estimated Damages
Information Technology	100 Year	3	\$8,813
Information Technology	300 Year	3	\$85,284
Information Technology	700 Year	3	\$161,929
National Monuments and Icons	25 Year	2	\$1,246
National Monuments and Icons	50 Year	2	\$4,188
National Monuments and Icons	100 Year	2	\$15,242
National Monuments and Icons	300 Year	2	\$77,461
National Monuments and Icons	700 Year	2	\$209,930
Nuclear Reactors, Materials and Waste	25 Year	64	\$962,645
Nuclear Reactors, Materials and Waste	50 Year	64	\$2,046,852
Nuclear Reactors, Materials and Waste	100 Year	64	\$3,576,998
Nuclear Reactors, Materials and Waste	300 Year	64	\$10,436,731
Nuclear Reactors, Materials and Waste	700 Year	64	\$16,433,212
Other	25 Year	12	\$10,325
Other	50 Year	12	\$14,873
Other	100 Year	12	\$44,968
Other	300 Year	12	\$305,367
Other	700 Year	12	\$749,393
Postal and Shipping	25 Year	246	\$218,103
Postal and Shipping	50 Year	246	\$736,035
Postal and Shipping	100 Year	246	\$2,355,350
Postal and Shipping	300 Year	246	\$9,148,407
Postal and Shipping	700 Year	246	\$15,606,429
Transportation Systems	25 Year	36,850	\$41,500,732

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	50 Year	36,850	\$96,359,512
Transportation Systems	100 Year	36,850	\$263,519,114
Transportation Systems	300 Year	36,850	\$1,161,055,825
Transportation Systems	700 Year	36,850	\$2,354,234,770
Water	25 Year	1,272	\$10,502,349
Water	50 Year	1,272	\$39,815,199
Water	100 Year	1,272	\$133,334,210
Water	300 Year	1,272	\$585,065,734
Water	700 Year	1,272	\$1,278,176,626
All Categories	25 Year	512,130	\$561,194,569
All Categories	50 Year	512,135	\$1,454,383,365
All Categories	100 Year	512,138	\$3,782,046,819
All Categories	300 Year	512,139	\$15,189,045,777
All Categories	700 Year	512,139	\$30,285,174,653

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.298: High Potential Loss Properties Exposed to the Hurricane Winds - Alexander County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	172	\$254,670
Commercial	50 Year	172	\$254,670
Commercial	100 Year	172	\$1,312,034
Commercial	300 Year	172	\$11,584,229
Commercial	700 Year	172	\$25,067,791

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	25 Year	23	\$51,312
Government	50 Year	23	\$51,312
Government	100 Year	23	\$260,762
Government	300 Year	23	\$2,551,212
Government	700 Year	23	\$5,324,565
Industrial	25 Year	62	\$85,442
Industrial	50 Year	62	\$85,442
Industrial	100 Year	62	\$413,160
Industrial	300 Year	62	\$4,115,061
Industrial	700 Year	62	\$9,223,717
Religious	25 Year	28	\$94,976
Religious	50 Year	28	\$94,976
Religious	100 Year	28	\$508,642
Religious	300 Year	28	\$4,520,249
Religious	700 Year	28	\$8,409,760
Residential	25 Year	17	\$10,347
Residential	50 Year	17	\$10,347
Residential	100 Year	17	\$46,612
Residential	300 Year	17	\$449,734
Residential	700 Year	17	\$1,221,542
Utilities	25 Year	13	\$11,982
Utilities	50 Year	13	\$11,982
Utilities	100 Year	13	\$25,112
Utilities	300 Year	13	\$342,160
Utilities	700 Year	13	\$1,469,479

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	315	\$508,729
All Categories	50 Year	315	\$508,729
All Categories	100 Year	315	\$2,566,322
All Categories	300 Year	315	\$23,562,645
All Categories	700 Year	315	\$50,716,854

Source: GIS Analysis

Table 4.299: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Taylorsville

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	53	\$43,766
Commercial	50 Year	53	\$43,766
Commercial	100 Year	53	\$220,098
Commercial	300 Year	53	\$2,238,695
Commercial	700 Year	53	\$5,673,331
Government	25 Year	5	\$3,939
Government	50 Year	5	\$3,939
Government	100 Year	5	\$9,580
Government	300 Year	5	\$156,685
Government	700 Year	5	\$660,228
Industrial	25 Year	17	\$27,847
Industrial	50 Year	17	\$27,847
Industrial	100 Year	17	\$152,204
Industrial	300 Year	17	\$1,855,939
Industrial	700 Year	17	\$5,206,254
Religious	25 Year	7	\$8,344
Religious	50 Year	7	\$8,344

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	100 Year	7	\$40,844
Religious	300 Year	7	\$333,766
Religious	700 Year	7	\$712,040
Residential	25 Year	8	\$1,654
Residential	50 Year	8	\$1,654
Residential	100 Year	8	\$9,947
Residential	300 Year	8	\$143,650
Residential	700 Year	8	\$386,694
Utilities	25 Year	2	\$5,159
Utilities	50 Year	2	\$5,159
Utilities	100 Year	2	\$12,156
Utilities	300 Year	2	\$191,134
Utilities	700 Year	2	\$886,153
All Categories	25 Year	92	\$90,709
All Categories	50 Year	92	\$90,709
All Categories	100 Year	92	\$444,829
All Categories	300 Year	92	\$4,919,869
All Categories	700 Year	92	\$13,524,700

Source: GIS Analysis

Table 4.300: High Potential Loss Properties Exposed to the Hurricane Winds - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	54	\$63,302
Commercial	50 Year	54	\$63,302
Commercial	100 Year	54	\$313,542

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	300 Year	54	\$2,797,762
Commercial	700 Year	54	\$5,673,936
Government	25 Year	11	\$28,460
Government	50 Year	11	\$28,460
Government	100 Year	11	\$145,918
Government	300 Year	11	\$1,606,310
Government	700 Year	11	\$4,101,456
Industrial	25 Year	14	\$22,351
Industrial	50 Year	14	\$22,351
Industrial	100 Year	14	\$112,651
Industrial	300 Year	14	\$867,145
Industrial	700 Year	14	\$1,550,769
Religious	25 Year	5	\$3,428
Religious	50 Year	5	\$3,428
Religious	100 Year	5	\$21,185
Religious	300 Year	5	\$277,308
Religious	700 Year	5	\$755,509
Residential	25 Year	15	\$11,795
Residential	50 Year	15	\$11,795
Residential	100 Year	15	\$38,275
Residential	300 Year	15	\$374,913
Residential	700 Year	15	\$1,205,835
Utilities	25 Year	7	\$16,089
Utilities	50 Year	7	\$16,089
Utilities	100 Year	7	\$33,290

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	300 Year	7	\$401,426
Utilities	700 Year	7	\$1,814,506
All Categories	25 Year	106	\$145,425
All Categories	50 Year	106	\$145,425
All Categories	100 Year	106	\$664,861
All Categories	300 Year	106	\$6,324,864
All Categories	700 Year	106	\$15,102,011

Source: GIS Analysis

Table 4.301: High Potential Loss Properties Exposed to the Hurricane Winds - City of Morganton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	72	\$141,779
Commercial	50 Year	72	\$141,779
Commercial	100 Year	72	\$634,523
Commercial	300 Year	72	\$5,934,487
Commercial	700 Year	72	\$14,057,573
Government	25 Year	49	\$81,335
Government	50 Year	49	\$81,335
Government	100 Year	49	\$415,659
Government	300 Year	49	\$3,962,222
Government	700 Year	49	\$8,628,056
Industrial	25 Year	25	\$53,347
Industrial	50 Year	25	\$53,347
Industrial	100 Year	25	\$233,401
Industrial	300 Year	25	\$2,498,310
Industrial	700 Year	25	\$6,347,112

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	25 Year	3	\$2,137
Religious	50 Year	3	\$2,137
Religious	100 Year	3	\$11,082
Religious	300 Year	3	\$103,920
Religious	700 Year	3	\$211,187
Residential	25 Year	42	\$14,575
Residential	50 Year	42	\$14,575
Residential	100 Year	42	\$60,577
Residential	300 Year	42	\$875,422
Residential	700 Year	42	\$2,820,857
Utilities	25 Year	18	\$17,755
Utilities	50 Year	18	\$17,755
Utilities	100 Year	18	\$38,006
Utilities	300 Year	18	\$492,133
Utilities	700 Year	18	\$2,255,472
All Categories	25 Year	209	\$310,928
All Categories	50 Year	209	\$310,928
All Categories	100 Year	209	\$1,393,248
All Categories	300 Year	209	\$13,866,494
All Categories	700 Year	209	\$34,320,257

Source: GIS Analysis

Table 4.302: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Connelly Springs

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	25 Year	1	\$2,288
Religious	50 Year	1	\$2,288

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	100 Year	1	\$13,839
Religious	300 Year	1	\$162,745
Religious	700 Year	1	\$485,874
Residential	25 Year	2	\$306
Residential	50 Year	2	\$306
Residential	100 Year	2	\$2,164
Residential	300 Year	2	\$22,828
Residential	700 Year	2	\$53,687
All Categories	25 Year	3	\$2,594
All Categories	50 Year	3	\$2,594
All Categories	100 Year	3	\$16,003
All Categories	300 Year	3	\$185,573
All Categories	700 Year	3	\$539,561

Source: GIS Analysis

Table 4.303: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Drexel

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	6	\$4,816
Commercial	50 Year	6	\$4,816
Commercial	100 Year	6	\$14,705
Commercial	300 Year	6	\$217,304
Commercial	700 Year	6	\$697,792
Government	25 Year	1	\$1,012
Government	50 Year	1	\$1,012
Government	100 Year	1	\$2,370
Government	300 Year	1	\$23,706

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	700 Year	1	\$83,154
Religious	25 Year	1	\$231
Religious	50 Year	1	\$231
Religious	100 Year	1	\$688
Religious	300 Year	1	\$10,397
Religious	700 Year	1	\$32,169
Residential	25 Year	2	\$107
Residential	50 Year	2	\$107
Residential	100 Year	2	\$1,390
Residential	300 Year	2	\$13,177
Residential	700 Year	2	\$29,367
Utilities	25 Year	1	\$5,968
Utilities	50 Year	1	\$5,968
Utilities	100 Year	1	\$11,446
Utilities	300 Year	1	\$114,000
Utilities	700 Year	1	\$493,321
All Categories	25 Year	11	\$12,134
All Categories	50 Year	11	\$12,134
All Categories	100 Year	11	\$30,599
All Categories	300 Year	11	\$378,584
All Categories	700 Year	11	\$1,335,803

Source: GIS Analysis

Table 4.304: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Glen Alpine

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$205

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	50 Year	1	\$205
Commercial	100 Year	1	\$1,335
Commercial	300 Year	1	\$14,114
Commercial	700 Year	1	\$33,252
Government	25 Year	1	\$1,648
Government	50 Year	1	\$1,648
Government	100 Year	1	\$10,239
Government	300 Year	1	\$121,406
Government	700 Year	1	\$352,061
Residential	25 Year	1	\$669
Residential	50 Year	1	\$669
Residential	100 Year	1	\$2,064
Residential	300 Year	1	\$11,215
Residential	700 Year	1	\$29,290
All Categories	25 Year	3	\$2,522
All Categories	50 Year	3	\$2,522
All Categories	100 Year	3	\$13,638
All Categories	300 Year	3	\$146,735
All Categories	700 Year	3	\$414,603

Source: GIS Analysis

Table 4.305: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Hildebran

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	3	\$2,151
Commercial	50 Year	3	\$2,151
Commercial	100 Year	3	\$9,809

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	300 Year	3	\$152,437
Commercial	700 Year	3	\$432,696
Government	25 Year	2	\$1,356
Government	50 Year	2	\$1,356
Government	100 Year	2	\$3,003
Government	300 Year	2	\$32,260
Government	700 Year	2	\$128,464
Industrial	25 Year	6	\$5,112
Industrial	50 Year	6	\$5,112
Industrial	100 Year	6	\$12,420
Industrial	300 Year	6	\$163,917
Industrial	700 Year	6	\$673,571
Utilities	25 Year	2	\$2,028
Utilities	50 Year	2	\$2,028
Utilities	100 Year	2	\$4,432
Utilities	300 Year	2	\$59,714
Utilities	700 Year	2	\$275,653
All Categories	25 Year	13	\$10,647
All Categories	50 Year	13	\$10,647
All Categories	100 Year	13	\$29,664
All Categories	300 Year	13	\$408,328
All Categories	700 Year	13	\$1,510,384

Source: GIS Analysis

Table 4.306: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Rutherford College

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	2	\$3,703
Commercial	50 Year	2	\$3,703
Commercial	100 Year	2	\$19,622
Commercial	300 Year	2	\$168,771
Commercial	700 Year	2	\$276,202
Government	25 Year	1	\$747
Government	50 Year	1	\$747
Government	100 Year	1	\$2,376
Government	300 Year	1	\$37,819
Government	700 Year	1	\$125,458
Industrial	25 Year	2	\$2,160
Industrial	50 Year	2	\$2,160
Industrial	100 Year	2	\$5,447
Industrial	300 Year	2	\$76,140
Industrial	700 Year	2	\$274,685
Residential	25 Year	3	\$1,609
Residential	50 Year	3	\$1,609
Residential	100 Year	3	\$11,863
Residential	300 Year	3	\$231,199
Residential	700 Year	3	\$759,232
All Categories	25 Year	8	\$8,219
All Categories	50 Year	8	\$8,219
All Categories	100 Year	8	\$39,308
All Categories	300 Year	8	\$513,929

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	700 Year	8	\$1,435,577

Source: GIS Analysis

Table 4.307: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Valdese

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	9	\$4,137
Commercial	50 Year	9	\$4,137
Commercial	100 Year	9	\$11,510
Commercial	300 Year	9	\$147,753
Commercial	700 Year	9	\$565,558
Government	25 Year	5	\$5,016
Government	50 Year	5	\$5,016
Government	100 Year	5	\$13,301
Government	300 Year	5	\$185,062
Government	700 Year	5	\$738,727
Industrial	25 Year	4	\$9,828
Industrial	50 Year	4	\$9,828
Industrial	100 Year	4	\$26,534
Industrial	300 Year	4	\$366,581
Industrial	700 Year	4	\$1,375,587
Residential	25 Year	3	\$281
Residential	50 Year	3	\$281
Residential	100 Year	3	\$2,725
Residential	300 Year	3	\$57,258
Residential	700 Year	3	\$164,331
Utilities	25 Year	9	\$12,049

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	50 Year	9	\$12,049
Utilities	100 Year	9	\$25,961
Utilities	300 Year	9	\$340,535
Utilities	700 Year	9	\$1,564,407
All Categories	25 Year	30	\$31,311
All Categories	50 Year	30	\$31,311
All Categories	100 Year	30	\$80,031
All Categories	300 Year	30	\$1,097,189
All Categories	700 Year	30	\$4,408,610

Source: GIS Analysis

Table 4.308: High Potential Loss Properties Exposed to the Hurricane Winds - Caldwell County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	34	\$123,686
Commercial	50 Year	34	\$123,686
Commercial	100 Year	34	\$620,218
Commercial	300 Year	34	\$4,472,090
Commercial	700 Year	34	\$8,778,873
Government	25 Year	12	\$71,945
Government	50 Year	12	\$71,945
Government	100 Year	12	\$382,696
Government	300 Year	12	\$3,241,437
Government	700 Year	12	\$5,733,837
Industrial	25 Year	9	\$11,874
Industrial	50 Year	9	\$11,874

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	100 Year	9	\$58,674
Industrial	300 Year	9	\$550,112
Industrial	700 Year	9	\$1,062,035
Religious	25 Year	3	\$2,859
Religious	50 Year	3	\$2,859
Religious	100 Year	3	\$11,826
Religious	300 Year	3	\$127,205
Religious	700 Year	3	\$291,106
Residential	25 Year	8	\$1,444
Residential	50 Year	8	\$1,444
Residential	100 Year	8	\$9,121
Residential	300 Year	8	\$143,690
Residential	700 Year	8	\$411,020
Utilities	25 Year	1	\$1,000
Utilities	50 Year	1	\$1,000
Utilities	100 Year	1	\$1,986
Utilities	300 Year	1	\$21,760
Utilities	700 Year	1	\$96,354
All Categories	25 Year	67	\$212,808
All Categories	50 Year	67	\$212,808
All Categories	100 Year	67	\$1,084,521
All Categories	300 Year	67	\$8,556,294
All Categories	700 Year	67	\$16,373,225

Source: GIS Analysis

Table 4.309: High Potential Loss Properties Exposed to the Hurricane Winds - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	52	\$82,244
Commercial	50 Year	52	\$82,244
Commercial	100 Year	52	\$297,992
Commercial	300 Year	52	\$3,900,489
Commercial	700 Year	52	\$11,456,176
Government	25 Year	14	\$32,341
Government	50 Year	14	\$32,341
Government	100 Year	14	\$163,252
Government	300 Year	14	\$1,889,290
Government	700 Year	14	\$4,788,527
Industrial	25 Year	19	\$124,368
Industrial	50 Year	19	\$124,368
Industrial	100 Year	19	\$612,623
Industrial	300 Year	19	\$4,812,886
Industrial	700 Year	19	\$11,877,119
Religious	25 Year	8	\$4,406
Religious	50 Year	8	\$4,406
Religious	100 Year	8	\$22,831
Religious	300 Year	8	\$291,114
Religious	700 Year	8	\$800,173
Residential	25 Year	29	\$107,643
Residential	50 Year	29	\$107,643
Residential	100 Year	29	\$409,273
Residential	300 Year	29	\$3,525,351

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	700 Year	29	\$8,390,862
Utilities	25 Year	14	\$9,746
Utilities	50 Year	14	\$9,746
Utilities	100 Year	14	\$19,643
Utilities	300 Year	14	\$223,759
Utilities	700 Year	14	\$996,478
All Categories	25 Year	136	\$360,748
All Categories	50 Year	136	\$360,748
All Categories	100 Year	136	\$1,525,614
All Categories	300 Year	136	\$14,642,889
All Categories	700 Year	136	\$38,309,335

Source: GIS Analysis

Table 4.310: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Cajah's Mountain

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	3	\$2,362
Commercial	50 Year	3	\$2,362
Commercial	100 Year	3	\$10,539
Commercial	300 Year	3	\$120,932
Commercial	700 Year	3	\$275,214
Residential	25 Year	1	\$254
Residential	50 Year	1	\$254
Residential	100 Year	1	\$2,538
Residential	300 Year	1	\$63,707
Residential	700 Year	1	\$178,678

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	4	\$2,616
All Categories	50 Year	4	\$2,616
All Categories	100 Year	4	\$13,077
All Categories	300 Year	4	\$184,639
All Categories	700 Year	4	\$453,892

Source: GIS Analysis

Table 4.311: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Gamewell

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$255
Commercial	50 Year	1	\$255
Commercial	100 Year	1	\$796
Commercial	300 Year	1	\$11,316
Commercial	700 Year	1	\$36,362
Government	25 Year	2	\$29,413
Government	50 Year	2	\$29,413
Government	100 Year	2	\$155,303
Government	300 Year	2	\$1,458,272
Government	700 Year	2	\$2,844,185
Industrial	25 Year	3	\$6,036
Industrial	50 Year	3	\$6,036
Industrial	100 Year	3	\$31,587
Industrial	300 Year	3	\$320,906
Industrial	700 Year	3	\$652,125
All Categories	25 Year	6	\$35,704
All Categories	50 Year	6	\$35,704

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	6	\$187,686
All Categories	300 Year	6	\$1,790,494
All Categories	700 Year	6	\$3,532,672

Source: GIS Analysis

Table 4.312: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Granite Falls

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	12	\$20,039
Commercial	50 Year	12	\$20,039
Commercial	100 Year	12	\$86,443
Commercial	300 Year	12	\$1,432,965
Commercial	700 Year	12	\$4,070,555
Government	25 Year	5	\$8,396
Government	50 Year	5	\$8,396
Government	100 Year	5	\$29,363
Government	300 Year	5	\$431,325
Government	700 Year	5	\$1,301,646
Industrial	25 Year	2	\$2,546
Industrial	50 Year	2	\$2,546
Industrial	100 Year	2	\$13,413
Industrial	300 Year	2	\$188,052
Industrial	700 Year	2	\$536,493
Religious	25 Year	2	\$300
Religious	50 Year	2	\$300
Religious	100 Year	2	\$1,446
Religious	300 Year	2	\$19,160

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	700 Year	2	\$51,882
Residential	25 Year	7	\$996
Residential	50 Year	7	\$996
Residential	100 Year	7	\$8,064
Residential	300 Year	7	\$150,210
Residential	700 Year	7	\$433,965
Utilities	25 Year	9	\$20,105
Utilities	50 Year	9	\$20,105
Utilities	100 Year	9	\$45,620
Utilities	300 Year	9	\$984,764
Utilities	700 Year	9	\$4,864,059
All Categories	25 Year	37	\$52,382
All Categories	50 Year	37	\$52,382
All Categories	100 Year	37	\$184,349
All Categories	300 Year	37	\$3,206,476
All Categories	700 Year	37	\$11,258,600

Source: GIS Analysis

Table 4.313: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Hudson

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	8	\$3,625
Commercial	50 Year	8	\$3,625
Commercial	100 Year	8	\$13,444
Commercial	300 Year	8	\$221,276
Commercial	700 Year	8	\$633,858
Government	25 Year	9	\$5,431

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	50 Year	9	\$5,431
Government	100 Year	9	\$26,111
Government	300 Year	9	\$365,277
Government	700 Year	9	\$1,041,354
Industrial	25 Year	7	\$6,600
Industrial	50 Year	7	\$6,600
Industrial	100 Year	7	\$19,781
Industrial	300 Year	7	\$314,653
Industrial	700 Year	7	\$1,110,560
Religious	25 Year	1	\$801
Religious	50 Year	1	\$801
Religious	100 Year	1	\$2,515
Religious	300 Year	1	\$39,480
Religious	700 Year	1	\$129,976
Residential	25 Year	5	\$2,667
Residential	50 Year	5	\$2,667
Residential	100 Year	5	\$11,557
Residential	300 Year	5	\$103,668
Residential	700 Year	5	\$287,634
All Categories	25 Year	30	\$19,124
All Categories	50 Year	30	\$19,124
All Categories	100 Year	30	\$73,408
All Categories	300 Year	30	\$1,044,354
All Categories	700 Year	30	\$3,203,382

Source: GIS Analysis

Table 4.314: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Rhodhiss

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$1,844
Commercial	50 Year	1	\$1,844
Commercial	100 Year	1	\$9,562
Commercial	300 Year	1	\$85,699
Commercial	700 Year	1	\$187,548
Government	25 Year	1	\$1,042
Government	50 Year	1	\$1,042
Government	100 Year	1	\$2,723
Government	300 Year	1	\$33,482
Government	700 Year	1	\$122,437
Residential	25 Year	1	\$127
Residential	50 Year	1	\$127
Residential	100 Year	1	\$1,025
Residential	300 Year	1	\$16,134
Residential	700 Year	1	\$41,868
All Categories	25 Year	3	\$3,013
All Categories	50 Year	3	\$3,013
All Categories	100 Year	3	\$13,310
All Categories	300 Year	3	\$135,315
All Categories	700 Year	3	\$351,853

Source: GIS Analysis

Table 4.315: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Sawmills

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	8	\$12,864

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	50 Year	8	\$12,864
Commercial	100 Year	8	\$63,138
Commercial	300 Year	8	\$484,604
Commercial	700 Year	8	\$990,900
Government	25 Year	2	\$3,744
Government	50 Year	2	\$3,744
Government	100 Year	2	\$11,772
Government	300 Year	2	\$130,772
Government	700 Year	2	\$373,399
Industrial	25 Year	2	\$3,859
Industrial	50 Year	2	\$3,859
Industrial	100 Year	2	\$19,724
Industrial	300 Year	2	\$127,956
Industrial	700 Year	2	\$229,473
Residential	25 Year	1	\$74
Residential	50 Year	1	\$74
Residential	100 Year	1	\$641
Residential	300 Year	1	\$10,737
Residential	700 Year	1	\$31,890
All Categories	25 Year	13	\$20,541
All Categories	50 Year	13	\$20,541
All Categories	100 Year	13	\$95,275
All Categories	300 Year	13	\$754,069
All Categories	700 Year	13	\$1,625,662

Source: GIS Analysis

Table 4.316: High Potential Loss Properties Exposed to the Hurricane Winds - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	41	\$62,650
Commercial	50 Year	41	\$62,650
Commercial	100 Year	41	\$324,488
Commercial	300 Year	41	\$2,778,617
Commercial	700 Year	41	\$5,819,782
Government	25 Year	22	\$173,920
Government	50 Year	22	\$173,920
Government	100 Year	22	\$892,048
Government	300 Year	22	\$7,917,528
Government	700 Year	22	\$17,340,657
Industrial	25 Year	8	\$28,106
Industrial	50 Year	8	\$28,106
Industrial	100 Year	8	\$98,728
Industrial	300 Year	8	\$1,409,188
Industrial	700 Year	8	\$4,442,708
Religious	25 Year	4	\$1,388
Religious	50 Year	4	\$1,388
Religious	100 Year	4	\$7,524
Religious	300 Year	4	\$85,309
Religious	700 Year	4	\$211,534
Residential	25 Year	19	\$9,239
Residential	50 Year	19	\$9,239
Residential	100 Year	20	\$44,258
Residential	300 Year	20	\$325,385

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	700 Year	20	\$902,863
Utilities	25 Year	24	\$69,662
Utilities	50 Year	24	\$69,662
Utilities	100 Year	24	\$171,816
Utilities	300 Year	24	\$3,201,057
Utilities	700 Year	24	\$14,062,855
All Categories	25 Year	118	\$344,965
All Categories	50 Year	118	\$344,965
All Categories	100 Year	119	\$1,538,862
All Categories	300 Year	119	\$15,717,084
All Categories	700 Year	119	\$42,780,399

Source: GIS Analysis

Table 4.317: High Potential Loss Properties Exposed to the Hurricane Winds - City of Claremont

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	10	\$14,246
Commercial	50 Year	10	\$14,246
Commercial	100 Year	10	\$53,242
Commercial	300 Year	10	\$487,711
Commercial	700 Year	10	\$1,122,242
Government	25 Year	2	\$1,255
Government	50 Year	2	\$1,255
Government	100 Year	2	\$2,968
Government	300 Year	2	\$55,653
Government	700 Year	2	\$256,973
Industrial	25 Year	12	\$29,585

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	50 Year	12	\$29,585
Industrial	100 Year	12	\$107,178
Industrial	300 Year	12	\$1,492,209
Industrial	700 Year	12	\$4,417,780
All Categories	25 Year	24	\$45,086
All Categories	50 Year	24	\$45,086
All Categories	100 Year	24	\$163,388
All Categories	300 Year	24	\$2,035,573
All Categories	700 Year	24	\$5,796,995

Source: GIS Analysis

Table 4.318: High Potential Loss Properties Exposed to the Hurricane Winds - City of Conover

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	35	\$35,750
Commercial	50 Year	35	\$35,750
Commercial	100 Year	35	\$163,867
Commercial	300 Year	35	\$2,026,852
Commercial	700 Year	35	\$5,720,069
Government	25 Year	5	\$44,351
Government	50 Year	5	\$44,351
Government	100 Year	5	\$238,988
Government	300 Year	5	\$2,130,602
Government	700 Year	5	\$4,057,232
Industrial	25 Year	23	\$46,437
Industrial	50 Year	23	\$46,437
Industrial	100 Year	23	\$175,954

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	300 Year	23	\$2,175,675
Industrial	700 Year	23	\$6,340,563
Residential	25 Year	6	\$2,458
Residential	50 Year	6	\$2,458
Residential	100 Year	6	\$16,187
Residential	300 Year	6	\$139,401
Residential	700 Year	6	\$400,455
Utilities	25 Year	6	\$5,664
Utilities	50 Year	6	\$5,664
Utilities	100 Year	6	\$13,959
Utilities	300 Year	6	\$252,645
Utilities	700 Year	6	\$1,128,694
All Categories	25 Year	75	\$134,660
All Categories	50 Year	75	\$134,660
All Categories	100 Year	75	\$608,955
All Categories	300 Year	75	\$6,725,175
All Categories	700 Year	75	\$17,647,013

Source: GIS Analysis

Table 4.319: High Potential Loss Properties Exposed to the Hurricane Winds - City of Hickory

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	207	\$322,647
Commercial	50 Year	207	\$322,647
Commercial	100 Year	207	\$1,597,355
Commercial	300 Year	207	\$16,718,412
Commercial	700 Year	207	\$40,777,800

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	25 Year	35	\$87,766
Government	50 Year	35	\$87,766
Government	100 Year	35	\$449,805
Government	300 Year	35	\$4,148,240
Government	700 Year	35	\$9,749,049
Industrial	25 Year	33	\$46,372
Industrial	50 Year	33	\$46,372
Industrial	100 Year	33	\$184,552
Industrial	300 Year	33	\$2,881,239
Industrial	700 Year	33	\$9,473,614
Religious	25 Year	4	\$11,177
Religious	50 Year	4	\$11,177
Religious	100 Year	4	\$55,751
Religious	300 Year	4	\$670,904
Religious	700 Year	4	\$1,732,844
Residential	25 Year	40	\$29,230
Residential	50 Year	40	\$29,230
Residential	100 Year	40	\$131,443
Residential	300 Year	40	\$1,440,477
Residential	700 Year	40	\$3,902,261
Utilities	25 Year	26	\$16,169
Utilities	50 Year	26	\$16,169
Utilities	100 Year	26	\$32,505
Utilities	300 Year	26	\$366,795
Utilities	700 Year	26	\$1,634,486

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	345	\$513,361
All Categories	50 Year	345	\$513,361
All Categories	100 Year	345	\$2,451,411
All Categories	300 Year	345	\$26,226,067
All Categories	700 Year	345	\$67,270,054

Source: GIS Analysis

Table 4.320: High Potential Loss Properties Exposed to the Hurricane Winds - City of Newton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	26	\$73,808
Commercial	50 Year	26	\$73,808
Commercial	100 Year	26	\$418,057
Commercial	300 Year	26	\$10,722,954
Commercial	700 Year	26	\$33,136,117
Government	25 Year	9	\$10,222
Government	50 Year	9	\$10,222
Government	100 Year	9	\$31,356
Government	300 Year	9	\$571,023
Government	700 Year	9	\$2,194,544
Industrial	25 Year	17	\$29,963
Industrial	50 Year	17	\$29,963
Industrial	100 Year	17	\$121,998
Industrial	300 Year	17	\$1,900,220
Industrial	700 Year	17	\$6,314,802
Religious	25 Year	1	\$256
Religious	50 Year	1	\$256

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	100 Year	1	\$809
Religious	300 Year	1	\$12,918
Religious	700 Year	1	\$40,228
Residential	25 Year	3	\$1,846
Residential	50 Year	3	\$1,846
Residential	100 Year	3	\$6,746
Residential	300 Year	3	\$55,611
Residential	700 Year	3	\$137,997
Utilities	25 Year	10	\$8,022
Utilities	50 Year	10	\$8,022
Utilities	100 Year	10	\$16,284
Utilities	300 Year	10	\$187,988
Utilities	700 Year	10	\$842,080
All Categories	25 Year	66	\$124,117
All Categories	50 Year	66	\$124,117
All Categories	100 Year	66	\$595,250
All Categories	300 Year	66	\$13,450,714
All Categories	700 Year	66	\$42,665,768

Source: GIS Analysis

Table 4.321: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Catawba

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$2,731
Commercial	50 Year	1	\$2,731
Commercial	100 Year	1	\$8,920
Commercial	300 Year	1	\$154,317

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	700 Year	1	\$589,534
Government	25 Year	2	\$20,388
Government	50 Year	2	\$20,388
Government	100 Year	2	\$108,892
Government	300 Year	2	\$986,017
Government	700 Year	2	\$1,687,141
All Categories	25 Year	3	\$23,119
All Categories	50 Year	3	\$23,119
All Categories	100 Year	3	\$117,812
All Categories	300 Year	3	\$1,140,334
All Categories	700 Year	3	\$2,276,675

Source: GIS Analysis

Table 4.322: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Long View

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	5	\$18,617
Commercial	50 Year	5	\$18,617
Commercial	100 Year	5	\$87,218
Commercial	300 Year	5	\$626,725
Commercial	700 Year	5	\$1,456,053
Government	25 Year	2	\$9,039
Government	50 Year	2	\$9,039
Government	100 Year	2	\$27,833
Government	300 Year	2	\$143,225
Government	700 Year	2	\$273,315
Industrial	25 Year	2	\$1,445

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	50 Year	2	\$1,445
Industrial	100 Year	2	\$3,308
Industrial	300 Year	2	\$51,131
Industrial	700 Year	2	\$243,052
Residential	25 Year	1	\$155
Residential	50 Year	1	\$155
Residential	100 Year	1	\$1,185
Residential	300 Year	1	\$19,789
Residential	700 Year	1	\$57,027
All Categories	25 Year	10	\$29,256
All Categories	50 Year	10	\$29,256
All Categories	100 Year	10	\$119,544
All Categories	300 Year	10	\$840,870
All Categories	700 Year	10	\$2,029,447

Source: GIS Analysis

Table 4.323: High Potential Loss Properties Exposed to the Hurricane Winds - Town of Maiden

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	7	\$3,515
Commercial	50 Year	7	\$3,515
Commercial	100 Year	7	\$12,451
Commercial	300 Year	7	\$548,977
Commercial	700 Year	7	\$2,226,093
Government	25 Year	4	\$8,543
Government	50 Year	4	\$8,543
Government	100 Year	4	\$54,322

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	300 Year	4	\$868,826
Government	700 Year	4	\$2,845,744
Industrial	25 Year	7	\$23,505
Industrial	50 Year	7	\$23,505
Industrial	100 Year	7	\$91,000
Industrial	300 Year	7	\$1,376,342
Industrial	700 Year	7	\$5,221,019
Utilities	25 Year	7	\$13,896
Utilities	50 Year	7	\$13,896
Utilities	100 Year	7	\$33,908
Utilities	300 Year	7	\$651,392
Utilities	700 Year	7	\$2,780,671
All Categories	25 Year	25	\$49,459
All Categories	50 Year	25	\$49,459
All Categories	100 Year	25	\$191,681
All Categories	300 Year	25	\$3,445,537
All Categories	700 Year	25	\$13,073,527

Source: GIS Analysis

4.5.12 Ice

Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Sleet—raindrops that freeze into ice pellets before reaching the ground—usually bounce when hitting a surface and do not stick to objects; however, sleet can accumulate like snow and cause a hazard to motorists. Freezing rain is rain that falls onto a surface with a temperature below freezing, forming a glaze of ice. Even small accumulations of ice can cause a significant hazard, especially on power lines and trees. An ice storm occurs when freezing rain falls and freezes immediately upon impact. Communications and power can be disrupted for days, and even small accumulations of ice may cause extreme hazards to motorists and pedestrians.

A freeze is weather marked by low temperatures, especially when below the freezing point (zero degrees Celsius or thirty-two degrees Fahrenheit). Agricultural production is seriously affected when temperatures remain below the freezing point.

Ice Hazard Analysis

In general, winter weather events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation, all of which may create locally hazardous conditions regardless of the magnitude of the overall event. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.

Location within the Planning Area

Winter weather, including blizzards, frosts/freezes, heavy snow, ice storms and sleet, are widespread atmospheric conditions that are not isolated to a specific geographic location. Therefore it is assumed that the entire planning area is exposed to this hazard. In the figures below, the measurements ranging from 0.0-1.5 are in inches.

Figure 4.110: Ice Hazard Areas with Average Annual Accumulation in inches

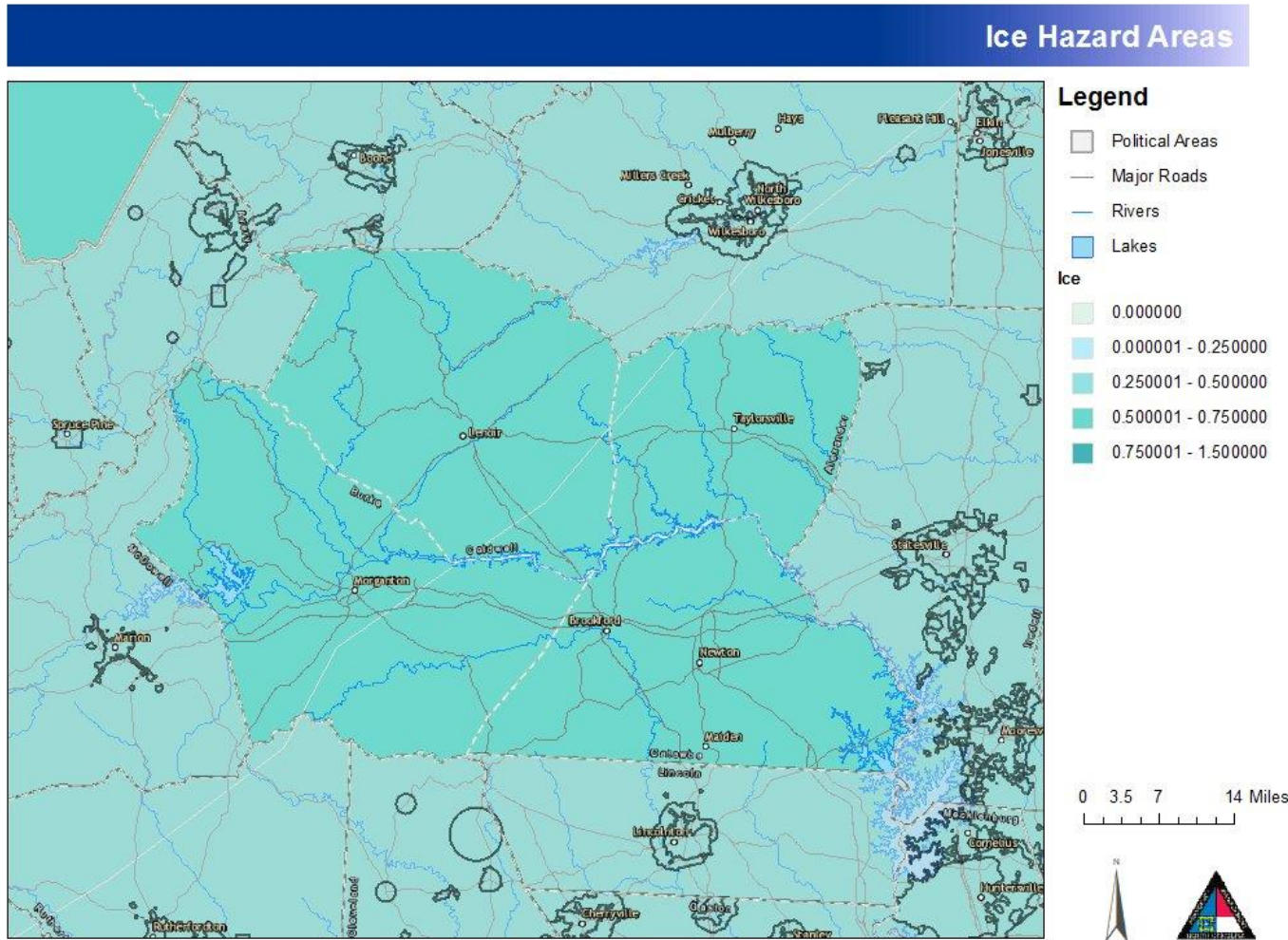


Figure 4.111: Ice Hazard Areas with Average Annual Accumulation in inches

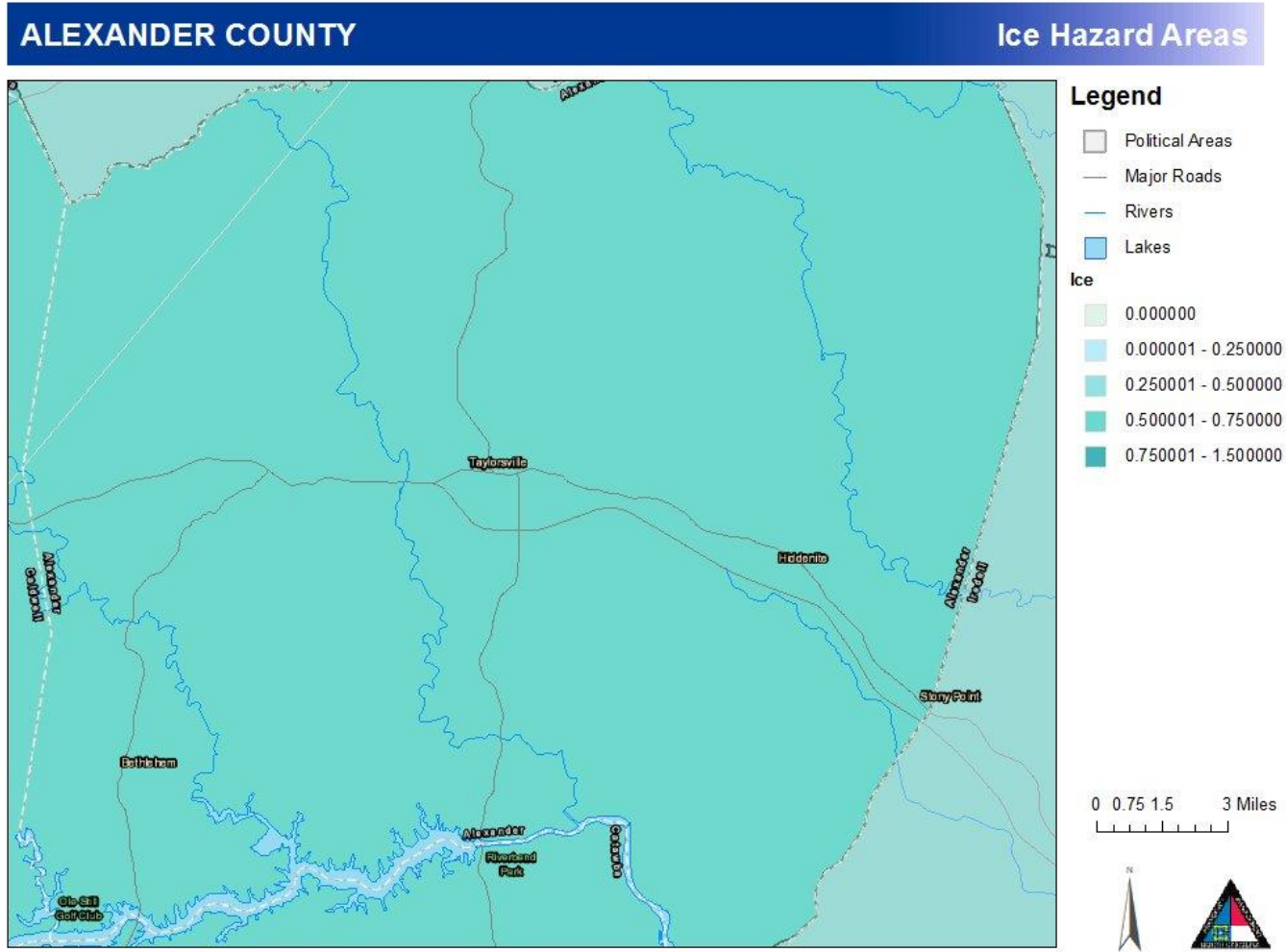


Figure 4.112: Ice Hazard Areas with Average Annual Accumulation in inches

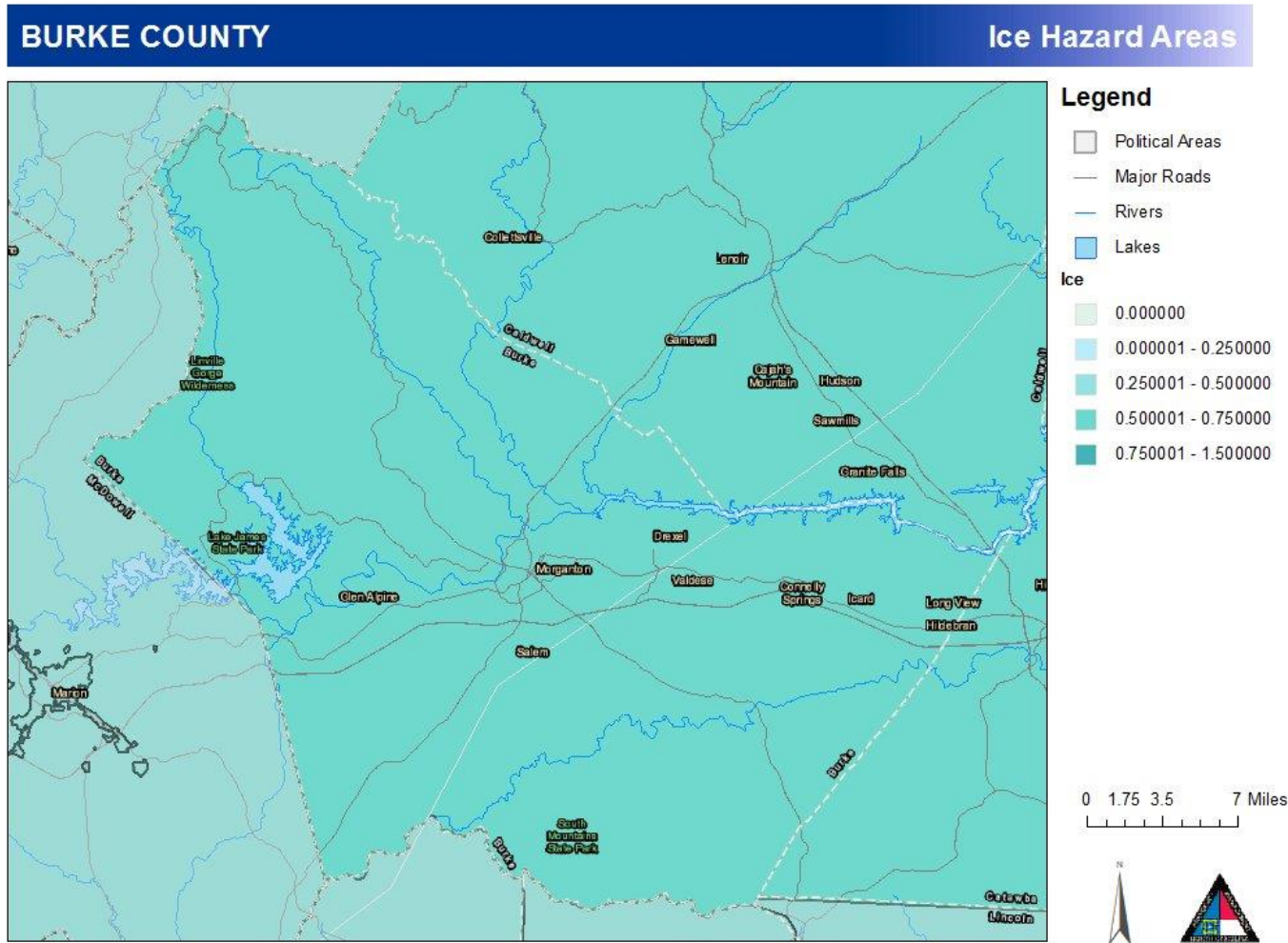


Figure 4.113: Ice Hazard Areas with Average Annual Accumulation in inches

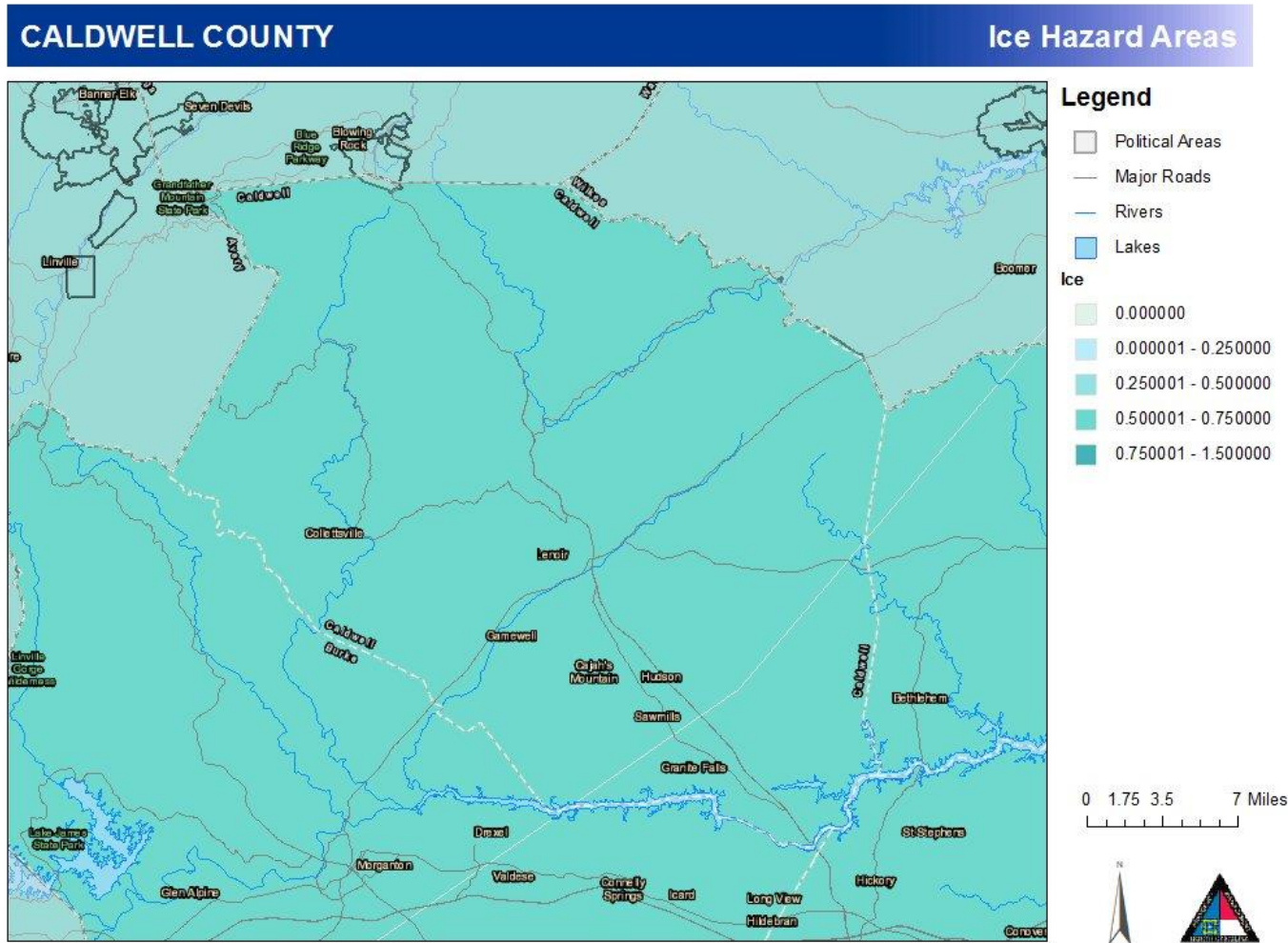
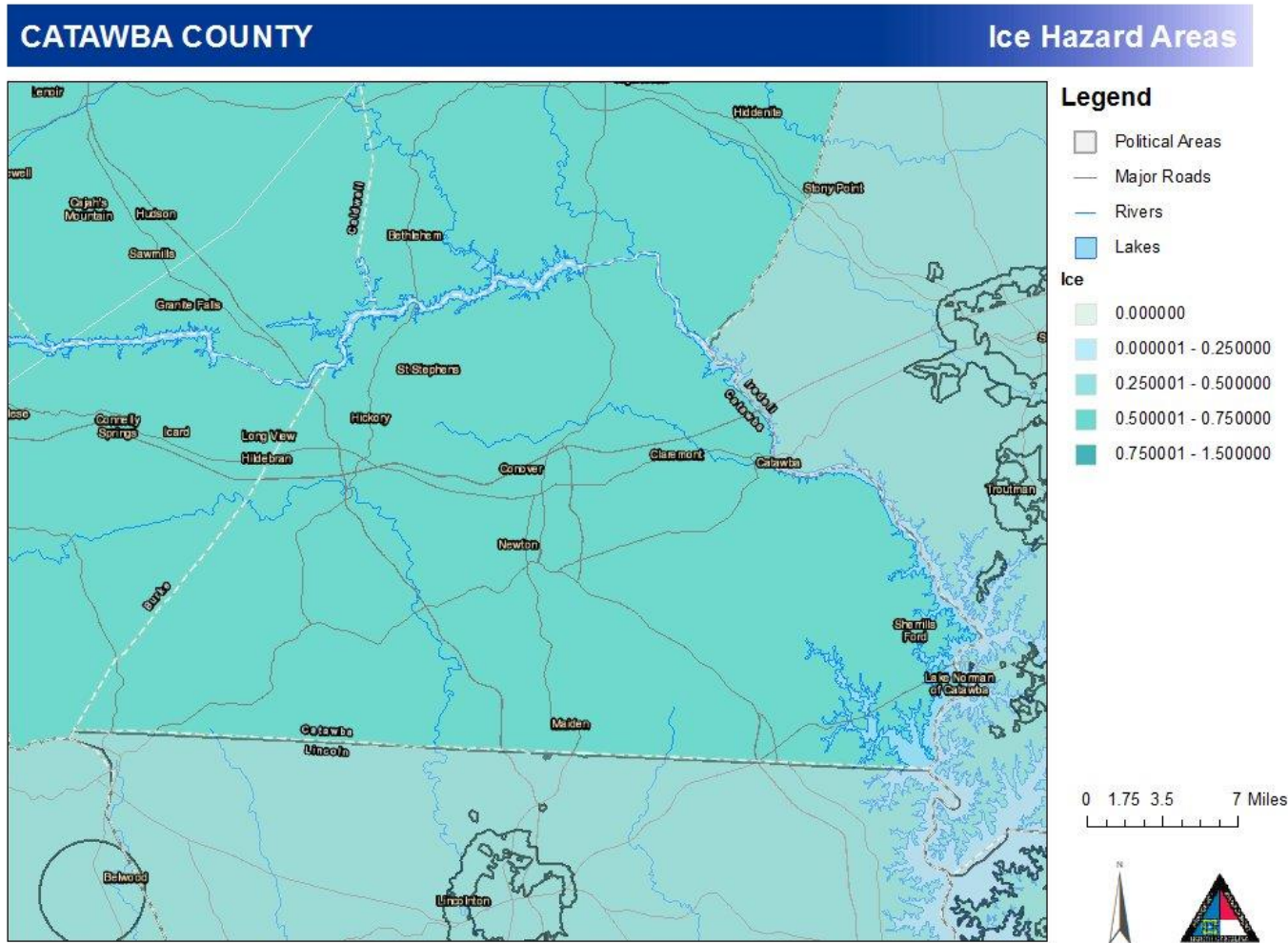


Figure 4.114: Ice Hazard Areas with Average Annual Accumulation in inches



Extent (Magnitude and Severity)

Definition:

Severity of ice storms can be measured by the accumulation amount of ice received in inches. **Extent Event:**

The highest recorded event for the planning area was in all four counties (Alexander, Burke, Caldwell, Catawba) and the 24 cities (Taylorsville, Connelly Springs, Drexel, Glen Alpine, Hildebran, Rhodhiss, Morganton, Rutherford College, Valdese, Cahaj's Mountain, Cedar Rock, Gamewell, Granite Falls, Hudson, Lenoir, Sawmills, Brookford, Catawba, Claremont, Conover, Hickory, Longview, Maiden, Newton) in December 2002. The planning area received 3-4 inches of snow then transitioned into sleet and freezing rain accumulating approximately 1/4-1/2 inches of ice. *Historical Occurrences*

The following historical occurrences ranging from 1996 to the present have been identified based on the NCDC Storm Events database. NCDC presents winter weather hazards under multiple subcategories. The table below shows occurrences of winter weather events, frost/freezes, and sleet. Because winter weather affects a large geographic area, this information is processed by NCDC in forecast "zones," and therefore a municipal-level breakdown is not provided. Similarly, it is important to note that many of the events shown for one county are the same events that are counted for one of the other four counties in the planning area. For these reasons, totals are not provided in the table for the Unifour area as a whole as some double-counting would be inherent in the numbers. Also, only those historical occurrences listed in the NCDC database are shown here and other smaller, unrecorded, or unreported events may have occurred within the planning area during this timeframe.

Table 4.324: Historical Occurrences for Ice 1996-2019

Jurisdiction	Number of Winter Weather Events	Number of Frost/ Freeze Events	Number of Sleet Events	Deaths/ Injuries	Reported Property Damage	Reported Crop Damage
Alexander County	35	3	7	0	\$0	\$1,000,000
Burke County	30	1	6	0	\$2,000	\$0
Caldwell County	26	1	5	0	\$0	\$0
Catawba County	35	3	5	0	\$2,000	\$1,000,000

Probability of Future Occurrences

The probability of future Ice is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Medium
City of Conover	Medium
City of Hickory	Medium
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	Medium
Town of Brookford	Medium
Town of Cahj's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium
Town of Hildebran	Medium
Town of Hudson	Medium
Town of Long View	Medium
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium
Town of Sawmills	Medium

Jurisdiction	Probability of Future Occurrence
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Ice Hazard Vulnerability

A qualitative factor in terms of vulnerability is a general lack of awareness on the part of county residents in preparing for and responding to winter storm conditions, such as ice in a manner that will minimize the danger to themselves and others. This lack of awareness is especially apparent when driving/roadway conditions catch motorists off-guard. Potential losses associated with winter storms, such as ice include the cost of the removal of ice from roadways, debris clean-up, and some indirect losses from power outages, etc. All future structures and infrastructure in the region will be vulnerable to winter storms.

4.5.13 Thunderstorm Winds

Thunderstorm Winds Hazard Analysis

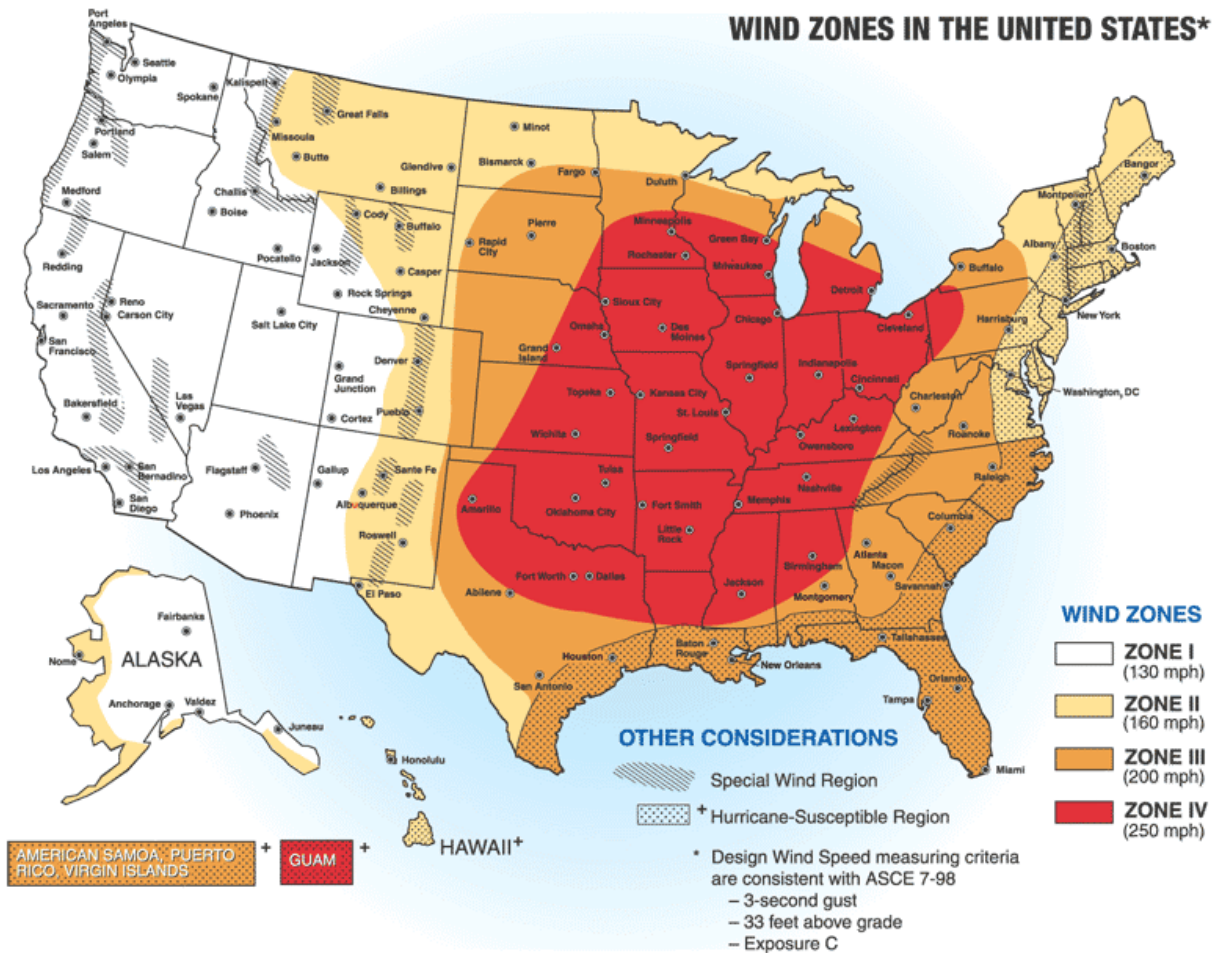
Thunderstorms are caused when air masses of varying temperatures meet. Rapidly rising warm moist air serves as the “engine” for thunderstorms. These storms can occur singularly, in lines, or in clusters. They can move through an area very quickly or linger for several hours. According to the National Weather Service, more than 100,000 thunderstorms occur each year, though only about 10% of these storms are classified as “severe.” Although thunderstorms generally affect a small area when they occur, they are very dangerous because of their ability to generate tornadoes, hailstorms, strong winds, flash flooding, and damaging lightning. While thunderstorms can occur in all regions of the United States, they are most common in the central and southern states because atmospheric conditions in those regions are most ideal for generating these powerful storms.

Location within the Planning Area

Straight-line winds, which in extreme cases have the potential to cause wind gusts that exceed 100 miles per hour, are responsible for most thunderstorm wind damage. One type of straight-line wind, the downburst, can cause damage equivalent to a strong tornado and can be extremely dangerous to aviation.

Figure 4.115 shows how the frequency and strength of extreme windstorms vary across the United States. The map was produced by the Federal Emergency Management Agency (FEMA) and is based on 40 years of tornado history and over 100 years of hurricane history. Zone IV, the darkest area on the map, has experienced both the greatest number of tornadoes and the strongest tornadoes. As shown by the map key, wind speeds in Zone IV can be as high as 250 MPH.

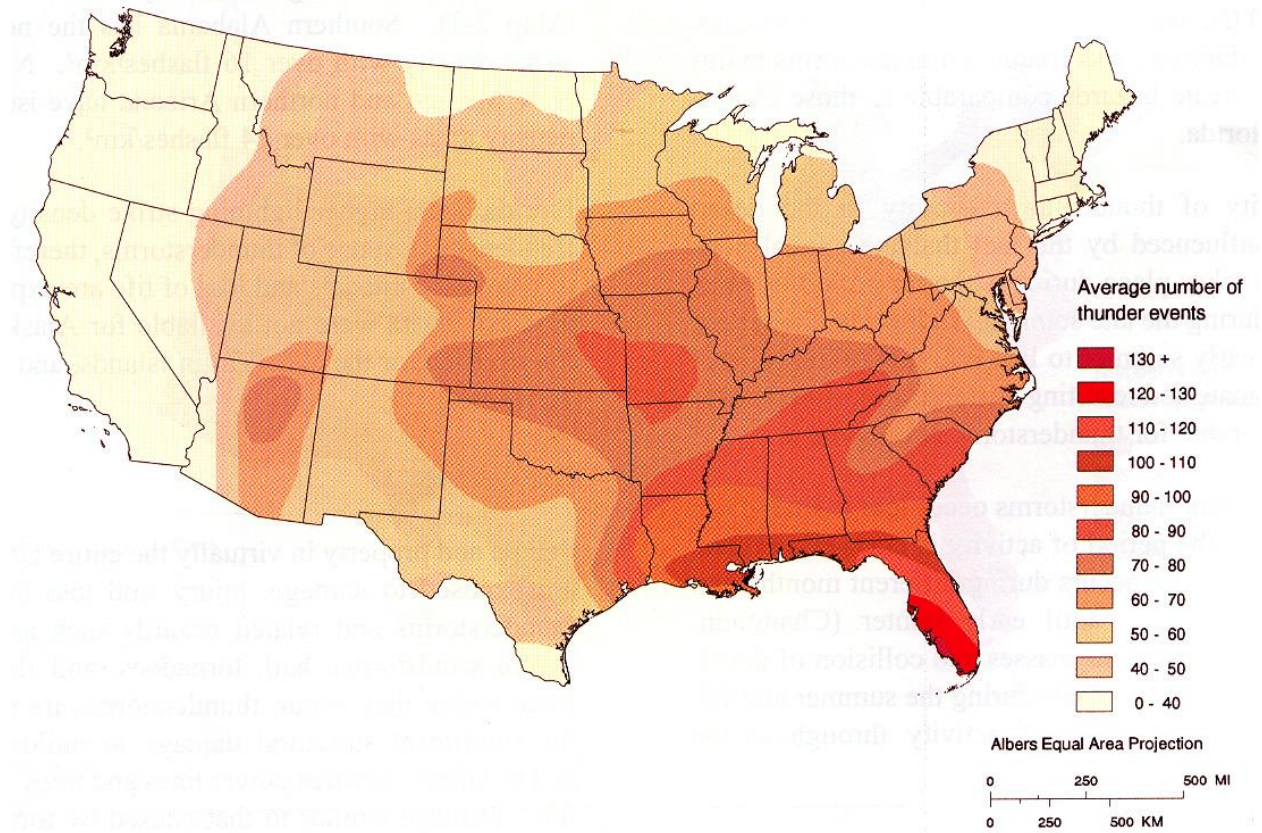
Figure 4.115: Wind Zones in the United States



Source: Federal Emergency Management Agency

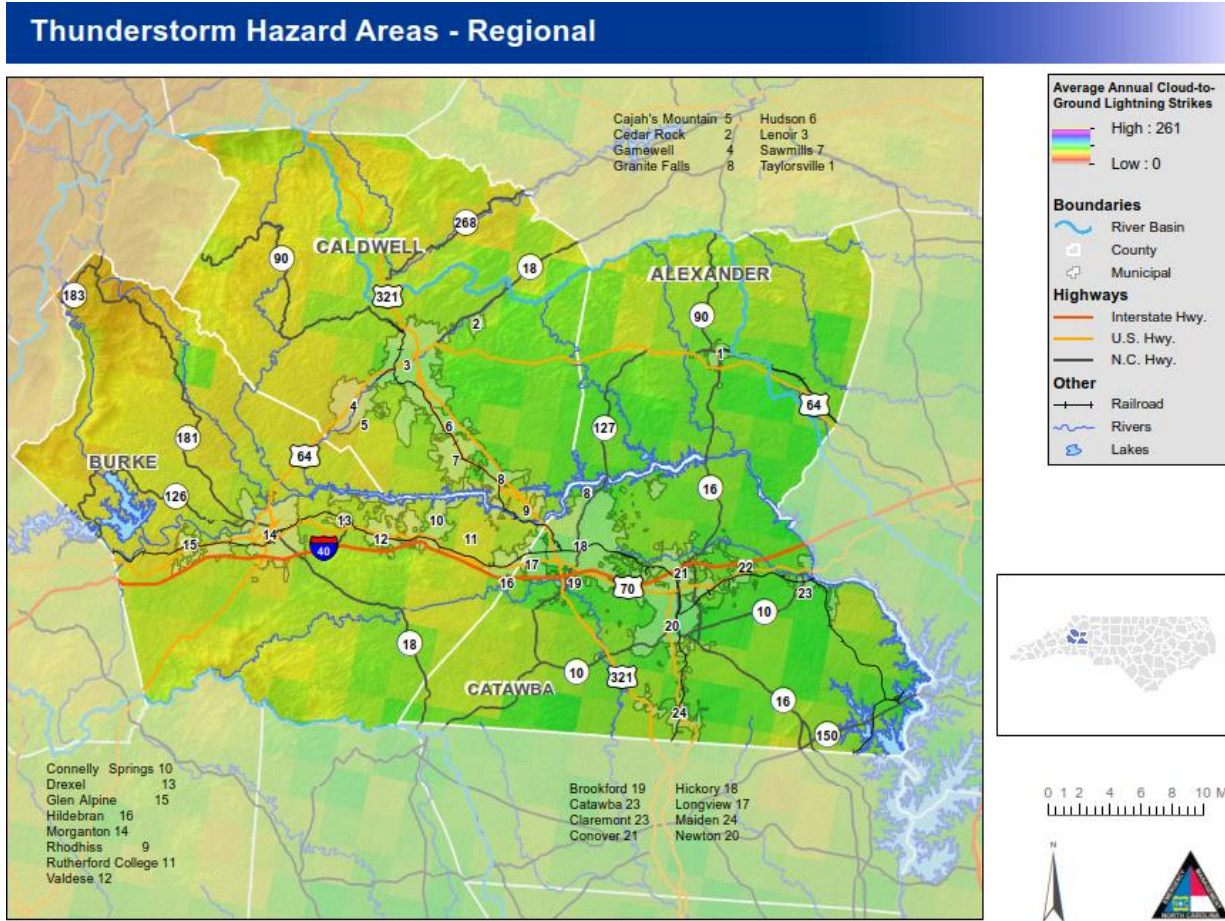
The National Weather Service collected data for thunder days, number and duration of thunder events, and lightning strike density for the 30-year period from 1948 to 1977. A series of maps was generated showing the annual average thunder event duration, the annual average number of thunder events, and the mean annual density of lightning strikes. **Figure 4.116** illustrates thunderstorm hazard severity based on the annual average number of thunder events from 1948 to 1977.

Figure 4.116: Annual Average Number of Thunder Events



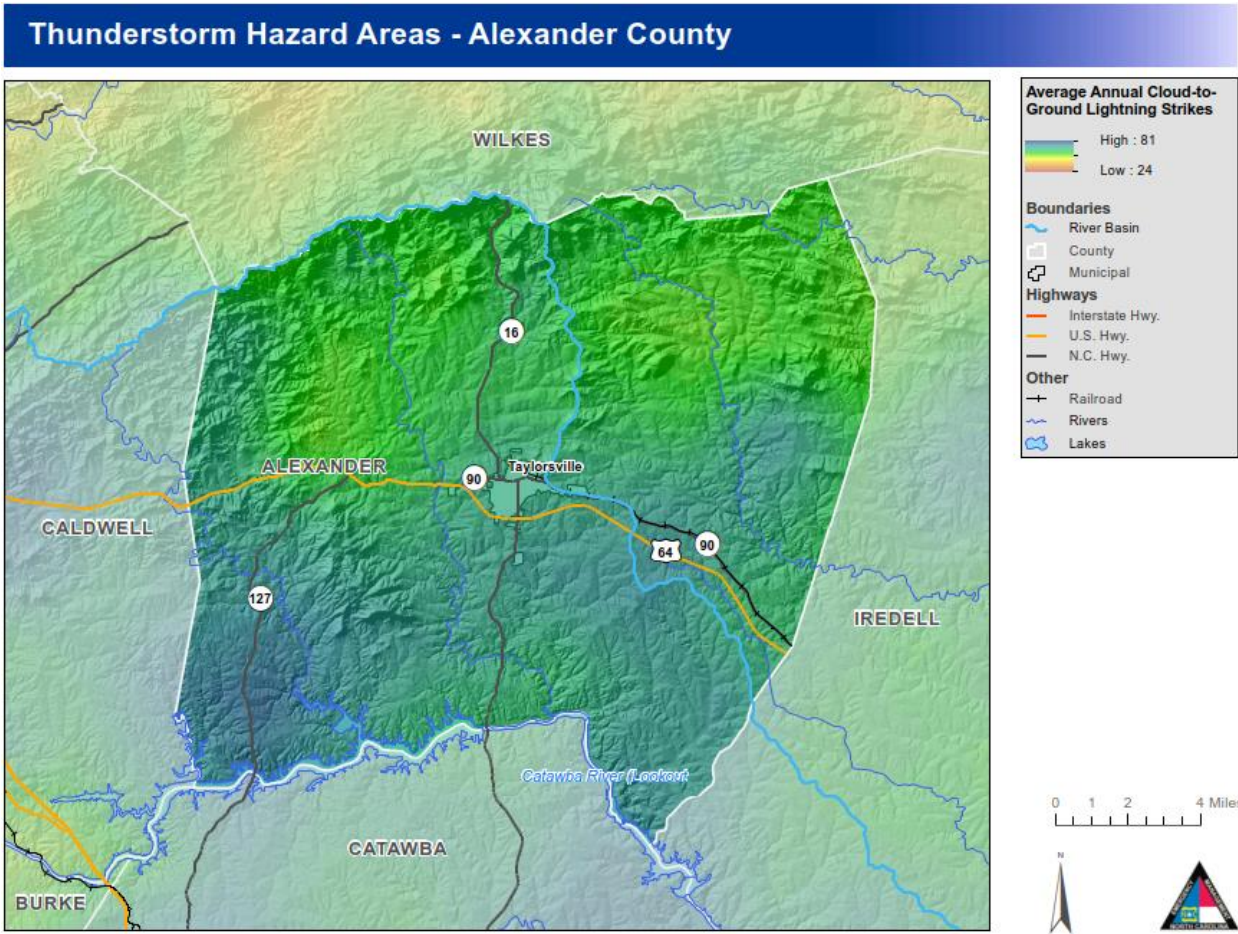
Source: Federal Emergency Management Agency

Figure 4.117: Thunderstorm Hazard Areas



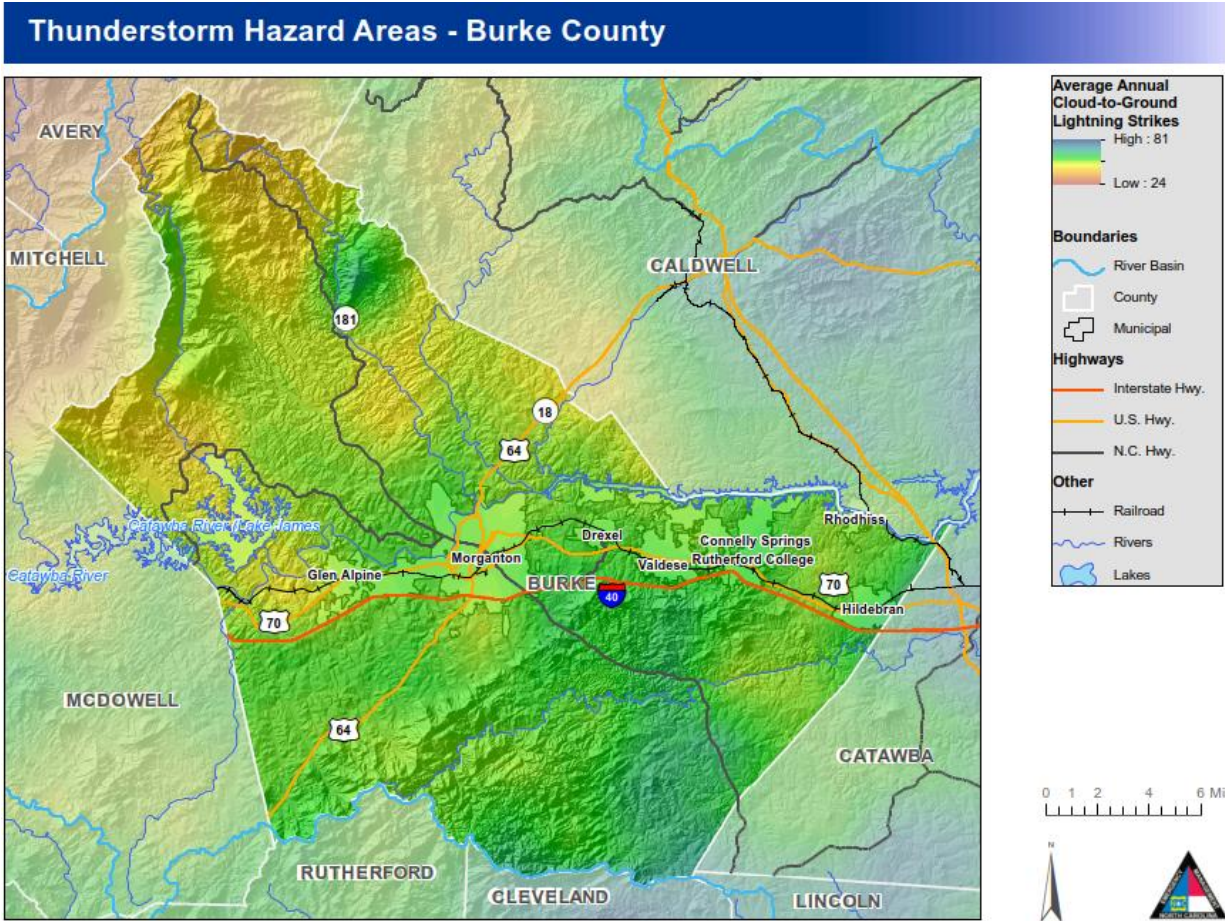
Source: GIS Analysis

Figure 4.118: Thunderstorm Hazard Areas



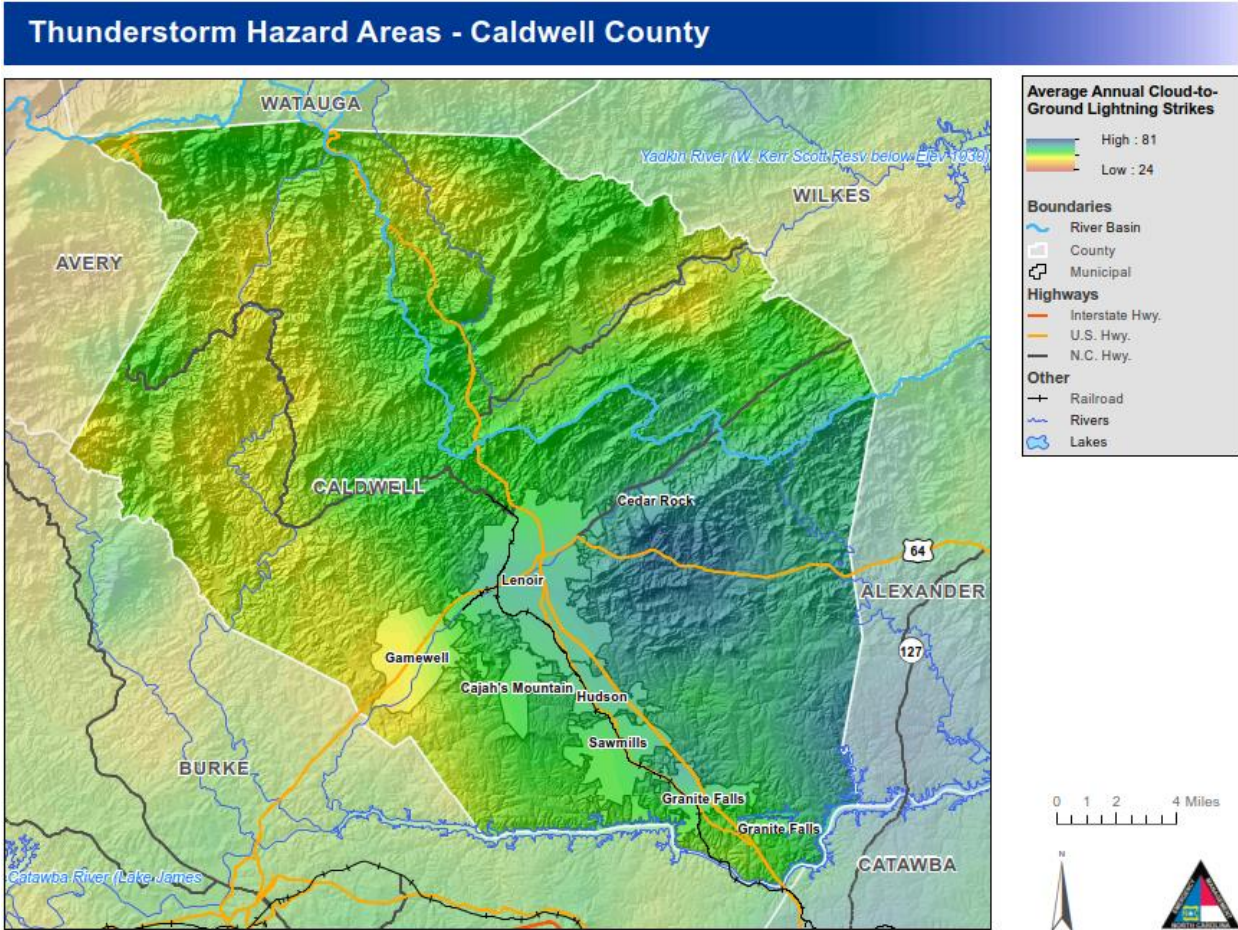
Source: GIS Analysis

Figure 4.119: Thunderstorm Hazard Areas



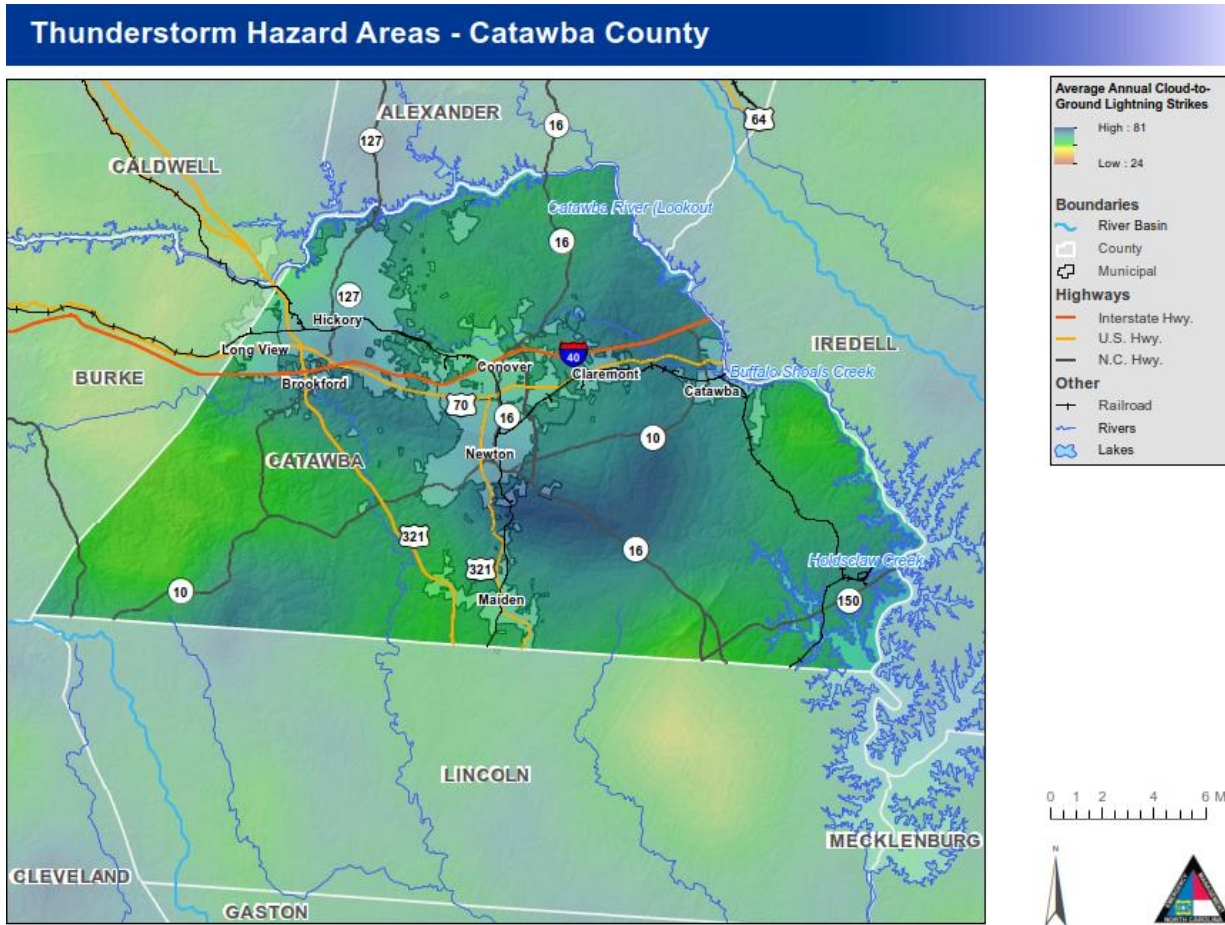
Source: GIS Analysis

Figure 4.120: Thunderstorm Hazard Areas



Source: GIS Analysis

Figure 4.121: Thunderstorm Hazard Areas



Source: GIS Analysis

Extent (Magnitude and Severity)

Definition:

Thunderstorm extent is defined by the number of thunder events and wind speeds reported.

Extent Event:

Thunderstorms are known to be damaging hazard occurrences in the Unifour Region that can result in multiple injuries. There is currently no specific overall scale to rank the potential severity of severe events of this type but it is assumed that the magnitude and severity of future occurrences will be similar to that of historical occurrences. The highest recorded thunderstorm winds in the planning area (according to NCDC) were 75 knots reported in Rutherford College in Burke County in 1997.

There are some national studies that suggest that the risk of severe thunderstorms that produce torrential rain, damaging winds, large hail, and tornadoes may increase due to changes in the climate. However, there is currently no evidence to suggest at what rate this may occur within the Unifour Region.

Historical Occurrences

The following historical occurrences have been identified based on the NCDC Storm Events database **Table 4.325** from 1970 to the present. It should be noted that only those historical occurrences listed in the NCDC database are shown here and that other, unrecorded or unreported events may have occurred within the planning area during this time frame.

Table 4.325: Historical Occurrences of Thunderstorm Winds

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Alexander						
Alexander County (Unincorporated Area)	78	0	2	\$1,230,000	\$0	
Town of Taylorsville	16	0	0	\$50,000	\$0	
Subtotal Alexander	94 Events	0	2	\$1,280,000	\$0	
Burke						
Burke County (Unincorporated Area)	99	0	0	\$127,000	\$0	
City of Morganton	60	0	1	\$76,000	\$10,000	
Town of Connelly Springs	2	0	1	\$0	\$0	
Town of Drexel	1	0	0	\$0	\$0	
Town of Glen Alpine	5	0	0	\$250,000	\$0	
Town of Hildebran	1	0	0	\$0	\$0	
Town of Rutherford College	5	0	0	\$25,000	\$0	
Town of Valdese	6	0	0	\$0	\$0	

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Subtotal Burke	179 Events	0	2	\$478,000	\$10,000	
Caldwell						
Caldwell County (Unincorporated Area)	56	1	2	\$265,000	\$0	
City of Lenoir	35	0	0	\$78,500	\$0	
Town of Cahaj's Mountain	2	0	0	\$0	\$0	
Town of Gamewell	5	0	0	\$10,000	\$0	
Town of Granite Falls	8	0	0	\$150,000	\$0	
Town of Hudson	4	0	0	\$1,500	\$0	
Town of Sawmills	5	0	0	\$0	\$0	
Subtotal Caldwell	115 Events	1	2	\$505,000	\$0	
Catawba						
Catawba County (Unincorporated Area)	75	0	1	\$293,000	\$10,000	
City of Claremont	12	0	0	\$40,000	\$0	
City of Conover	31	0	0	\$266,000	\$0	
City of Hickory	84	0	1	\$79,000	\$0	
City of Newton	22	0	0	\$12,000	\$0	
Town of Catawba	7	0	0	\$0	\$0	

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Crop Damage	Details
Town of Long View	13	0	0	\$0	\$0	
Town of Maiden	9	0	0	\$26,000	\$0	
Subtotal Catawba	253 Events	0	2	\$716,000	\$10,000	
TOTAL PLAN	641 Events	1	8	\$2,979,000	\$20,000	

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

According to NCDC 641 recorded instances of Thunderstorm Winds conditions have affected the planning area causing an estimated \$2,979,000 in losses to property, \$20,000 in losses to agricultural crops, 1 death(s), and 8 injury(ies) from 1970 to the present.

Table 4.326 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.326: Summary of Historical Thunderstorm Winds Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Alexander							
Alexander County (Unincorporated Area)	78	0	2	\$1,230,000	\$178,424	\$0	\$0
Town of Taylorsville	16	0	0	\$50,000	\$15,470	\$0	\$0
Subtotal Alexander	94	0	2	\$1,280,000	\$193,894	\$0	\$0
Burke							
Burke County (Unincorporated Area)	99	0	0	\$127,000	\$15,111	\$0	\$0
City of Morganton	60	0	1	\$76,000	\$9,634	\$10,000	\$1,268

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Town of ConnellySprings	2	0	1	\$0	\$0	\$0	\$0
Town of Drexel	1	0	0	0	\$0	0	\$0
Town of Glen Alpine	5	0	0	\$250,000	\$121,476	\$0	\$0
Town of Hil debran	1	0	0	0	\$0	0	\$0
Town of Rutherford College	5	0	0	\$25,000	\$11,725	\$0	\$0
Town of Valdese	6	0	0	\$0	\$0	\$0	\$0
Subtotal Burke	179	0	2	\$478,000	\$157,946	\$10,000	\$1,268
Caldwell							
Caldwell County (Unincorporated Area)	56	1	2	\$265,000	\$85,332	\$0	\$0
City of Lenoir	35	0	0	\$78,500	\$8,665	\$0	\$0
Town of Cahjahl's Mountain	2	0	0	\$0	\$0	\$0	\$0
Town of Gamewell	5	0	0	\$10,000	\$7,347	\$0	\$0
Town of Granite Falls	8	0	0	\$150,000	\$43,580	\$0	\$0
Town of Hudson	4	0	0	\$1,500	\$535	\$0	\$0
Town of Sawmills	5	0	0	\$0	\$0	\$0	\$0
Subtotal Caldwell	115	1	2	\$505,000	\$145,459	\$0	\$0
Catawba							
Catawba County (Unincorporated Area)	75	0	1	\$293,000	\$52,571	\$10,000	\$1,794

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
City of Claremont	12	0	0	\$40,000	\$8,230	\$0	\$0
City of Conover	31	0	0	\$266,000	\$31,498	\$0	\$0
City of Hickory	84	0	1	\$79,000	\$9,265	\$0	\$0
City of Newton	22	0	0	\$12,000	\$2,932	\$0	\$0
Town of Catawba	7	0	0	\$0	\$0	\$0	\$0
Town of Long View	13	0	0	\$0	\$0	\$0	\$0
Town of Maiden	9	0	0	\$26,000	\$8,070	\$0	\$0
Subtotal Catawba	253	0	2	\$716,000	\$112,566	\$10,000	\$1,794
TOTAL PLAN	641	1	8	\$2,979,000	\$609,865	\$20,000	\$3,062

Source: National Climatic Data Center (NCDC) Storm Events Database and/or potential user entered data.

Probability of Future Occurrences

Based on the analyses performed in IRISK, the probability of future Thunderstorm Winds is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	IRISK Probability of Future Occurrence
Alexander County (Unincorporated Area)	Medium
Burke County (Unincorporated Area)	Medium
Caldwell County (Unincorporated Area)	Medium
Catawba County (Unincorporated Area)	Medium
City of Claremont	Medium
City of Conover	Medium
City of Hickory	Medium
City of Lenoir	Medium
City of Morganton	Medium
City of Newton	Medium
Town of Brookford	Medium
Town of Cahah's Mountain	Medium
Town of Catawba	Medium
Town of Connelly Springs	Medium
Town of Drexel	Medium
Town of Gamewell	Medium
Town of Glen Alpine	Medium
Town of Granite Falls	Medium

Jurisdiction	IRISK Probability of Future Occurrence
Town of Hildebran	Medium
Town of Hudson	Medium
Town of Long View	Medium
Town of Maiden	Medium
Town of Rhodhiss	Medium
Town of Rutherford College	Medium
Town of Sawmills	Medium
Town of Taylorsville	Medium
Town of Valdese	Medium
Village of Cedar Rock	Medium

Thunderstorm Winds Hazard Vulnerability

However, continued enforcement of building codes, flood damage prevention ordinances and other local regulatory tools and policies designed to mitigate the effects of high hazard winds is expected to minimize future losses as construction and planning continue to seek higher standards. Based on historical events the most significant local impacts for the Unifour Region regarding future events will likely be damage to trees (and the requisite management of vegetative debris) and widespread power outages to the area.

The following tables provide counts and values by jurisdiction relevant to Thunderstorm Winds hazard vulnerability in the Unifour Regional HMP Area.

Table 4.327: Population Impacted by the 25 Year Thunderstorm Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,457	100%	7,997	7,995	100%	2,762	2,761	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,858	158.5%	14674	22136	150.9%	5069	8378	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,673	100%	5,352	5,351	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,376	2698%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,940	161.3%	12815	19965	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,011	100%	9,835	9,834	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,213	100.8%	21773	21968	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,207	128.7%	54889	69696	127%	21594	28106	130.2%

Source: GIS Analysis

Table 4.328: Population Impacted by the 50 Year Thunderstorm Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.329: Population Impacted by the 100 Year Thunderstorm Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.330: Population Impacted by the 300 Year Thunderstorm Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahah's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.331: Population Impacted by the 700 Year Thunderstorm Winds

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Alexander									
Alexander County (Unincorporated Area)	33,016	33,016	100%	4,995	4,995	100%	1,961	1,961	100%
Town of Taylorsville	4,180	4,180	100%	632	632	100%	248	248	100%
Subtotal Alexander	37,196	37,196	100%	5627	5627	100%	2209	2209	100%
Burke									
Burke County (Unincorporated Area)	49,470	49,470	100%	7,997	7,997	100%	2,762	2,762	100%
City of Hickory	456	48,988	10743%	74	6,892	9313.5%	25	3,052	12208%
City of Morganton	22,546	22,546	100%	3,645	3,645	100%	1,259	1,259	100%
Town of Connelly Springs	1,659	1,659	100%	268	268	100%	93	93	100%
Town of Drexel	5,506	5,506	100%	890	890	100%	307	307	100%
Town of Glen Alpine	1,964	1,964	100%	318	318	100%	110	110	100%
Town of Hildebran	1,945	1,945	100%	314	314	100%	109	109	100%
Town of Long View	698	4,879	699%	113	700	619.5%	39	300	769.2%
Town of Rhodhiss	640	1,025	160.2%	103	162	157.3%	36	58	161.1%
Town of Rutherford College	1,502	1,502	100%	243	243	100%	84	84	100%
Town of Valdese	4,387	4,387	100%	709	709	100%	245	245	100%
Subtotal Burke	90,773	143,871	158.5%	14674	22138	150.9%	5069	8379	165.3%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
Caldwell									
Caldwell County (Unincorporated Area)	34,680	34,680	100%	5,352	5,352	100%	1,940	1,940	100%
City of Hickory	51	48,988	96054.9%	8	6,892	86150%	3	3,052	101733.3%
City of Lenoir	20,837	20,837	100%	3,216	3,216	100%	1,166	1,166	100%
Town of Blowing Rock	51	1,378	2702%	8	172	2150%	3	54	1800%
Town of Cahaj's Mountain	2,789	2,789	100%	430	430	100%	156	156	100%
Town of Gamewell	4,043	4,043	100%	624	624	100%	226	226	100%
Town of Granite Falls	7,104	7,104	100%	1,096	1,096	100%	397	397	100%
Town of Hudson	6,431	6,431	100%	992	992	100%	360	360	100%
Town of Rhodhiss	385	1,025	266.2%	59	162	274.6%	22	58	263.6%
Town of Sawmills	6,380	6,380	100%	985	985	100%	357	357	100%
Village of Cedar Rock	294	294	100%	45	45	100%	16	16	100%
Subtotal Caldwell	83,045	133,949	161.3%	12815	19966	155.8%	4646	7782	167.5%
Catawba									
Catawba County (Unincorporated Area)	70,017	70,017	100%	9,835	9,835	100%	4,368	4,368	100%
City of Claremont	1,957	1,957	100%	275	275	100%	122	122	100%
City of Conover	9,669	9,669	100%	1,358	1,358	100%	603	603	100%

Jurisdiction	Total Population	Population At Risk		All Elderly Population	Elderly Population At Risk		All Children Population	Children At Risk	
		Number	Percent		Number	Percent		Number	Percent
City of Hickory	48,481	48,988	101%	6,810	6,892	101.2%	3,024	3,052	100.9%
City of Newton	14,214	14,214	100%	1,997	1,997	100%	887	887	100%
Town of Brookford	371	371	100%	52	52	100%	23	23	100%
Town of Catawba	1,152	1,152	100%	162	162	100%	72	72	100%
Town of Long View	4,181	4,879	116.7%	587	700	119.3%	261	300	114.9%
Town of Maiden	4,964	4,972	100.2%	697	698	100.1%	310	310	100%
Subtotal Catawba	155,006	156,219	100.8%	21773	21969	100.9%	9670	9737	100.7%
TOTAL PLAN	366,020	471,235	128.7%	54889	69700	127%	21594	28107	130.2%

Source: GIS Analysis

Table 4.332: Buildings Impacted by the 25 Year Thunderstorm Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$3,869,773	1,814	7.4%	\$1,437,580	218	0.9%	\$420,004	24,650	99.9%	\$5,727,358
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$374,335	309	10.9%	\$189,696	76	2.7%	\$30,990	2,821	99.9%	\$595,021
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$4,244,108	2,123	7.7%	\$1,627,276	294	1.1%	\$450,994	27,471	99.9%	\$6,322,379

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Burke															
Burke County (Unincorporated Area)	28,091	21,153	75.3%	26,746	95.2%	\$4,000,297	1,102	3.9%	\$1,290,200	229	0.8%	\$276,415	28,077	100%	\$5,566,911
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$1,852,204	1,134	10.6%	\$915,785	301	2.8%	\$298,078	10,704	99.8%	\$3,066,067
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$108,764	38	4.3%	\$27,862	8	0.9%	\$14,343	889	100%	\$150,970
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$444,000	98	3.3%	\$97,589	26	0.9%	\$21,790	2,948	100%	\$563,379
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$143,752	44	4.1%	\$18,176	9	0.8%	\$23,439	1,086	100%	\$185,368
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$192,149	121	11.3%	\$221,238	16	1.5%	\$184,231	1,067	99.8%	\$597,618
Town of Rutherford College	827	682	82.5%	755	91.3%	\$130,867	49	5.9%	\$30,408	23	2.8%	\$25,309	827	100%	\$186,584
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$367,576	175	8.2%	\$136,599	32	1.5%	\$13,434	2,121	99.5%	\$517,609
Subtotal Burke	47,770	37,587	78.7%	44,314	92.8%	\$7,239,609	2,761	5.8%	\$2,737,857	644	1.3%	\$857,039	47,719	99.9%	\$10,834,506
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,769	100%	19,715	94.9%	\$3,443,734	887	4.3%	\$972,146	166	0.8%	\$321,512	20,768	100%	\$4,737,392
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$1,948,804	938	9.1%	\$1,009,664	160	1.6%	\$160,617	10,299	99.8%	\$3,119,085
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$311,271	87	6.4%	\$105,619	13	1%	\$17,099	1,350	100%	\$433,988
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$341,788	78	3.8%	\$71,753	13	0.6%	\$75,981	2,062	100%	\$489,522
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$652,394	262	7.7%	\$253,990	60	1.8%	\$38,161	3,385	99.7%	\$944,545

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$465,659	231	7.4%	\$138,792	37	1.2%	\$22,146	3,116	100%	\$626,597
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$58,792	17	3.5%	\$5,967	8	1.6%	\$2,164	490	100%	\$66,923
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$566,944	175	5.4%	\$473,584	14	0.4%	\$33,284	3,234	100%	\$1,073,811
Village of Cedar Rock	135	135	100%	131	97%	\$42,369	3	2.2%	\$2,828	1	0.7%	\$206	135	100%	\$45,402
Subtotal Caldwell	44,870	44,754	99.7%	41,689	92.9%	\$7,831,755	2,678	6%	\$3,034,343	472	1.1%	\$671,170	44,839	99.9%	\$11,537,265
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,053	94%	\$7,790,707	2,695	5.4%	\$1,659,336	271	0.5%	\$533,083	50,019	99.9%	\$9,983,126
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$207,411	230	17%	\$161,899	14	1%	\$6,082	1,351	100%	\$375,391
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$825,653	931	18.3%	\$492,270	21	0.4%	\$111,092	5,083	99.9%	\$1,429,015
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$4,604,604	3,248	14.4%	\$1,831,819	184	0.8%	\$267,927	22,473	99.8%	\$6,704,351
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$1,137,628	903	11.8%	\$494,557	48	0.6%	\$25,144	7,646	99.9%	\$1,657,329
Town of Brookford	304	274	90.1%	267	87.8%	\$34,320	36	11.8%	\$6,049	1	0.3%	\$3	304	100%	\$40,372
Town of Catawba	1,016	706	69.5%	901	88.7%	\$117,015	107	10.5%	\$42,643	8	0.8%	\$48,678	1,016	100%	\$208,336
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$417,171	305	11.2%	\$232,202	19	0.7%	\$21,411	2,716	100%	\$670,784
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$503,563	417	12.9%	\$197,271	18	0.6%	\$25,073	3,223	99.8%	\$725,907
Subtotal Catawba	93,930	52,491	55.9%	84,375	89.8%	\$15,638,072	8,872	9.4%	\$5,118,046	584	0.6%	\$1,038,493	93,831	99.9%	\$21,794,611

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
TOTAL PLAN	214,056	162,318	75.8%	195,432	91.3%	\$34,953,544	16,434	7.7%	\$12,517,522	1,994	0.9%	\$3,017,696	213,860	99.9%	\$50,488,761

Source: GIS Analysis

Table 4.333: Buildings Impacted by the 50 Year Thunderstorm Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$6,633,244	1,814	7.4%	\$3,167,729	218	0.9%	\$941,547	24,650	99.9%	\$10,742,520
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$649,263	309	10.9%	\$413,070	76	2.7%	\$61,696	2,821	99.9%	\$1,124,029
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$7,282,507	2,123	7.7%	\$3,580,799	294	1.1%	\$1,003,243	27,471	99.9%	\$11,866,549
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$7,008,388	1,102	3.9%	\$2,818,634	229	0.8%	\$613,184	28,084	100%	\$10,440,206
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$3,202,082	1,134	10.6%	\$1,936,162	301	2.8%	\$648,604	10,704	99.8%	\$5,786,847
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$194,059	38	4.3%	\$61,019	8	0.9%	\$32,275	889	100%	\$287,354
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$770,484	98	3.3%	\$210,306	26	0.9%	\$44,751	2,948	100%	\$1,025,541
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$254,545	44	4.1%	\$40,236	9	0.8%	\$52,738	1,086	100%	\$347,519
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$338,634	121	11.3%	\$480,669	16	1.5%	\$389,899	1,067	99.8%	\$1,209,202

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Rutherford College	827	682	82.5%	755	91.3%	\$237,829	49	5.9%	\$64,400	23	2.8%	\$55,935	827	100%	\$358,163
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$654,562	175	8.2%	\$267,317	32	1.5%	\$24,925	2,121	99.5%	\$946,804
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$12,660,583	2,761	5.8%	\$5,878,743	644	1.3%	\$1,862,311	47,726	99.9%	\$20,401,636
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$6,009,878	887	4.3%	\$2,118,809	166	0.8%	\$717,773	20,772	100%	\$8,846,460
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$3,462,039	938	9.1%	\$2,116,334	160	1.6%	\$351,404	10,299	99.8%	\$5,929,777
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$519,561	87	6.4%	\$229,029	13	1%	\$37,752	1,350	100%	\$786,341
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$600,542	78	3.8%	\$159,269	13	0.6%	\$171,923	2,062	100%	\$931,735
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$1,160,785	262	7.7%	\$548,595	60	1.8%	\$79,696	3,385	99.7%	\$1,789,076
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$837,424	231	7.4%	\$289,778	37	1.2%	\$46,406	3,116	100%	\$1,173,609
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$105,985	17	3.5%	\$12,190	8	1.6%	\$3,672	490	100%	\$121,847
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$994,361	175	5.4%	\$1,016,853	14	0.4%	\$71,254	3,234	100%	\$2,082,467
Village of Cedar Rock	135	135	100%	131	97%	\$80,511	3	2.2%	\$6,343	1	0.7%	\$303	135	100%	\$87,158
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$13,771,086	2,678	6%	\$6,497,200	472	1.1%	\$1,480,183	44,843	99.9%	\$21,748,470
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$13,671,328	2,695	5.4%	\$3,631,766	271	0.5%	\$1,168,950	50,023	99.9%	\$18,472,044

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$367,934	230	17%	\$337,226	14	1%	\$12,214	1,351	100%	\$717,373
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$1,437,522	931	18.3%	\$1,025,649	21	0.4%	\$253,488	5,083	99.9%	\$2,716,659
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$7,983,226	3,248	14.4%	\$3,907,775	184	0.8%	\$585,529	22,473	99.8%	\$12,476,529
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$1,969,560	903	11.8%	\$1,099,510	48	0.6%	\$48,248	7,646	99.9%	\$3,117,317
Town of Brookford	304	274	90.1%	267	87.8%	\$60,183	36	11.8%	\$11,066	1	0.3%	\$10	304	100%	\$71,259
Town of Catawba	1,016	706	69.5%	901	88.7%	\$204,036	107	10.5%	\$90,650	8	0.8%	\$110,801	1,016	100%	\$405,488
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$720,069	305	11.2%	\$491,825	19	0.7%	\$38,675	2,716	100%	\$1,250,568
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$860,530	417	12.9%	\$413,083	18	0.6%	\$60,042	3,223	99.8%	\$1,333,656
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$27,274,388	8,872	9.4%	\$11,008,550	584	0.6%	\$2,277,957	93,835	99.9%	\$40,560,893
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$60,988,564	16,434	7.7%	\$26,965,292	1,994	0.9%	\$6,623,694	213,875	99.9%	\$94,577,548

Source: GIS Analysis

Table 4.334: Buildings Impacted by the 100 Year Thunderstorm Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$10,480,978	1,814	7.4%	\$6,387,032	218	0.9%	\$1,933,361	24,650	99.9%	\$18,801,371

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$1,050,659	309	10.9%	\$836,085	76	2.7%	\$118,414	2,821	99.9%	\$2,005,158
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$11,531,637	2,123	7.7%	\$7,223,117	294	1.1%	\$2,051,775	27,471	99.9%	\$20,806,529
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$11,133,734	1,102	3.9%	\$5,558,593	229	0.8%	\$1,247,196	28,084	100%	\$17,939,522
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$5,107,734	1,134	10.6%	\$3,858,660	301	2.8%	\$1,322,909	10,704	99.8%	\$10,289,303
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$319,281	38	4.3%	\$120,911	8	0.9%	\$66,130	889	100%	\$506,322
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$1,229,935	98	3.3%	\$418,605	26	0.9%	\$86,273	2,948	100%	\$1,734,813
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$405,416	44	4.1%	\$83,229	9	0.8%	\$108,410	1,086	100%	\$597,055
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$550,951	121	11.3%	\$964,330	16	1.5%	\$702,367	1,067	99.8%	\$2,217,648
Town of Rutherford College	827	682	82.5%	755	91.3%	\$396,620	49	5.9%	\$131,117	23	2.8%	\$114,287	827	100%	\$642,024
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$1,087,505	175	8.2%	\$500,999	32	1.5%	\$48,173	2,121	99.5%	\$1,636,677
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$20,231,176	2,761	5.8%	\$11,636,444	644	1.3%	\$3,695,745	47,726	99.9%	\$35,563,364
Caldwell															
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$9,507,937	887	4.3%	\$4,167,061	166	0.8%	\$1,437,366	20,772	100%	\$15,112,364
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$5,682,126	938	9.1%	\$4,089,041	160	1.6%	\$724,304	10,299	99.8%	\$10,495,471
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$806,537	87	6.4%	\$449,627	13	1%	\$76,522	1,350	100%	\$1,332,685

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$950,418	78	3.8%	\$325,761	13	0.6%	\$350,326	2,062	100%	\$1,626,505
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$1,916,650	262	7.7%	\$1,112,187	60	1.8%	\$161,781	3,385	99.7%	\$3,190,618
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$1,364,313	231	7.4%	\$581,030	37	1.2%	\$94,887	3,116	100%	\$2,040,229
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$174,683	17	3.5%	\$23,737	8	1.6%	\$6,889	490	100%	\$205,309
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$1,609,107	175	5.4%	\$1,906,090	14	0.4%	\$140,494	3,234	100%	\$3,655,690
Village of Cedar Rock	135	135	100%	131	97%	\$132,628	3	2.2%	\$13,278	1	0.7%	\$494	135	100%	\$146,400
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$22,144,399	2,678	6%	\$12,667,812	472	1.1%	\$2,993,063	44,843	99.9%	\$37,805,271
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$21,932,983	2,695	5.4%	\$7,248,061	271	0.5%	\$2,322,825	50,023	99.9%	\$31,503,869
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$588,082	230	17%	\$685,208	14	1%	\$23,880	1,351	100%	\$1,297,170
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$2,298,264	931	18.3%	\$2,079,828	21	0.4%	\$519,320	5,083	99.9%	\$4,897,412
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$12,653,629	3,248	14.4%	\$7,842,388	184	0.8%	\$1,167,991	22,473	99.8%	\$21,664,007
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$3,117,748	903	11.8%	\$2,462,954	48	0.6%	\$96,551	7,646	99.9%	\$5,677,252
Town of Brookford	304	274	90.1%	267	87.8%	\$95,950	36	11.8%	\$21,450	1	0.3%	\$27	304	100%	\$117,426
Town of Catawba	1,016	706	69.5%	901	88.7%	\$325,945	107	10.5%	\$184,764	8	0.8%	\$233,564	1,016	100%	\$744,273
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$1,128,530	305	11.2%	\$977,092	19	0.7%	\$65,571	2,716	100%	\$2,171,193

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$1,344,647	417	12.9%	\$852,976	18	0.6%	\$131,139	3,223	99.8%	\$2,328,762
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$43,485,778	8,872	9.4%	\$22,354,721	584	0.6%	\$4,560,868	93,835	99.9%	\$70,401,364
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$97,392,990	16,434	7.7%	\$53,882,094	1,994	0.9%	\$13,301,451	213,875	99.9%	\$164,576,528

Source: GIS Analysis

Table 4.335: Buildings Impacted by the 300 Year Thunderstorm Winds

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Alexander															
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$26,569,361	1,814	7.4%	\$19,204,832	218	0.9%	\$5,804,570	24,650	99.9%	\$51,578,764
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$2,874,442	309	10.9%	\$2,778,663	76	2.7%	\$378,441	2,821	99.9%	\$6,031,546
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$29,443,803	2,123	7.7%	\$21,983,495	294	1.1%	\$6,183,011	27,471	99.9%	\$57,610,310
Burke															
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$26,037,675	1,102	3.9%	\$15,806,390	229	0.8%	\$3,825,740	28,084	100%	\$45,669,804
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$12,896,327	1,134	10.6%	\$12,107,427	301	2.8%	\$4,200,823	10,704	99.8%	\$29,204,577
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$806,511	38	4.3%	\$341,244	8	0.9%	\$212,487	889	100%	\$1,360,241

Jurisdiction	All Buildings		Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num		Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Drexel	2,949		2,428	82.3%	2,824	95.8%	\$3,034,031	98	3.3%	\$1,238,740	26	0.9%	\$254,687	2,948	100%	\$4,527,459
Town of Glen Alpine	1,086		848	78.1%	1,033	95.1%	\$936,939	44	4.1%	\$271,478	9	0.8%	\$327,882	1,086	100%	\$1,536,298
Town of Hildebran	1,069		1,047	97.9%	930	87%	\$1,375,626	121	11.3%	\$2,964,847	16	1.5%	\$1,632,537	1,067	99.8%	\$5,973,010
Town of Rutherford College	827		682	82.5%	755	91.3%	\$1,020,274	49	5.9%	\$416,521	23	2.8%	\$353,392	827	100%	\$1,790,187
Town of Valdese	2,132		1,712	80.3%	1,914	89.8%	\$2,843,145	175	8.2%	\$1,582,806	32	1.5%	\$180,171	2,121	99.5%	\$4,606,122
Subtotal Burke	47,770		37,591	78.7%	44,321	92.8%	\$48,950,528	2,761	5.8%	\$34,729,453	644	1.3%	\$10,987,719	47,726	99.9%	\$94,667,698
Caldwell																
Caldwell County (Unincorporated Area)	20,773		20,773	100%	19,719	94.9%	\$22,673,085	887	4.3%	\$11,840,445	166	0.8%	\$4,163,154	20,772	100%	\$38,676,684
City of Lenoir	10,316		10,316	100%	9,201	89.2%	\$14,358,460	938	9.1%	\$12,272,690	160	1.6%	\$2,389,303	10,299	99.8%	\$29,020,453
Town of Cahah's Mountain	1,350		1,350	100%	1,250	92.6%	\$2,068,294	87	6.4%	\$1,269,758	13	1%	\$224,198	1,350	100%	\$3,562,250
Town of Gamewell	2,062		2,062	100%	1,971	95.6%	\$2,242,502	78	3.8%	\$1,028,999	13	0.6%	\$1,077,997	2,062	100%	\$4,349,498
Town of Granite Falls	3,394		3,394	100%	3,063	90.2%	\$5,186,179	262	7.7%	\$3,619,090	60	1.8%	\$581,531	3,385	99.7%	\$9,386,799
Town of Hudson	3,116		3,116	100%	2,848	91.4%	\$3,254,928	231	7.4%	\$1,910,753	37	1.2%	\$336,382	3,116	100%	\$5,502,063
Town of Rhodhiss	490		378	77.1%	465	94.9%	\$451,743	17	3.5%	\$73,661	8	1.6%	\$26,595	490	100%	\$551,999
Town of Sawmills	3,234		3,234	100%	3,045	94.2%	\$4,167,137	175	5.4%	\$4,829,837	14	0.4%	\$406,958	3,234	100%	\$9,403,932
Village of Cedar Rock	135		135	100%	131	97%	\$305,091	3	2.2%	\$39,119	1	0.7%	\$1,628	135	100%	\$345,837

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$54,707,419	2,678	6%	\$36,884,352	472	1.1%	\$9,207,746	44,843	99.9%	\$100,799,515
Catawba															
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$54,839,718	2,695	5.4%	\$21,593,173	271	0.5%	\$6,925,746	50,023	99.9%	\$83,358,637
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$1,429,819	230	17%	\$2,369,266	14	1%	\$81,230	1,351	100%	\$3,880,314
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$5,804,107	931	18.3%	\$7,095,574	21	0.4%	\$1,534,965	5,083	99.9%	\$14,434,646
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$31,155,082	3,248	14.4%	\$25,370,832	184	0.8%	\$3,580,596	22,473	99.8%	\$60,106,510
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$7,535,639	903	11.8%	\$10,399,790	48	0.6%	\$397,416	7,646	99.9%	\$18,332,846
Town of Brookford	304	274	90.1%	267	87.8%	\$230,759	36	11.8%	\$85,661	1	0.3%	\$142	304	100%	\$316,561
Town of Catawba	1,016	706	69.5%	901	88.7%	\$794,130	107	10.5%	\$597,689	8	0.8%	\$696,959	1,016	100%	\$2,088,778
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$2,694,295	305	11.2%	\$3,104,051	19	0.7%	\$155,970	2,716	100%	\$5,954,317
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$3,277,037	417	12.9%	\$3,089,808	18	0.6%	\$527,269	3,223	99.8%	\$6,894,114
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$107,760,586	8,872	9.4%	\$73,705,844	584	0.6%	\$13,900,293	93,835	99.9%	\$195,366,723
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$240,862,336	16,434	7.7%	\$167,303,144	1,994	0.9%	\$40,278,769	213,875	99.9%	\$448,444,246

Source: GIS Analysis

Table 4.336: Buildings Impacted by the 700 Year Thunderstorm Winds

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Alexander																		
Alexander County (Unincorporated Area)	24,663	24,663	100%	22,618	91.7%	\$26,569,361	1,814	7.4%	\$19,204,832	218	0.9%	\$5,804,570	24,650	99.9%	\$51,578,764			
Town of Taylorsville	2,823	2,823	100%	2,436	86.3%	\$2,874,442	309	10.9%	\$2,778,663	76	2.7%	\$378,441	2,821	99.9%	\$6,031,546			
Subtotal Alexander	27,486	27,486	100%	25,054	91.2%	\$29,443,803	2,123	7.7%	\$21,983,495	294	1.1%	\$6,183,011	27,471	99.9%	\$57,610,310			
Burke																		
Burke County (Unincorporated Area)	28,091	21,157	75.3%	26,753	95.2%	\$26,037,675	1,102	3.9%	\$15,806,390	229	0.8%	\$3,825,740	28,084	100%	\$45,669,804			
City of Morganton	10,727	8,982	83.7%	9,269	86.4%	\$12,896,327	1,134	10.6%	\$12,107,427	301	2.8%	\$4,200,823	10,704	99.8%	\$29,204,577			
Town of Connelly Springs	889	735	82.7%	843	94.8%	\$806,511	38	4.3%	\$341,244	8	0.9%	\$212,487	889	100%	\$1,360,241			
Town of Drexel	2,949	2,428	82.3%	2,824	95.8%	\$3,034,031	98	3.3%	\$1,238,740	26	0.9%	\$254,687	2,948	100%	\$4,527,459			
Town of Glen Alpine	1,086	848	78.1%	1,033	95.1%	\$936,939	44	4.1%	\$271,478	9	0.8%	\$327,882	1,086	100%	\$1,536,298			
Town of Hildebran	1,069	1,047	97.9%	930	87%	\$1,375,626	121	11.3%	\$2,964,847	16	1.5%	\$1,632,537	1,067	99.8%	\$5,973,010			
Town of Rutherford College	827	682	82.5%	755	91.3%	\$1,020,274	49	5.9%	\$416,521	23	2.8%	\$353,392	827	100%	\$1,790,187			
Town of Valdese	2,132	1,712	80.3%	1,914	89.8%	\$2,843,145	175	8.2%	\$1,582,806	32	1.5%	\$180,171	2,121	99.5%	\$4,606,122			
Subtotal Burke	47,770	37,591	78.7%	44,321	92.8%	\$48,950,528	2,761	5.8%	\$34,729,453	644	1.3%	\$10,987,719	47,726	99.9%	\$94,667,698			
Caldwell																		

Jurisdiction	All Buildings			Number of Pre-FIRM Buildings At Risk			Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages			
Caldwell County (Unincorporated Area)	20,773	20,773	100%	19,719	94.9%	\$22,673,085	887	4.3%	\$11,840,445	166	0.8%	\$4,163,154	20,772	100%	\$38,676,684			
City of Lenoir	10,316	10,316	100%	9,201	89.2%	\$14,358,460	938	9.1%	\$12,272,690	160	1.6%	\$2,389,303	10,299	99.8%	\$29,020,453			
Town of Cahaj's Mountain	1,350	1,350	100%	1,250	92.6%	\$2,068,294	87	6.4%	\$1,269,758	13	1%	\$224,198	1,350	100%	\$3,562,250			
Town of Gamewell	2,062	2,062	100%	1,971	95.6%	\$2,242,502	78	3.8%	\$1,028,999	13	0.6%	\$1,077,997	2,062	100%	\$4,349,498			
Town of Granite Falls	3,394	3,394	100%	3,063	90.2%	\$5,186,179	262	7.7%	\$3,619,090	60	1.8%	\$581,531	3,385	99.7%	\$9,386,799			
Town of Hudson	3,116	3,116	100%	2,848	91.4%	\$3,254,928	231	7.4%	\$1,910,753	37	1.2%	\$336,382	3,116	100%	\$5,502,063			
Town of Rhodhiss	490	378	77.1%	465	94.9%	\$451,743	17	3.5%	\$73,661	8	1.6%	\$26,595	490	100%	\$551,999			
Town of Sawmills	3,234	3,234	100%	3,045	94.2%	\$4,167,137	175	5.4%	\$4,829,837	14	0.4%	\$406,958	3,234	100%	\$9,403,932			
Village of Cedar Rock	135	135	100%	131	97%	\$305,091	3	2.2%	\$39,119	1	0.7%	\$1,628	135	100%	\$345,837			
Subtotal Caldwell	44,870	44,758	99.8%	41,693	92.9%	\$54,707,419	2,678	6%	\$36,884,352	472	1.1%	\$9,207,746	44,843	99.9%	\$100,799,515			
Catawba																		
Catawba County (Unincorporated Area)	50,060	22,184	44.3%	47,057	94%	\$60,031,895	2,695	5.4%	\$22,300,112	271	0.5%	\$6,966,026	50,023	99.9%	\$89,298,033			
City of Claremont	1,351	1,323	97.9%	1,107	81.9%	\$1,429,819	230	17%	\$2,369,266	14	1%	\$81,230	1,351	100%	\$3,880,314			
City of Conover	5,089	2,884	56.7%	4,131	81.2%	\$5,804,107	931	18.3%	\$7,095,574	21	0.4%	\$1,534,965	5,083	99.9%	\$14,434,646			
City of Hickory	22,507	15,061	66.9%	19,041	84.6%	\$31,155,082	3,248	14.4%	\$25,370,832	184	0.8%	\$3,580,596	22,473	99.8%	\$60,106,510			
City of Newton	7,657	5,620	73.4%	6,695	87.4%	\$7,535,639	903	11.8%	\$10,399,790	48	0.6%	\$397,416	7,646	99.9%	\$18,332,846			

Jurisdiction	All Buildings	Number of Pre-FIRM Buildings At Risk		Residential Buildings At Risk			Commercial Buildings At Risk			Public Buildings At Risk			Total Buildings at Risk		
	Num	Num	% of Total	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages	Num	% of Total	Estimated Damages
Town of Brookford	304	274	90.1%	267	87.8%	\$230,759	36	11.8%	\$85,661	1	0.3%	\$142	304	100%	\$316,561
Town of Catawba	1,016	706	69.5%	901	88.7%	\$794,130	107	10.5%	\$597,689	8	0.8%	\$696,959	1,016	100%	\$2,088,778
Town of Long View	2,716	2,247	82.7%	2,392	88.1%	\$2,694,295	305	11.2%	\$3,104,051	19	0.7%	\$155,970	2,716	100%	\$5,954,317
Town of Maiden	3,230	2,192	67.9%	2,788	86.3%	\$3,277,037	417	12.9%	\$3,089,808	18	0.6%	\$527,269	3,223	99.8%	\$6,894,114
Subtotal Catawba	93,930	52,491	55.9%	84,379	89.8%	\$112,952,763	8,872	9.4%	\$74,412,783	584	0.6%	\$13,940,573	93,835	99.9%	\$201,306,119
TOTAL PLAN	214,056	162,326	75.8%	195,447	91.3%	\$246,054,513	16,434	7.7%	\$168,010,083	1,994	0.9%	\$40,319,049	213,875	99.9%	\$454,383,642

Source: GIS Analysis

The following tables provide counts and estimated damages for CIKR buildings by jurisdiction in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event. Totals across all sectors are shown at the bottom of each table.

Table 4.337: Critical Facilities Exposed to the Thunderstorm Winds - Alexander County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	19	\$9,878
Banking and Finance	50 Year	19	\$21,578
Banking and Finance	100 Year	19	\$43,881
Banking and Finance	300 Year	19	\$133,090
Banking and Finance	700 Year	19	\$133,090
Commercial Facilities	25 Year	680	\$1,040,361
Commercial Facilities	50 Year	680	\$2,319,360
Commercial Facilities	100 Year	680	\$4,711,806
Commercial Facilities	300 Year	680	\$13,992,069
Commercial Facilities	700 Year	680	\$13,992,069
Critical Manufacturing	25 Year	384	\$383,021
Critical Manufacturing	50 Year	384	\$837,421
Critical Manufacturing	100 Year	384	\$1,691,962
Critical Manufacturing	300 Year	384	\$5,144,422
Critical Manufacturing	700 Year	384	\$5,144,422
Defense Industrial Base	25 Year	1	\$58
Defense Industrial Base	50 Year	1	\$84
Defense Industrial Base	100 Year	1	\$139
Defense Industrial Base	300 Year	1	\$497
Defense Industrial Base	700 Year	1	\$497
Emergency Services	25 Year	7	\$7,688
Emergency Services	50 Year	7	\$17,799

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	100 Year	7	\$37,454
Emergency Services	300 Year	7	\$118,460
Emergency Services	700 Year	7	\$118,460
Energy	25 Year	14	\$16,677
Energy	50 Year	14	\$25,151
Energy	100 Year	14	\$44,099
Energy	300 Year	14	\$171,836
Energy	700 Year	14	\$171,836
Food and Agriculture	25 Year	617	\$10,083
Food and Agriculture	50 Year	617	\$30,403
Food and Agriculture	100 Year	617	\$80,014
Food and Agriculture	300 Year	617	\$395,361
Food and Agriculture	700 Year	617	\$395,361
Government Facilities	25 Year	76	\$126,364
Government Facilities	50 Year	76	\$280,471
Government Facilities	100 Year	76	\$575,090
Government Facilities	300 Year	76	\$1,766,797
Government Facilities	700 Year	76	\$1,766,797
Healthcare and Public Health	25 Year	35	\$26,757
Healthcare and Public Health	50 Year	35	\$58,047
Healthcare and Public Health	100 Year	35	\$114,400
Healthcare and Public Health	300 Year	35	\$330,481
Healthcare and Public Health	700 Year	35	\$330,481
Transportation Systems	25 Year	207	\$250,979
Transportation Systems	50 Year	207	\$539,348

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	100 Year	207	\$1,056,235
Transportation Systems	300 Year	207	\$3,091,417
Transportation Systems	700 Year	207	\$3,091,417
All Categories	25 Year	2,040	\$1,871,866
All Categories	50 Year	2,040	\$4,129,662
All Categories	100 Year	2,040	\$8,355,080
All Categories	300 Year	2,040	\$25,144,430
All Categories	700 Year	2,040	\$25,144,430

Source: GIS Analysis

Table 4.338: Critical Facilities Exposed to the Thunderstorm Winds - Town of Taylorsville

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	14	\$5,631
Banking and Finance	50 Year	14	\$12,811
Banking and Finance	100 Year	14	\$27,584
Banking and Finance	300 Year	14	\$97,851
Banking and Finance	700 Year	14	\$97,851
Commercial Facilities	25 Year	195	\$90,221
Commercial Facilities	50 Year	195	\$192,985
Commercial Facilities	100 Year	195	\$386,777
Commercial Facilities	300 Year	195	\$1,261,967
Commercial Facilities	700 Year	195	\$1,261,967
Critical Manufacturing	25 Year	62	\$72,420
Critical Manufacturing	50 Year	62	\$161,950
Critical Manufacturing	100 Year	62	\$333,442
Critical Manufacturing	300 Year	62	\$1,147,993

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	700 Year	62	\$1,147,993
Emergency Services	25 Year	4	\$416
Emergency Services	50 Year	4	\$642
Emergency Services	100 Year	4	\$1,118
Emergency Services	300 Year	4	\$4,311
Emergency Services	700 Year	4	\$4,311
Energy	25 Year	2	\$7,862
Energy	50 Year	2	\$12,156
Energy	100 Year	2	\$20,516
Energy	300 Year	2	\$86,804
Energy	700 Year	2	\$86,804
Food and Agriculture	25 Year	7	\$109
Food and Agriculture	50 Year	7	\$333
Food and Agriculture	100 Year	7	\$882
Food and Agriculture	300 Year	7	\$4,410
Food and Agriculture	700 Year	7	\$4,410
Government Facilities	25 Year	35	\$7,174
Government Facilities	50 Year	35	\$11,469
Government Facilities	100 Year	35	\$20,794
Government Facilities	300 Year	35	\$88,696
Government Facilities	700 Year	35	\$88,696
Healthcare and Public Health	25 Year	16	\$29,054
Healthcare and Public Health	50 Year	16	\$62,399
Healthcare and Public Health	100 Year	16	\$119,458
Healthcare and Public Health	300 Year	16	\$337,486

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	700 Year	16	\$337,486
Transportation Systems	25 Year	44	\$13,789
Transportation Systems	50 Year	44	\$28,917
Transportation Systems	100 Year	44	\$58,745
Transportation Systems	300 Year	44	\$197,578
Transportation Systems	700 Year	44	\$197,578
All Categories	25 Year	379	\$226,676
All Categories	50 Year	379	\$483,662
All Categories	100 Year	379	\$969,316
All Categories	300 Year	379	\$3,227,096
All Categories	700 Year	379	\$3,227,096

Source: GIS Analysis

Table 4.339: Critical Facilities Exposed to the Thunderstorm Winds - Burke County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$241
Banking and Finance	50 Year	4	\$365
Banking and Finance	100 Year	4	\$603
Banking and Finance	300 Year	4	\$2,331
Banking and Finance	700 Year	4	\$2,331
Commercial Facilities	25 Year	599	\$825,326
Commercial Facilities	50 Year	599	\$1,808,758
Commercial Facilities	100 Year	599	\$3,557,619
Commercial Facilities	300 Year	599	\$9,984,442
Commercial Facilities	700 Year	599	\$9,984,442

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	25 Year	316	\$309,829
Critical Manufacturing	50 Year	316	\$675,536
Critical Manufacturing	100 Year	316	\$1,333,476
Critical Manufacturing	300 Year	316	\$3,773,692
Critical Manufacturing	700 Year	316	\$3,773,692
Emergency Services	25 Year	13	\$8,667
Emergency Services	50 Year	13	\$19,342
Emergency Services	100 Year	13	\$40,074
Emergency Services	300 Year	13	\$127,501
Emergency Services	700 Year	13	\$127,501
Energy	25 Year	7	\$22,653
Energy	50 Year	7	\$33,290
Energy	100 Year	7	\$54,803
Energy	300 Year	7	\$196,968
Energy	700 Year	7	\$196,968
Food and Agriculture	25 Year	59	\$594
Food and Agriculture	50 Year	59	\$1,814
Food and Agriculture	100 Year	59	\$4,894
Food and Agriculture	300 Year	59	\$25,495
Food and Agriculture	700 Year	59	\$25,495
Government Facilities	25 Year	81	\$111,543
Government Facilities	50 Year	81	\$250,112
Government Facilities	100 Year	81	\$516,922
Government Facilities	300 Year	81	\$1,663,258
Government Facilities	700 Year	81	\$1,663,258

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	25 Year	22	\$66,529
Healthcare and Public Health	50 Year	22	\$148,247
Healthcare and Public Health	100 Year	22	\$298,070
Healthcare and Public Health	300 Year	22	\$858,424
Healthcare and Public Health	700 Year	22	\$858,424
Transportation Systems	25 Year	206	\$233,750
Transportation Systems	50 Year	206	\$509,595
Transportation Systems	100 Year	206	\$1,022,751
Transportation Systems	300 Year	206	\$3,109,508
Transportation Systems	700 Year	206	\$3,109,508
All Categories	25 Year	1,307	\$1,579,132
All Categories	50 Year	1,307	\$3,447,059
All Categories	100 Year	1,307	\$6,829,212
All Categories	300 Year	1,307	\$19,741,619
All Categories	700 Year	1,307	\$19,741,619

Source: GIS Analysis

Table 4.340: Critical Facilities Exposed to the Thunderstorm Winds - City of Morganton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	36	\$15,084
Banking and Finance	50 Year	36	\$31,529
Banking and Finance	100 Year	36	\$63,391
Banking and Finance	300 Year	36	\$204,905
Banking and Finance	700 Year	36	\$204,905
Commercial Facilities	25 Year	622	\$445,333

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	50 Year	622	\$951,172
Commercial Facilities	100 Year	622	\$1,901,305
Commercial Facilities	300 Year	622	\$5,800,217
Commercial Facilities	700 Year	622	\$5,800,217
Communications	25 Year	2	\$21,896
Communications	50 Year	2	\$48,388
Communications	100 Year	2	\$98,808
Communications	300 Year	2	\$284,430
Communications	700 Year	2	\$284,430
Critical Manufacturing	25 Year	274	\$213,877
Critical Manufacturing	50 Year	274	\$450,909
Critical Manufacturing	100 Year	274	\$914,655
Critical Manufacturing	300 Year	274	\$3,015,448
Critical Manufacturing	700 Year	274	\$3,015,448
Emergency Services	25 Year	6	\$2,263
Emergency Services	50 Year	6	\$5,000
Emergency Services	100 Year	6	\$10,809
Emergency Services	300 Year	6	\$47,811
Emergency Services	700 Year	6	\$47,811
Energy	25 Year	25	\$29,323
Energy	50 Year	25	\$45,944
Energy	100 Year	25	\$78,737
Energy	300 Year	25	\$282,349
Energy	700 Year	25	\$282,349
Food and Agriculture	25 Year	5	\$2,147

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	50 Year	5	\$3,230
Food and Agriculture	100 Year	5	\$5,908
Food and Agriculture	300 Year	5	\$25,267
Food and Agriculture	700 Year	5	\$25,267
Government Facilities	25 Year	152	\$212,010
Government Facilities	50 Year	152	\$464,590
Government Facilities	100 Year	152	\$947,630
Government Facilities	300 Year	152	\$2,971,951
Government Facilities	700 Year	152	\$2,971,951
Healthcare and Public Health	25 Year	81	\$37,322
Healthcare and Public Health	50 Year	81	\$73,616
Healthcare and Public Health	100 Year	81	\$145,226
Healthcare and Public Health	300 Year	81	\$513,052
Healthcare and Public Health	700 Year	81	\$513,052
Nuclear Reactors, Materials and Waste	25 Year	1	\$1,290
Nuclear Reactors, Materials and Waste	50 Year	1	\$3,071
Nuclear Reactors, Materials and Waste	100 Year	1	\$6,438
Nuclear Reactors, Materials and Waste	300 Year	1	\$20,371
Nuclear Reactors, Materials and Waste	700 Year	1	\$20,371
Transportation Systems	25 Year	201	\$231,872
Transportation Systems	50 Year	201	\$494,032
Transportation Systems	100 Year	201	\$970,946
Transportation Systems	300 Year	201	\$3,020,423
Transportation Systems	700 Year	201	\$3,020,423

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	1,405	\$1,212,417
All Categories	50 Year	1,405	\$2,571,481
All Categories	100 Year	1,405	\$5,143,853
All Categories	300 Year	1,405	\$16,186,224
All Categories	700 Year	1,405	\$16,186,224

Source: GIS Analysis

Table 4.341: Critical Facilities Exposed to the Thunderstorm Winds - Town of Connelly Springs

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	29	\$15,415
Commercial Facilities	50 Year	29	\$34,421
Commercial Facilities	100 Year	29	\$70,523
Commercial Facilities	300 Year	29	\$230,222
Commercial Facilities	700 Year	29	\$230,222
Critical Manufacturing	25 Year	13	\$19,960
Critical Manufacturing	50 Year	13	\$43,927
Critical Manufacturing	100 Year	13	\$85,887
Critical Manufacturing	300 Year	13	\$232,997
Critical Manufacturing	700 Year	13	\$232,997
Government Facilities	25 Year	2	\$1,737
Government Facilities	50 Year	2	\$3,905
Government Facilities	100 Year	2	\$8,085
Government Facilities	300 Year	2	\$24,079
Government Facilities	700 Year	2	\$24,079
Transportation Systems	25 Year	2	\$5,093
Transportation Systems	50 Year	2	\$11,041

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	100 Year	2	\$22,546
Transportation Systems	300 Year	2	\$66,432
Transportation Systems	700 Year	2	\$66,432
All Categories	25 Year	46	\$42,205
All Categories	50 Year	46	\$93,294
All Categories	100 Year	46	\$187,041
All Categories	300 Year	46	\$553,730
All Categories	700 Year	46	\$553,730

Source: GIS Analysis

Table 4.342: Critical Facilities Exposed to the Thunderstorm Winds - Town of Drexel

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	64	\$49,740
Commercial Facilities	50 Year	64	\$106,033
Commercial Facilities	100 Year	64	\$211,630
Commercial Facilities	300 Year	64	\$650,243
Commercial Facilities	700 Year	64	\$650,243
Critical Manufacturing	25 Year	17	\$6,798
Critical Manufacturing	50 Year	17	\$14,678
Critical Manufacturing	100 Year	17	\$29,958
Critical Manufacturing	300 Year	17	\$94,997
Critical Manufacturing	700 Year	17	\$94,997
Emergency Services	25 Year	2	\$962
Emergency Services	50 Year	2	\$1,984
Emergency Services	100 Year	2	\$4,381
Emergency Services	300 Year	2	\$19,254

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	700 Year	2	\$19,254
Energy	25 Year	2	\$8,035
Energy	50 Year	2	\$11,494
Energy	100 Year	2	\$18,876
Energy	300 Year	2	\$60,942
Energy	700 Year	2	\$60,942
Government Facilities	25 Year	10	\$3,791
Government Facilities	50 Year	10	\$5,776
Government Facilities	100 Year	10	\$9,647
Government Facilities	300 Year	10	\$35,834
Government Facilities	700 Year	10	\$35,834
Healthcare and Public Health	25 Year	8	\$7,206
Healthcare and Public Health	50 Year	8	\$15,298
Healthcare and Public Health	100 Year	8	\$30,912
Healthcare and Public Health	300 Year	8	\$96,075
Healthcare and Public Health	700 Year	8	\$96,075
Transportation Systems	25 Year	20	\$50,796
Transportation Systems	50 Year	20	\$111,163
Transportation Systems	100 Year	20	\$218,151
Transportation Systems	300 Year	20	\$596,414
Transportation Systems	700 Year	20	\$596,414
All Categories	25 Year	123	\$127,328
All Categories	50 Year	123	\$266,426
All Categories	100 Year	123	\$523,555
All Categories	300 Year	123	\$1,553,759

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	700 Year	123	\$1,553,759

Source: GIS Analysis

Table 4.343: Critical Facilities Exposed to the Thunderstorm Winds - Town of Glen Alpine

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	19	\$6,709
Commercial Facilities	50 Year	19	\$14,400
Commercial Facilities	100 Year	19	\$29,199
Commercial Facilities	300 Year	19	\$99,592
Commercial Facilities	700 Year	19	\$99,592
Critical Manufacturing	25 Year	5	\$421
Critical Manufacturing	50 Year	5	\$855
Critical Manufacturing	100 Year	5	\$1,771
Critical Manufacturing	300 Year	5	\$7,796
Critical Manufacturing	700 Year	5	\$7,796
Emergency Services	25 Year	1	\$136
Emergency Services	50 Year	1	\$362
Emergency Services	100 Year	1	\$807
Emergency Services	300 Year	1	\$2,921
Emergency Services	700 Year	1	\$2,921
Government Facilities	25 Year	5	\$21,660
Government Facilities	50 Year	5	\$49,504
Government Facilities	100 Year	5	\$102,631
Government Facilities	300 Year	5	\$310,794
Government Facilities	700 Year	5	\$310,794
Healthcare and Public Health	25 Year	1	\$829

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	1	\$1,918
Healthcare and Public Health	100 Year	1	\$3,986
Healthcare and Public Health	300 Year	1	\$13,348
Healthcare and Public Health	700 Year	1	\$13,348
Transportation Systems	25 Year	21	\$10,671
Transportation Systems	50 Year	21	\$23,871
Transportation Systems	100 Year	21	\$49,828
Transportation Systems	300 Year	21	\$157,154
Transportation Systems	700 Year	21	\$157,154
All Categories	25 Year	52	\$40,426
All Categories	50 Year	52	\$90,910
All Categories	100 Year	52	\$188,222
All Categories	300 Year	52	\$591,605
All Categories	700 Year	52	\$591,605

Source: GIS Analysis

Table 4.344: Critical Facilities Exposed to the Thunderstorm Winds - Town of Hildebran

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$100
Banking and Finance	50 Year	1	\$149
Banking and Finance	100 Year	1	\$246
Banking and Finance	300 Year	1	\$940
Banking and Finance	700 Year	1	\$940
Commercial Facilities	25 Year	63	\$213,361
Commercial Facilities	50 Year	63	\$450,330
Commercial Facilities	100 Year	63	\$822,082

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	300 Year	63	\$2,033,744
Commercial Facilities	700 Year	63	\$2,033,744
Critical Manufacturing	25 Year	45	\$165,455
Critical Manufacturing	50 Year	45	\$365,253
Critical Manufacturing	100 Year	45	\$739,309
Critical Manufacturing	300 Year	45	\$2,232,915
Critical Manufacturing	700 Year	45	\$2,232,915
Emergency Services	25 Year	1	\$457
Emergency Services	50 Year	1	\$776
Emergency Services	100 Year	1	\$1,598
Emergency Services	300 Year	1	\$10,397
Emergency Services	700 Year	1	\$10,397
Energy	25 Year	2	\$2,960
Energy	50 Year	2	\$4,432
Energy	100 Year	2	\$7,306
Energy	300 Year	2	\$28,051
Energy	700 Year	2	\$28,051
Government Facilities	25 Year	5	\$5,296
Government Facilities	50 Year	5	\$10,104
Government Facilities	100 Year	5	\$21,158
Government Facilities	300 Year	5	\$90,320
Government Facilities	700 Year	5	\$90,320
Healthcare and Public Health	25 Year	8	\$14,370
Healthcare and Public Health	50 Year	8	\$29,845
Healthcare and Public Health	100 Year	8	\$52,900

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	300 Year	8	\$126,375
Healthcare and Public Health	700 Year	8	\$126,375
Transportation Systems	25 Year	13	\$6,027
Transportation Systems	50 Year	13	\$13,439
Transportation Systems	100 Year	13	\$28,281
Transportation Systems	300 Year	13	\$99,185
Transportation Systems	700 Year	13	\$99,185
All Categories	25 Year	138	\$408,026
All Categories	50 Year	138	\$874,328
All Categories	100 Year	138	\$1,672,880
All Categories	300 Year	138	\$4,621,927
All Categories	700 Year	138	\$4,621,927

Source: GIS Analysis

Table 4.345: Critical Facilities Exposed to the Thunderstorm Winds - Town of Rutherford College

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$121
Banking and Finance	50 Year	1	\$200
Banking and Finance	100 Year	1	\$396
Banking and Finance	300 Year	1	\$2,157
Banking and Finance	700 Year	1	\$2,157
Commercial Facilities	25 Year	26	\$10,809
Commercial Facilities	50 Year	26	\$23,596
Commercial Facilities	100 Year	26	\$49,381
Commercial Facilities	300 Year	26	\$165,655
Commercial Facilities	700 Year	26	\$165,655

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	25 Year	14	\$4,696
Critical Manufacturing	50 Year	14	\$7,868
Critical Manufacturing	100 Year	14	\$14,701
Critical Manufacturing	300 Year	14	\$58,060
Critical Manufacturing	700 Year	14	\$58,060
Government Facilities	25 Year	13	\$22,713
Government Facilities	50 Year	13	\$50,733
Government Facilities	100 Year	13	\$103,816
Government Facilities	300 Year	13	\$314,625
Government Facilities	700 Year	13	\$314,625
Healthcare and Public Health	25 Year	10	\$12,844
Healthcare and Public Health	50 Year	10	\$28,297
Healthcare and Public Health	100 Year	10	\$57,561
Healthcare and Public Health	300 Year	10	\$169,732
Healthcare and Public Health	700 Year	10	\$169,732
Transportation Systems	25 Year	4	\$2,967
Transportation Systems	50 Year	4	\$6,475
Transportation Systems	100 Year	4	\$13,368
Transportation Systems	300 Year	4	\$40,047
Transportation Systems	700 Year	4	\$40,047
All Categories	25 Year	68	\$54,150
All Categories	50 Year	68	\$117,169
All Categories	100 Year	68	\$239,223
All Categories	300 Year	68	\$750,276
All Categories	700 Year	68	\$750,276

Source: GIS Analysis

Table 4.346: Critical Facilities Exposed to the Thunderstorm Winds - Town of Valdese

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	2	\$539
Banking and Finance	50 Year	2	\$984
Banking and Finance	100 Year	2	\$1,921
Banking and Finance	300 Year	2	\$8,007
Banking and Finance	700 Year	2	\$8,007
Commercial Facilities	25 Year	85	\$32,150
Commercial Facilities	50 Year	85	\$64,862
Commercial Facilities	100 Year	85	\$122,148
Commercial Facilities	300 Year	85	\$369,698
Commercial Facilities	700 Year	85	\$369,698
Critical Manufacturing	25 Year	50	\$46,388
Critical Manufacturing	50 Year	50	\$84,532
Critical Manufacturing	100 Year	50	\$162,329
Critical Manufacturing	300 Year	50	\$640,854
Critical Manufacturing	700 Year	50	\$640,854
Emergency Services	25 Year	3	\$525
Emergency Services	50 Year	3	\$791
Emergency Services	100 Year	3	\$1,363
Emergency Services	300 Year	3	\$4,688
Emergency Services	700 Year	3	\$4,688
Energy	25 Year	11	\$17,574
Energy	50 Year	11	\$26,184
Energy	100 Year	11	\$43,150

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	300 Year	11	\$162,927
Energy	700 Year	11	\$162,927
Government Facilities	25 Year	9	\$9,856
Government Facilities	50 Year	9	\$17,788
Government Facilities	100 Year	9	\$33,491
Government Facilities	300 Year	9	\$122,956
Government Facilities	700 Year	9	\$122,956
Healthcare and Public Health	25 Year	20	\$47,823
Healthcare and Public Health	50 Year	20	\$100,399
Healthcare and Public Health	100 Year	20	\$184,793
Healthcare and Public Health	300 Year	20	\$469,164
Healthcare and Public Health	700 Year	20	\$469,164
Transportation Systems	25 Year	31	\$12,600
Transportation Systems	50 Year	31	\$22,660
Transportation Systems	100 Year	31	\$42,747
Transportation Systems	300 Year	31	\$146,333
Transportation Systems	700 Year	31	\$146,333
All Categories	25 Year	211	\$167,455
All Categories	50 Year	211	\$318,200
All Categories	100 Year	211	\$591,942
All Categories	300 Year	211	\$1,924,627
All Categories	700 Year	211	\$1,924,627

Source: GIS Analysis

Table 4.347: Critical Facilities Exposed to the Thunderstorm Winds - Caldwell County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$242
Banking and Finance	50 Year	1	\$461
Banking and Finance	100 Year	1	\$888
Banking and Finance	300 Year	1	\$3,781
Banking and Finance	700 Year	1	\$3,781
Commercial Facilities	25 Year	484	\$629,974
Commercial Facilities	50 Year	484	\$1,374,210
Commercial Facilities	100 Year	484	\$2,686,451
Commercial Facilities	300 Year	484	\$7,514,218
Commercial Facilities	700 Year	484	\$7,514,218
Critical Manufacturing	25 Year	275	\$232,127
Critical Manufacturing	50 Year	275	\$505,311
Critical Manufacturing	100 Year	275	\$1,002,989
Critical Manufacturing	300 Year	275	\$2,915,928
Critical Manufacturing	700 Year	275	\$2,915,928
Energy	25 Year	1	\$1,371
Energy	50 Year	1	\$1,986
Energy	100 Year	1	\$3,266
Energy	300 Year	1	\$11,113
Energy	700 Year	1	\$11,113
Food and Agriculture	25 Year	63	\$609
Food and Agriculture	50 Year	63	\$1,851
Food and Agriculture	100 Year	63	\$4,924
Food and Agriculture	300 Year	63	\$24,761

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	700 Year	63	\$24,761
Government Facilities	25 Year	49	\$203,987
Government Facilities	50 Year	49	\$456,987
Government Facilities	100 Year	49	\$919,862
Government Facilities	300 Year	49	\$2,657,223
Government Facilities	700 Year	49	\$2,657,223
Healthcare and Public Health	25 Year	19	\$24,846
Healthcare and Public Health	50 Year	19	\$55,417
Healthcare and Public Health	100 Year	19	\$110,497
Healthcare and Public Health	300 Year	19	\$318,574
Healthcare and Public Health	700 Year	19	\$318,574
Transportation Systems	25 Year	156	\$201,289
Transportation Systems	50 Year	156	\$441,407
Transportation Systems	100 Year	156	\$877,209
Transportation Systems	300 Year	156	\$2,563,918
Transportation Systems	700 Year	156	\$2,563,918
All Categories	25 Year	1,048	\$1,294,445
All Categories	50 Year	1,048	\$2,837,630
All Categories	100 Year	1,048	\$5,606,086
All Categories	300 Year	1,048	\$16,009,516
All Categories	700 Year	1,048	\$16,009,516

Source: GIS Analysis

Table 4.348: Critical Facilities Exposed to the Thunderstorm Winds - City of Lenoir

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	24	\$8,658
Banking and Finance	50 Year	24	\$18,349
Banking and Finance	100 Year	24	\$37,560
Banking and Finance	300 Year	24	\$129,787
Banking and Finance	700 Year	24	\$129,787
Commercial Facilities	25 Year	617	\$397,815
Commercial Facilities	50 Year	617	\$835,721
Commercial Facilities	100 Year	617	\$1,625,342
Commercial Facilities	300 Year	617	\$4,976,950
Commercial Facilities	700 Year	617	\$4,976,950
Communications	25 Year	1	\$210
Communications	50 Year	1	\$315
Communications	100 Year	1	\$520
Communications	300 Year	1	\$2,004
Communications	700 Year	1	\$2,004
Critical Manufacturing	25 Year	207	\$446,440
Critical Manufacturing	50 Year	207	\$954,709
Critical Manufacturing	100 Year	207	\$1,845,268
Critical Manufacturing	300 Year	207	\$5,375,340
Critical Manufacturing	700 Year	207	\$5,375,340
Energy	25 Year	4	\$1,349
Energy	50 Year	4	\$1,939
Energy	100 Year	4	\$3,187
Energy	300 Year	4	\$10,518

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	700 Year	4	\$10,518
Food and Agriculture	25 Year	3	\$1,730
Food and Agriculture	50 Year	3	\$2,971
Food and Agriculture	100 Year	3	\$5,591
Food and Agriculture	300 Year	3	\$31,052
Food and Agriculture	700 Year	3	\$31,052
Government Facilities	25 Year	53	\$97,366
Government Facilities	50 Year	53	\$215,975
Government Facilities	100 Year	53	\$450,656
Government Facilities	300 Year	53	\$1,492,794
Government Facilities	700 Year	53	\$1,492,794
Healthcare and Public Health	25 Year	57	\$74,157
Healthcare and Public Health	50 Year	57	\$157,320
Healthcare and Public Health	100 Year	57	\$314,072
Healthcare and Public Health	300 Year	57	\$947,037
Healthcare and Public Health	700 Year	57	\$947,037
Transportation Systems	25 Year	115	\$137,140
Transportation Systems	50 Year	115	\$270,467
Transportation Systems	100 Year	115	\$513,962
Transportation Systems	300 Year	115	\$1,649,227
Transportation Systems	700 Year	115	\$1,649,227
Water	25 Year	13	\$12,286
Water	50 Year	13	\$17,927
Water	100 Year	13	\$29,564
Water	300 Year	13	\$103,423

Sector	Event	Number of Buildings At Risk	Estimated Damages
Water	700 Year	13	\$103,423
All Categories	25 Year	1,094	\$1,177,151
All Categories	50 Year	1,094	\$2,475,693
All Categories	100 Year	1,094	\$4,825,722
All Categories	300 Year	1,094	\$14,718,132
All Categories	700 Year	1,094	\$14,718,132

Source: GIS Analysis

Table 4.349: Critical Facilities Exposed to the Thunderstorm Winds - Town of Cahaj's Mountain

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	2	\$549
Banking and Finance	50 Year	2	\$979
Banking and Finance	100 Year	2	\$1,788
Banking and Finance	300 Year	2	\$5,425
Banking and Finance	700 Year	2	\$5,425
Commercial Facilities	25 Year	43	\$60,228
Commercial Facilities	50 Year	43	\$132,620
Commercial Facilities	100 Year	43	\$262,933
Commercial Facilities	300 Year	43	\$737,773
Commercial Facilities	700 Year	43	\$737,773
Critical Manufacturing	25 Year	26	\$8,515
Critical Manufacturing	50 Year	26	\$18,319
Critical Manufacturing	100 Year	26	\$37,546
Critical Manufacturing	300 Year	26	\$117,467
Critical Manufacturing	700 Year	26	\$117,467
Government Facilities	25 Year	2	\$173

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	50 Year	2	\$296
Government Facilities	100 Year	2	\$540
Government Facilities	300 Year	2	\$2,174
Government Facilities	700 Year	2	\$2,174
Healthcare and Public Health	25 Year	7	\$14,018
Healthcare and Public Health	50 Year	7	\$30,672
Healthcare and Public Health	100 Year	7	\$62,484
Healthcare and Public Health	300 Year	7	\$193,355
Healthcare and Public Health	700 Year	7	\$193,355
Transportation Systems	25 Year	16	\$32,711
Transportation Systems	50 Year	16	\$69,997
Transportation Systems	100 Year	16	\$133,898
Transportation Systems	300 Year	16	\$360,470
Transportation Systems	700 Year	16	\$360,470
All Categories	25 Year	96	\$116,194
All Categories	50 Year	96	\$252,883
All Categories	100 Year	96	\$499,189
All Categories	300 Year	96	\$1,416,664
All Categories	700 Year	96	\$1,416,664

Source: GIS Analysis

Table 4.350: Critical Facilities Exposed to the Thunderstorm Winds - Town of Gamewell

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	45	\$41,372
Commercial Facilities	50 Year	45	\$90,678

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	45	\$183,032
Commercial Facilities	300 Year	45	\$568,169
Commercial Facilities	700 Year	45	\$568,169
Critical Manufacturing	25 Year	24	\$27,023
Critical Manufacturing	50 Year	24	\$60,089
Critical Manufacturing	100 Year	24	\$123,920
Critical Manufacturing	300 Year	24	\$387,221
Critical Manufacturing	700 Year	24	\$387,221
Government Facilities	25 Year	5	\$68,976
Government Facilities	50 Year	5	\$156,556
Government Facilities	100 Year	5	\$319,651
Government Facilities	300 Year	5	\$985,043
Government Facilities	700 Year	5	\$985,043
Healthcare and Public Health	25 Year	4	\$2,219
Healthcare and Public Health	50 Year	4	\$4,929
Healthcare and Public Health	100 Year	4	\$10,128
Healthcare and Public Health	300 Year	4	\$34,572
Healthcare and Public Health	700 Year	4	\$34,572
Transportation Systems	25 Year	13	\$8,144
Transportation Systems	50 Year	13	\$18,942
Transportation Systems	100 Year	13	\$39,356
Transportation Systems	300 Year	13	\$131,991
Transportation Systems	700 Year	13	\$131,991
All Categories	25 Year	91	\$147,734
All Categories	50 Year	91	\$331,194

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	91	\$676,087
All Categories	300 Year	91	\$2,106,996
All Categories	700 Year	91	\$2,106,996

Source: GIS Analysis

Table 4.351: Critical Facilities Exposed to the Thunderstorm Winds - Town of Granite Falls

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	8	\$1,056
Banking and Finance	50 Year	8	\$1,609
Banking and Finance	100 Year	8	\$2,855
Banking and Finance	300 Year	8	\$11,468
Banking and Finance	700 Year	8	\$11,468
Commercial Facilities	25 Year	154	\$136,631
Commercial Facilities	50 Year	154	\$295,972
Commercial Facilities	100 Year	154	\$607,774
Commercial Facilities	300 Year	154	\$2,104,056
Commercial Facilities	700 Year	154	\$2,104,056
Critical Manufacturing	25 Year	70	\$45,084
Critical Manufacturing	50 Year	70	\$98,721
Critical Manufacturing	100 Year	70	\$200,856
Critical Manufacturing	300 Year	70	\$625,787
Critical Manufacturing	700 Year	70	\$625,787
Energy	25 Year	1	\$17,913
Energy	50 Year	1	\$29,583
Energy	100 Year	1	\$58,759
Energy	300 Year	1	\$342,268

Sector	Event	Number of Buildings At Risk	Estimated Damages
Energy	700 Year	1	\$342,268
Government Facilities	25 Year	24	\$16,984
Government Facilities	50 Year	24	\$33,826
Government Facilities	100 Year	24	\$68,650
Government Facilities	300 Year	24	\$278,350
Government Facilities	700 Year	24	\$278,350
Healthcare and Public Health	25 Year	9	\$1,854
Healthcare and Public Health	50 Year	9	\$3,400
Healthcare and Public Health	100 Year	9	\$6,601
Healthcare and Public Health	300 Year	9	\$28,306
Healthcare and Public Health	700 Year	9	\$28,306
Transportation Systems	25 Year	52	\$84,246
Transportation Systems	50 Year	52	\$181,794
Transportation Systems	100 Year	52	\$362,846
Transportation Systems	300 Year	52	\$1,087,838
Transportation Systems	700 Year	52	\$1,087,838
Water	25 Year	8	\$11,017
Water	50 Year	8	\$16,036
Water	100 Year	8	\$26,381
Water	300 Year	8	\$91,460
Water	700 Year	8	\$91,460
All Categories	25 Year	326	\$314,785
All Categories	50 Year	326	\$660,941
All Categories	100 Year	326	\$1,334,722
All Categories	300 Year	326	\$4,569,533

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	700 Year	326	\$4,569,533

Source: GIS Analysis

Table 4.352: Critical Facilities Exposed to the Thunderstorm Winds - Town of Hudson

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$3,876
Banking and Finance	50 Year	4	\$8,460
Banking and Finance	100 Year	4	\$17,215
Banking and Finance	300 Year	4	\$52,839
Banking and Finance	700 Year	4	\$52,839
Commercial Facilities	25 Year	122	\$53,800
Commercial Facilities	50 Year	122	\$110,781
Commercial Facilities	100 Year	122	\$222,645
Commercial Facilities	300 Year	122	\$759,136
Commercial Facilities	700 Year	122	\$759,136
Critical Manufacturing	25 Year	66	\$43,229
Critical Manufacturing	50 Year	66	\$89,229
Critical Manufacturing	100 Year	66	\$177,342
Critical Manufacturing	300 Year	66	\$568,507
Critical Manufacturing	700 Year	66	\$568,507
Government Facilities	25 Year	24	\$13,631
Government Facilities	50 Year	24	\$29,123
Government Facilities	100 Year	24	\$61,430
Government Facilities	300 Year	24	\$230,816
Government Facilities	700 Year	24	\$230,816
Healthcare and Public Health	25 Year	15	\$19,958

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	15	\$43,299
Healthcare and Public Health	100 Year	15	\$85,358
Healthcare and Public Health	300 Year	15	\$246,085
Healthcare and Public Health	700 Year	15	\$246,085
Transportation Systems	25 Year	37	\$26,445
Transportation Systems	50 Year	37	\$55,292
Transportation Systems	100 Year	37	\$111,927
Transportation Systems	300 Year	37	\$389,752
Transportation Systems	700 Year	37	\$389,752
All Categories	25 Year	268	\$160,939
All Categories	50 Year	268	\$336,184
All Categories	100 Year	268	\$675,917
All Categories	300 Year	268	\$2,247,135
All Categories	700 Year	268	\$2,247,135

Source: GIS Analysis

Table 4.353: Critical Facilities Exposed to the Thunderstorm Winds - Town of Rhodhiss

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	8	\$4,907
Commercial Facilities	50 Year	8	\$10,840
Commercial Facilities	100 Year	8	\$21,895
Commercial Facilities	300 Year	8	\$67,595
Commercial Facilities	700 Year	8	\$67,595
Critical Manufacturing	25 Year	8	\$1,265
Critical Manufacturing	50 Year	8	\$1,876
Critical Manufacturing	100 Year	8	\$3,100

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	300 Year	8	\$11,629
Critical Manufacturing	700 Year	8	\$11,629
Emergency Services	25 Year	2	\$58
Emergency Services	50 Year	2	\$104
Emergency Services	100 Year	2	\$222
Emergency Services	300 Year	2	\$1,084
Emergency Services	700 Year	2	\$1,084
Government Facilities	25 Year	4	\$1,746
Government Facilities	50 Year	4	\$2,796
Government Facilities	100 Year	4	\$4,964
Government Facilities	300 Year	4	\$18,311
Government Facilities	700 Year	4	\$18,311
Transportation Systems	25 Year	3	\$155
Transportation Systems	50 Year	3	\$246
Transportation Systems	100 Year	3	\$445
Transportation Systems	300 Year	3	\$1,638
Transportation Systems	700 Year	3	\$1,638
All Categories	25 Year	25	\$8,131
All Categories	50 Year	25	\$15,862
All Categories	100 Year	25	\$30,626
All Categories	300 Year	25	\$100,257
All Categories	700 Year	25	\$100,257

Source: GIS Analysis

Table 4.354: Critical Facilities Exposed to the Thunderstorm Winds - Town of Sawmills

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	91	\$229,536
Commercial Facilities	50 Year	91	\$500,073
Commercial Facilities	100 Year	91	\$969,943
Commercial Facilities	300 Year	91	\$2,633,435
Commercial Facilities	700 Year	91	\$2,633,435
Critical Manufacturing	25 Year	61	\$226,424
Critical Manufacturing	50 Year	61	\$482,435
Critical Manufacturing	100 Year	61	\$878,479
Critical Manufacturing	300 Year	61	\$2,059,151
Critical Manufacturing	700 Year	61	\$2,059,151
Food and Agriculture	25 Year	4	\$63
Food and Agriculture	50 Year	4	\$191
Food and Agriculture	100 Year	4	\$490
Food and Agriculture	300 Year	4	\$2,239
Food and Agriculture	700 Year	4	\$2,239
Government Facilities	25 Year	4	\$16,096
Government Facilities	50 Year	4	\$32,866
Government Facilities	100 Year	4	\$61,547
Government Facilities	300 Year	4	\$173,610
Government Facilities	700 Year	4	\$173,610
Healthcare and Public Health	25 Year	4	\$11,498
Healthcare and Public Health	50 Year	4	\$23,696
Healthcare and Public Health	100 Year	4	\$41,712
Healthcare and Public Health	300 Year	4	\$91,427

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	700 Year	4	\$91,427
Transportation Systems	25 Year	25	\$23,249
Transportation Systems	50 Year	25	\$48,847
Transportation Systems	100 Year	25	\$94,412
Transportation Systems	300 Year	25	\$276,933
Transportation Systems	700 Year	25	\$276,933
All Categories	25 Year	189	\$506,866
All Categories	50 Year	189	\$1,088,108
All Categories	100 Year	189	\$2,046,583
All Categories	300 Year	189	\$5,236,795
All Categories	700 Year	189	\$5,236,795

Source: GIS Analysis

Table 4.355: Critical Facilities Exposed to the Thunderstorm Winds - Village of Cedar Rock

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	1	\$60
Commercial Facilities	50 Year	1	\$86
Commercial Facilities	100 Year	1	\$138
Commercial Facilities	300 Year	1	\$445
Commercial Facilities	700 Year	1	\$445
Government Facilities	25 Year	1	\$206
Government Facilities	50 Year	1	\$303
Government Facilities	100 Year	1	\$494
Government Facilities	300 Year	1	\$1,628
Government Facilities	700 Year	1	\$1,628
Healthcare and Public Health	25 Year	1	\$2,737

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	1	\$6,216
Healthcare and Public Health	100 Year	1	\$13,078
Healthcare and Public Health	300 Year	1	\$38,515
Healthcare and Public Health	700 Year	1	\$38,515
Transportation Systems	25 Year	1	\$32
Transportation Systems	50 Year	1	\$42
Transportation Systems	100 Year	1	\$63
Transportation Systems	300 Year	1	\$159
Transportation Systems	700 Year	1	\$159
All Categories	25 Year	4	\$3,035
All Categories	50 Year	4	\$6,647
All Categories	100 Year	4	\$13,773
All Categories	300 Year	4	\$40,747
All Categories	700 Year	4	\$40,747

Source: GIS Analysis

Table 4.356: Critical Facilities Exposed to the Thunderstorm Winds - Catawba County (Unincorporated Area)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	7	\$2,533
Banking and Finance	50 Year	7	\$5,799
Banking and Finance	100 Year	7	\$12,112
Banking and Finance	300 Year	7	\$39,765
Banking and Finance	700 Year	7	\$39,765
Commercial Facilities	25 Year	1,760	\$1,015,367
Commercial Facilities	50 Year	1,760	\$2,236,048

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	100 Year	1,760	\$4,487,533
Commercial Facilities	300 Year	1,760	\$13,386,629
Commercial Facilities	700 Year	1,760	\$13,951,830
Critical Manufacturing	25 Year	623	\$418,716
Critical Manufacturing	50 Year	623	\$912,954
Critical Manufacturing	100 Year	623	\$1,803,761
Critical Manufacturing	300 Year	623	\$5,171,257
Critical Manufacturing	700 Year	623	\$5,242,799
Emergency Services	25 Year	12	\$30,619
Emergency Services	50 Year	12	\$65,259
Emergency Services	100 Year	12	\$122,650
Emergency Services	300 Year	12	\$321,205
Emergency Services	700 Year	12	\$322,773
Energy	25 Year	36	\$107,182
Energy	50 Year	36	\$174,268
Energy	100 Year	36	\$323,054
Energy	300 Year	36	\$1,518,372
Energy	700 Year	36	\$2,942,595
Food and Agriculture	25 Year	141	\$2,164
Food and Agriculture	50 Year	141	\$6,575
Food and Agriculture	100 Year	141	\$17,395
Food and Agriculture	300 Year	141	\$86,540
Food and Agriculture	700 Year	141	\$86,929
Government Facilities	25 Year	86	\$407,091
Government Facilities	50 Year	86	\$890,881

Sector	Event	Number of Buildings At Risk	Estimated Damages
Government Facilities	100 Year	86	\$1,767,206
Government Facilities	300 Year	86	\$5,253,150
Government Facilities	700 Year	86	\$5,259,805
Healthcare and Public Health	25 Year	28	\$11,911
Healthcare and Public Health	50 Year	28	\$25,648
Healthcare and Public Health	100 Year	28	\$50,030
Healthcare and Public Health	300 Year	28	\$142,870
Healthcare and Public Health	700 Year	28	\$147,130
Postal and Shipping	25 Year	1	\$309
Postal and Shipping	50 Year	1	\$445
Postal and Shipping	100 Year	1	\$731
Postal and Shipping	300 Year	1	\$2,414
Postal and Shipping	700 Year	1	\$2,414
Transportation Systems	25 Year	290	\$295,631
Transportation Systems	50 Year	290	\$640,932
Transportation Systems	100 Year	290	\$1,278,881
Transportation Systems	300 Year	290	\$4,028,126
Transportation Systems	700 Year	290	\$4,125,732
Water	25 Year	1	\$41
Water	50 Year	1	\$59
Water	100 Year	1	\$97
Water	300 Year	1	\$329
Water	700 Year	1	\$329
All Categories	25 Year	2,985	\$2,291,564
All Categories	50 Year	2,985	\$4,958,868

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	2,985	\$9,863,450
All Categories	300 Year	2,985	\$29,950,657
All Categories	700 Year	2,985	\$32,122,101

Source: GIS Analysis

Table 4.357: Critical Facilities Exposed to the Thunderstorm Winds - City of Claremont

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	120	\$61,338
Commercial Facilities	50 Year	120	\$128,633
Commercial Facilities	100 Year	120	\$261,077
Commercial Facilities	300 Year	120	\$834,742
Commercial Facilities	700 Year	120	\$834,742
Critical Manufacturing	25 Year	104	\$89,258
Critical Manufacturing	50 Year	104	\$180,985
Critical Manufacturing	100 Year	104	\$364,849
Critical Manufacturing	300 Year	104	\$1,334,672
Critical Manufacturing	700 Year	104	\$1,334,672
Emergency Services	25 Year	1	\$460
Emergency Services	50 Year	1	\$837
Emergency Services	100 Year	1	\$1,806
Emergency Services	300 Year	1	\$11,231
Emergency Services	700 Year	1	\$11,231
Food and Agriculture	25 Year	1	\$5,938
Food and Agriculture	50 Year	1	\$15,714
Food and Agriculture	100 Year	1	\$34,822
Food and Agriculture	300 Year	1	\$125,008

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	700 Year	1	\$125,008
Government Facilities	25 Year	7	\$5,344
Government Facilities	50 Year	7	\$10,928
Government Facilities	100 Year	7	\$21,298
Government Facilities	300 Year	7	\$67,261
Government Facilities	700 Year	7	\$67,261
Transportation Systems	25 Year	7	\$5,411
Transportation Systems	50 Year	7	\$11,983
Transportation Systems	100 Year	7	\$24,641
Transportation Systems	300 Year	7	\$75,707
Transportation Systems	700 Year	7	\$75,707
All Categories	25 Year	240	\$167,749
All Categories	50 Year	240	\$349,080
All Categories	100 Year	240	\$708,493
All Categories	300 Year	240	\$2,448,621
All Categories	700 Year	240	\$2,448,621

Source: GIS Analysis

Table 4.358: Critical Facilities Exposed to the Thunderstorm Winds - City of Conover

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$22
Banking and Finance	50 Year	1	\$40
Banking and Finance	100 Year	1	\$90
Banking and Finance	300 Year	1	\$574
Banking and Finance	700 Year	1	\$574
Commercial Facilities	25 Year	592	\$215,298

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	50 Year	592	\$453,502
Commercial Facilities	100 Year	592	\$926,093
Commercial Facilities	300 Year	592	\$3,156,212
Commercial Facilities	700 Year	592	\$3,156,212
Critical Manufacturing	25 Year	305	\$240,274
Critical Manufacturing	50 Year	305	\$486,703
Critical Manufacturing	100 Year	305	\$971,727
Critical Manufacturing	300 Year	305	\$3,291,939
Critical Manufacturing	700 Year	305	\$3,291,939
Emergency Services	25 Year	2	\$3,256
Emergency Services	50 Year	2	\$7,803
Emergency Services	100 Year	2	\$16,822
Emergency Services	300 Year	2	\$62,067
Emergency Services	700 Year	2	\$62,067
Energy	25 Year	6	\$8,680
Energy	50 Year	6	\$13,959
Energy	100 Year	6	\$25,219
Energy	300 Year	6	\$116,402
Energy	700 Year	6	\$116,402
Government Facilities	25 Year	11	\$102,462
Government Facilities	50 Year	11	\$233,373
Government Facilities	100 Year	11	\$477,105
Government Facilities	300 Year	11	\$1,396,121
Government Facilities	700 Year	11	\$1,396,121
Healthcare and Public Health	25 Year	3	\$2,362

Sector	Event	Number of Buildings At Risk	Estimated Damages
Healthcare and Public Health	50 Year	3	\$5,135
Healthcare and Public Health	100 Year	3	\$10,073
Healthcare and Public Health	300 Year	3	\$29,450
Healthcare and Public Health	700 Year	3	\$29,450
Transportation Systems	25 Year	36	\$39,610
Transportation Systems	50 Year	36	\$92,450
Transportation Systems	100 Year	36	\$197,014
Transportation Systems	300 Year	36	\$693,434
Transportation Systems	700 Year	36	\$693,434
All Categories	25 Year	956	\$611,964
All Categories	50 Year	956	\$1,292,965
All Categories	100 Year	956	\$2,624,143
All Categories	300 Year	956	\$8,746,199
All Categories	700 Year	956	\$8,746,199

Source: GIS Analysis

Table 4.359: Critical Facilities Exposed to the Thunderstorm Winds - City of Hickory

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	17	\$1,548
Banking and Finance	50 Year	17	\$3,043
Banking and Finance	100 Year	17	\$6,230
Banking and Finance	300 Year	17	\$26,310
Banking and Finance	700 Year	17	\$26,310
Commercial Facilities	25 Year	2,533	\$1,319,538
Commercial Facilities	50 Year	2,533	\$2,847,874
Commercial Facilities	100 Year	2,533	\$5,754,894

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	300 Year	2,533	\$18,600,313
Commercial Facilities	700 Year	2,533	\$18,600,313
Critical Manufacturing	25 Year	567	\$421,487
Critical Manufacturing	50 Year	567	\$875,523
Critical Manufacturing	100 Year	567	\$1,725,452
Critical Manufacturing	300 Year	567	\$5,615,721
Critical Manufacturing	700 Year	567	\$5,615,721
Defense Industrial Base	25 Year	1	\$624
Defense Industrial Base	50 Year	1	\$962
Defense Industrial Base	100 Year	1	\$1,652
Defense Industrial Base	300 Year	1	\$7,283
Defense Industrial Base	700 Year	1	\$7,283
Emergency Services	25 Year	13	\$4,678
Emergency Services	50 Year	13	\$10,481
Emergency Services	100 Year	13	\$21,977
Emergency Services	300 Year	13	\$78,116
Emergency Services	700 Year	13	\$78,116
Energy	25 Year	35	\$23,629
Energy	50 Year	35	\$34,381
Energy	100 Year	35	\$56,551
Energy	300 Year	35	\$195,391
Energy	700 Year	35	\$195,391
Food and Agriculture	25 Year	1	\$17
Food and Agriculture	50 Year	1	\$26
Food and Agriculture	100 Year	1	\$43

Sector	Event	Number of Buildings At Risk	Estimated Damages
Food and Agriculture	300 Year	1	\$178
Food and Agriculture	700 Year	1	\$178
Government Facilities	25 Year	90	\$215,676
Government Facilities	50 Year	90	\$472,257
Government Facilities	100 Year	90	\$936,081
Government Facilities	300 Year	90	\$2,813,778
Government Facilities	700 Year	90	\$2,813,778
Healthcare and Public Health	25 Year	65	\$33,346
Healthcare and Public Health	50 Year	65	\$59,451
Healthcare and Public Health	100 Year	65	\$113,397
Healthcare and Public Health	300 Year	65	\$424,882
Healthcare and Public Health	700 Year	65	\$424,882
Transportation Systems	25 Year	119	\$90,635
Transportation Systems	50 Year	119	\$199,411
Transportation Systems	100 Year	119	\$406,737
Transportation Systems	300 Year	119	\$1,269,645
Transportation Systems	700 Year	119	\$1,269,645
All Categories	25 Year	3,441	\$2,111,178
All Categories	50 Year	3,441	\$4,503,409
All Categories	100 Year	3,441	\$9,023,014
All Categories	300 Year	3,441	\$29,031,617
All Categories	700 Year	3,441	\$29,031,617

Source: GIS Analysis

Table 4.360: Critical Facilities Exposed to the Thunderstorm Winds - City of Newton

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	4	\$2,928
Banking and Finance	50 Year	4	\$5,396
Banking and Finance	100 Year	4	\$10,632
Banking and Finance	300 Year	4	\$37,875
Banking and Finance	700 Year	4	\$37,875
Commercial Facilities	25 Year	684	\$323,626
Commercial Facilities	50 Year	684	\$737,447
Commercial Facilities	100 Year	684	\$1,715,334
Commercial Facilities	300 Year	684	\$7,689,475
Commercial Facilities	700 Year	684	\$7,689,475
Critical Manufacturing	25 Year	192	\$130,743
Critical Manufacturing	50 Year	192	\$273,320
Critical Manufacturing	100 Year	192	\$565,026
Critical Manufacturing	300 Year	192	\$2,059,545
Critical Manufacturing	700 Year	192	\$2,059,545
Defense Industrial Base	25 Year	1	\$6,914
Defense Industrial Base	50 Year	1	\$13,184
Defense Industrial Base	100 Year	1	\$25,405
Defense Industrial Base	300 Year	1	\$108,128
Defense Industrial Base	700 Year	1	\$108,128
Emergency Services	25 Year	7	\$2,537
Emergency Services	50 Year	7	\$4,657
Emergency Services	100 Year	7	\$10,182
Emergency Services	300 Year	7	\$53,908

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	700 Year	7	\$53,908
Energy	25 Year	11	\$11,195
Energy	50 Year	11	\$16,342
Energy	100 Year	11	\$26,889
Energy	300 Year	11	\$94,222
Energy	700 Year	11	\$94,222
Food and Agriculture	25 Year	1	\$1
Food and Agriculture	50 Year	1	\$4
Food and Agriculture	100 Year	1	\$12
Food and Agriculture	300 Year	1	\$60
Food and Agriculture	700 Year	1	\$60
Government Facilities	25 Year	24	\$19,418
Government Facilities	50 Year	24	\$37,122
Government Facilities	100 Year	24	\$73,436
Government Facilities	300 Year	24	\$297,593
Government Facilities	700 Year	24	\$297,593
Healthcare and Public Health	25 Year	9	\$24,178
Healthcare and Public Health	50 Year	9	\$56,760
Healthcare and Public Health	100 Year	9	\$120,564
Healthcare and Public Health	300 Year	9	\$435,408
Healthcare and Public Health	700 Year	9	\$435,408
Transportation Systems	25 Year	26	\$8,637
Transportation Systems	50 Year	26	\$18,633
Transportation Systems	100 Year	26	\$36,662
Transportation Systems	300 Year	26	\$107,139

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	700 Year	26	\$107,139
All Categories	25 Year	959	\$530,177
All Categories	50 Year	959	\$1,162,865
All Categories	100 Year	959	\$2,584,142
All Categories	300 Year	959	\$10,883,353
All Categories	700 Year	959	\$10,883,353

Source: GIS Analysis

Table 4.361: Critical Facilities Exposed to the Thunderstorm Winds - Town of Brookford

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	28	\$2,644
Commercial Facilities	50 Year	28	\$5,059
Commercial Facilities	100 Year	28	\$9,997
Commercial Facilities	300 Year	28	\$38,022
Commercial Facilities	700 Year	28	\$38,022
Critical Manufacturing	25 Year	7	\$1,203
Critical Manufacturing	50 Year	7	\$2,025
Critical Manufacturing	100 Year	7	\$3,609
Critical Manufacturing	300 Year	7	\$13,495
Critical Manufacturing	700 Year	7	\$13,495
Transportation Systems	25 Year	2	\$2,205
Transportation Systems	50 Year	2	\$3,992
Transportation Systems	100 Year	2	\$7,871
Transportation Systems	300 Year	2	\$34,286
Transportation Systems	700 Year	2	\$34,286
All Categories	25 Year	37	\$6,052

Sector	Event	Number of Buildings At Risk	Estimated Damages
All Categories	50 Year	37	\$11,076
All Categories	100 Year	37	\$21,477
All Categories	300 Year	37	\$85,803
All Categories	700 Year	37	\$85,803

Source: GIS Analysis

Table 4.362: Critical Facilities Exposed to the Thunderstorm Winds - Town of Catawba

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$79
Banking and Finance	50 Year	1	\$191
Banking and Finance	100 Year	1	\$416
Banking and Finance	300 Year	1	\$1,544
Banking and Finance	700 Year	1	\$1,544
Commercial Facilities	25 Year	77	\$28,182
Commercial Facilities	50 Year	77	\$61,147
Commercial Facilities	100 Year	77	\$126,113
Commercial Facilities	300 Year	77	\$417,547
Commercial Facilities	700 Year	77	\$417,547
Critical Manufacturing	25 Year	25	\$13,938
Critical Manufacturing	50 Year	25	\$28,185
Critical Manufacturing	100 Year	25	\$55,653
Critical Manufacturing	300 Year	25	\$168,124
Critical Manufacturing	700 Year	25	\$168,124
Emergency Services	25 Year	2	\$195
Emergency Services	50 Year	2	\$280
Emergency Services	100 Year	2	\$448

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	300 Year	2	\$1,441
Emergency Services	700 Year	2	\$1,441
Government Facilities	25 Year	3	\$47,949
Government Facilities	50 Year	3	\$109,369
Government Facilities	100 Year	3	\$230,789
Government Facilities	300 Year	3	\$687,927
Government Facilities	700 Year	3	\$687,927
Transportation Systems	25 Year	7	\$978
Transportation Systems	50 Year	7	\$2,280
Transportation Systems	100 Year	7	\$4,909
Transportation Systems	300 Year	7	\$18,065
Transportation Systems	700 Year	7	\$18,065
All Categories	25 Year	115	\$91,321
All Categories	50 Year	115	\$201,452
All Categories	100 Year	115	\$418,328
All Categories	300 Year	115	\$1,294,648
All Categories	700 Year	115	\$1,294,648

Source: GIS Analysis

Table 4.363: Critical Facilities Exposed to the Thunderstorm Winds - Town of Long View

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	3	\$1,313
Banking and Finance	50 Year	3	\$2,931
Banking and Finance	100 Year	3	\$5,905
Banking and Finance	300 Year	3	\$17,546
Banking and Finance	700 Year	3	\$17,546

Sector	Event	Number of Buildings At Risk	Estimated Damages
Commercial Facilities	25 Year	215	\$112,202
Commercial Facilities	50 Year	215	\$238,058
Commercial Facilities	100 Year	215	\$466,004
Commercial Facilities	300 Year	215	\$1,440,307
Commercial Facilities	700 Year	215	\$1,440,307
Critical Manufacturing	25 Year	86	\$110,724
Critical Manufacturing	50 Year	86	\$233,238
Critical Manufacturing	100 Year	86	\$467,878
Critical Manufacturing	300 Year	86	\$1,502,377
Critical Manufacturing	700 Year	86	\$1,502,377
Emergency Services	25 Year	1	\$192
Emergency Services	50 Year	1	\$502
Emergency Services	100 Year	1	\$1,157
Emergency Services	300 Year	1	\$4,703
Emergency Services	700 Year	1	\$4,703
Government Facilities	25 Year	8	\$16,301
Government Facilities	50 Year	8	\$28,178
Government Facilities	100 Year	8	\$46,517
Government Facilities	300 Year	8	\$106,655
Government Facilities	700 Year	8	\$106,655
Healthcare and Public Health	25 Year	1	\$134
Healthcare and Public Health	50 Year	1	\$349
Healthcare and Public Health	100 Year	1	\$794
Healthcare and Public Health	300 Year	1	\$3,371
Healthcare and Public Health	700 Year	1	\$3,371

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	25 Year	10	\$12,746
Transportation Systems	50 Year	10	\$27,246
Transportation Systems	100 Year	10	\$54,407
Transportation Systems	300 Year	10	\$185,061
Transportation Systems	700 Year	10	\$185,061
All Categories	25 Year	324	\$253,612
All Categories	50 Year	324	\$530,502
All Categories	100 Year	324	\$1,042,662
All Categories	300 Year	324	\$3,260,020
All Categories	700 Year	324	\$3,260,020

Source: GIS Analysis

Table 4.364: Critical Facilities Exposed to the Thunderstorm Winds - Town of Maiden

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	1	\$85
Banking and Finance	50 Year	1	\$128
Banking and Finance	100 Year	1	\$212
Banking and Finance	300 Year	1	\$712
Banking and Finance	700 Year	1	\$712
Commercial Facilities	25 Year	271	\$87,207
Commercial Facilities	50 Year	271	\$187,092
Commercial Facilities	100 Year	271	\$395,698
Commercial Facilities	300 Year	271	\$1,458,680
Commercial Facilities	700 Year	271	\$1,458,680
Critical Manufacturing	25 Year	138	\$107,780
Critical Manufacturing	50 Year	138	\$222,008

Sector	Event	Number of Buildings At Risk	Estimated Damages
Critical Manufacturing	100 Year	138	\$450,674
Critical Manufacturing	300 Year	138	\$1,616,279
Critical Manufacturing	700 Year	138	\$1,616,279
Emergency Services	25 Year	1	\$91
Emergency Services	50 Year	1	\$138
Emergency Services	100 Year	1	\$227
Emergency Services	300 Year	1	\$913
Emergency Services	700 Year	1	\$913
Energy	25 Year	5	\$17,458
Energy	50 Year	5	\$29,260
Energy	100 Year	5	\$57,523
Energy	300 Year	5	\$283,161
Energy	700 Year	5	\$283,161
Government Facilities	25 Year	10	\$23,250
Government Facilities	50 Year	10	\$55,682
Government Facilities	100 Year	10	\$121,636
Government Facilities	300 Year	10	\$490,353
Government Facilities	700 Year	10	\$490,353
Healthcare and Public Health	25 Year	1	\$83
Healthcare and Public Health	50 Year	1	\$153
Healthcare and Public Health	100 Year	1	\$291
Healthcare and Public Health	300 Year	1	\$1,191
Healthcare and Public Health	700 Year	1	\$1,191
Transportation Systems	25 Year	13	\$3,848
Transportation Systems	50 Year	13	\$7,926

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	100 Year	13	\$15,376
Transportation Systems	300 Year	13	\$48,948
Transportation Systems	700 Year	13	\$48,948
Water	25 Year	2	\$3,163
Water	50 Year	2	\$4,648
Water	100 Year	2	\$7,653
Water	300 Year	2	\$27,515
Water	700 Year	2	\$27,515
All Categories	25 Year	442	\$242,965
All Categories	50 Year	442	\$507,035
All Categories	100 Year	442	\$1,049,290
All Categories	300 Year	442	\$3,927,752
All Categories	700 Year	442	\$3,927,752

Source: GIS Analysis

The following table provides counts and estimated damages for CIKR buildings across all jurisdictions, by sector, in the plan. Because there is a large number of sectors and events, the table is sorted by sector and then by event.

Table 4.365: Critical Facilities Exposed to the Thunderstorm Winds (by Sector)

Sector	Event	Number of Buildings At Risk	Estimated Damages
Banking and Finance	25 Year	5,542	\$7,025,461
Banking and Finance	50 Year	5,542	\$13,827,335
Banking and Finance	100 Year	5,542	\$24,887,048
Banking and Finance	300 Year	5,542	\$64,005,278
Banking and Finance	700 Year	5,542	\$101,283,394
Chemical	25 Year	64	\$533,947
Chemical	50 Year	64	\$1,053,034

Sector	Event	Number of Buildings At Risk	Estimated Damages
Chemical	100 Year	64	\$1,980,725
Chemical	300 Year	64	\$6,416,265
Chemical	700 Year	64	\$10,770,715
Commercial Facilities	25 Year	197,147	\$180,589,654
Commercial Facilities	50 Year	197,147	\$360,432,560
Commercial Facilities	100 Year	197,148	\$639,501,145
Commercial Facilities	300 Year	197,148	\$1,666,371,622
Commercial Facilities	700 Year	197,148	\$2,544,763,702
Communications	25 Year	227	\$713,781
Communications	50 Year	227	\$1,429,585
Communications	100 Year	227	\$2,346,804
Communications	300 Year	227	\$6,123,880
Communications	700 Year	227	\$9,415,550
Critical Manufacturing	25 Year	61,924	\$79,144,386
Critical Manufacturing	50 Year	61,924	\$147,072,575
Critical Manufacturing	100 Year	61,924	\$256,358,132
Critical Manufacturing	300 Year	61,924	\$639,306,260
Critical Manufacturing	700 Year	61,924	\$980,681,516
Defense Industrial Base	25 Year	77	\$1,223,311
Defense Industrial Base	50 Year	77	\$3,225,488
Defense Industrial Base	100 Year	77	\$5,178,909
Defense Industrial Base	300 Year	77	\$13,924,255
Defense Industrial Base	700 Year	77	\$19,487,130
Emergency Services	25 Year	2,495	\$4,126,321
Emergency Services	50 Year	2,495	\$8,363,895

Sector	Event	Number of Buildings At Risk	Estimated Damages
Emergency Services	100 Year	2,495	\$15,297,119
Emergency Services	300 Year	2,495	\$40,914,037
Emergency Services	700 Year	2,495	\$63,375,965
Energy	25 Year	1,631	\$8,345,519
Energy	50 Year	1,631	\$15,841,363
Energy	100 Year	1,631	\$30,179,937
Energy	300 Year	1,631	\$124,077,919
Energy	700 Year	1,631	\$252,069,130
Food and Agriculture	25 Year	152,092	\$6,396,985
Food and Agriculture	50 Year	152,092	\$14,322,542
Food and Agriculture	100 Year	152,092	\$28,823,559
Food and Agriculture	300 Year	152,092	\$89,309,305
Food and Agriculture	700 Year	152,092	\$156,954,462
Government Facilities	25 Year	38,877	\$73,474,558
Government Facilities	50 Year	38,877	\$142,585,507
Government Facilities	100 Year	38,877	\$257,254,481
Government Facilities	300 Year	38,877	\$640,312,151
Government Facilities	700 Year	38,877	\$993,816,094
Healthcare and Public Health	25 Year	13,613	\$20,307,127
Healthcare and Public Health	50 Year	13,613	\$40,749,517
Healthcare and Public Health	100 Year	13,613	\$71,186,133
Healthcare and Public Health	300 Year	13,613	\$196,721,976
Healthcare and Public Health	700 Year	13,613	\$316,667,458
Information Technology	25 Year	3	\$8,734
Information Technology	50 Year	3	\$18,467

Sector	Event	Number of Buildings At Risk	Estimated Damages
Information Technology	100 Year	3	\$34,171
Information Technology	300 Year	3	\$57,578
Information Technology	700 Year	3	\$119,296
National Monuments and Icons	25 Year	2	\$860
National Monuments and Icons	50 Year	2	\$1,762
National Monuments and Icons	100 Year	2	\$2,073
National Monuments and Icons	300 Year	2	\$8,829
National Monuments and Icons	700 Year	2	\$22,664
Nuclear Reactors, Materials and Waste	25 Year	64	\$528,548
Nuclear Reactors, Materials and Waste	50 Year	64	\$828,846
Nuclear Reactors, Materials and Waste	100 Year	64	\$1,213,204
Nuclear Reactors, Materials and Waste	300 Year	64	\$2,187,766
Nuclear Reactors, Materials and Waste	700 Year	64	\$3,326,472
Other	25 Year	12	\$20,871
Other	50 Year	12	\$39,049
Other	100 Year	12	\$73,224
Other	300 Year	12	\$193,921
Other	700 Year	12	\$240,696
Postal and Shipping	25 Year	246	\$61,833
Postal and Shipping	50 Year	246	\$127,087
Postal and Shipping	100 Year	246	\$242,758
Postal and Shipping	300 Year	246	\$793,380
Postal and Shipping	700 Year	246	\$1,434,221
Transportation Systems	25 Year	36,850	\$43,302,139

Sector	Event	Number of Buildings At Risk	Estimated Damages
Transportation Systems	50 Year	36,850	\$86,896,314
Transportation Systems	100 Year	36,850	\$158,396,684
Transportation Systems	300 Year	36,850	\$412,314,380
Transportation Systems	700 Year	36,850	\$626,551,375
Water	25 Year	1,272	\$6,095,799
Water	50 Year	1,272	\$11,195,368
Water	100 Year	1,272	\$19,486,134
Water	300 Year	1,272	\$74,148,388
Water	700 Year	1,272	\$167,030,804
All Categories	25 Year	512,138	\$431,899,834
All Categories	50 Year	512,138	\$848,010,294
All Categories	100 Year	512,139	\$1,512,442,240
All Categories	300 Year	512,139	\$3,977,187,190
All Categories	700 Year	512,139	\$6,248,010,644

Source: GIS Analysis

The following tables provide counts and estimated damages for High Potential Loss Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

Table 4.366: High Potential Loss Properties Exposed to the Thunderstorm Winds - Alexander County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	172	\$594,913
Commercial	50 Year	172	\$1,312,034
Commercial	100 Year	172	\$2,612,234
Commercial	300 Year	172	\$7,648,304
Commercial	700 Year	172	\$7,648,304

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	25 Year	23	\$116,926
Government	50 Year	23	\$260,762
Government	100 Year	23	\$537,993
Government	300 Year	23	\$1,663,154
Government	700 Year	23	\$1,663,154
Industrial	25 Year	62	\$188,407
Industrial	50 Year	62	\$413,160
Industrial	100 Year	62	\$841,148
Industrial	300 Year	62	\$2,642,354
Industrial	700 Year	62	\$2,642,354
Religious	25 Year	28	\$225,144
Religious	50 Year	28	\$508,642
Religious	100 Year	28	\$1,049,110
Religious	300 Year	28	\$3,082,678
Religious	700 Year	28	\$3,082,678
Residential	25 Year	17	\$23,146
Residential	50 Year	17	\$46,612
Residential	100 Year	17	\$86,444
Residential	300 Year	17	\$267,833
Residential	700 Year	17	\$267,833
Utilities	25 Year	13	\$16,651
Utilities	50 Year	13	\$25,112
Utilities	100 Year	13	\$44,033
Utilities	300 Year	13	\$171,600
Utilities	700 Year	13	\$171,600

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	315	\$1,165,187
All Categories	50 Year	315	\$2,566,322
All Categories	100 Year	315	\$5,170,962
All Categories	300 Year	315	\$15,475,923
All Categories	700 Year	315	\$15,475,923

Source: GIS Analysis

Table 4.367: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Taylorsville

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	53	\$100,643
Commercial	50 Year	53	\$220,098
Commercial	100 Year	53	\$441,619
Commercial	300 Year	53	\$1,387,528
Commercial	700 Year	53	\$1,387,528
Government	25 Year	5	\$5,989
Government	50 Year	5	\$9,580
Government	100 Year	5	\$17,429
Government	300 Year	5	\$74,805
Government	700 Year	5	\$74,805
Industrial	25 Year	17	\$67,557
Industrial	50 Year	17	\$152,204
Industrial	100 Year	17	\$314,180
Industrial	300 Year	17	\$1,082,718
Industrial	700 Year	17	\$1,082,718
Religious	25 Year	7	\$19,032
Religious	50 Year	7	\$40,844

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	100 Year	7	\$79,088
Religious	300 Year	7	\$222,004
Religious	700 Year	7	\$222,004
Residential	25 Year	8	\$4,119
Residential	50 Year	8	\$9,947
Residential	100 Year	8	\$21,837
Residential	300 Year	8	\$83,110
Residential	700 Year	8	\$83,110
Utilities	25 Year	2	\$7,862
Utilities	50 Year	2	\$12,156
Utilities	100 Year	2	\$20,516
Utilities	300 Year	2	\$86,804
Utilities	700 Year	2	\$86,804
All Categories	25 Year	92	\$205,202
All Categories	50 Year	92	\$444,829
All Categories	100 Year	92	\$894,669
All Categories	300 Year	92	\$2,936,969
All Categories	700 Year	92	\$2,936,969

Source: GIS Analysis

Table 4.368: High Potential Loss Properties Exposed to the Thunderstorm Winds - Burke County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	54	\$143,153
Commercial	50 Year	54	\$313,542
Commercial	100 Year	54	\$628,965

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	300 Year	54	\$1,863,201
Commercial	700 Year	54	\$1,863,201
Government	25 Year	11	\$65,339
Government	50 Year	11	\$145,918
Government	100 Year	11	\$300,679
Government	300 Year	11	\$988,348
Government	700 Year	11	\$988,348
Industrial	25 Year	14	\$51,809
Industrial	50 Year	14	\$112,651
Industrial	100 Year	14	\$221,165
Industrial	300 Year	14	\$606,456
Industrial	700 Year	14	\$606,456
Religious	25 Year	5	\$8,912
Religious	50 Year	5	\$21,185
Religious	100 Year	5	\$45,637
Religious	300 Year	5	\$162,193
Religious	700 Year	5	\$162,193
Residential	25 Year	15	\$21,960
Residential	50 Year	15	\$38,275
Residential	100 Year	15	\$64,955
Residential	300 Year	15	\$206,054
Residential	700 Year	15	\$206,054
Utilities	25 Year	7	\$22,653
Utilities	50 Year	7	\$33,290
Utilities	100 Year	7	\$54,803

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	300 Year	7	\$196,968
Utilities	700 Year	7	\$196,968
All Categories	25 Year	106	\$313,826
All Categories	50 Year	106	\$664,861
All Categories	100 Year	106	\$1,316,204
All Categories	300 Year	106	\$4,023,220
All Categories	700 Year	106	\$4,023,220

Source: GIS Analysis

Table 4.369: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Morgantown

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	72	\$302,404
Commercial	50 Year	72	\$634,523
Commercial	100 Year	72	\$1,255,514
Commercial	300 Year	72	\$3,797,908
Commercial	700 Year	72	\$3,797,908
Government	25 Year	49	\$186,706
Government	50 Year	49	\$415,659
Government	100 Year	49	\$850,345
Government	300 Year	49	\$2,594,903
Government	700 Year	49	\$2,594,903
Industrial	25 Year	25	\$110,348
Industrial	50 Year	25	\$233,401
Industrial	100 Year	25	\$475,832
Industrial	300 Year	25	\$1,548,182
Industrial	700 Year	25	\$1,548,182

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	25 Year	3	\$4,917
Religious	50 Year	3	\$11,082
Religious	100 Year	3	\$23,008
Religious	300 Year	3	\$69,782
Religious	700 Year	3	\$69,782
Residential	25 Year	42	\$29,373
Residential	50 Year	42	\$60,577
Residential	100 Year	42	\$123,798
Residential	300 Year	42	\$477,111
Residential	700 Year	42	\$477,111
Utilities	25 Year	18	\$25,561
Utilities	50 Year	18	\$38,006
Utilities	100 Year	18	\$62,622
Utilities	300 Year	18	\$234,734
Utilities	700 Year	18	\$234,734
All Categories	25 Year	209	\$659,309
All Categories	50 Year	209	\$1,393,248
All Categories	100 Year	209	\$2,791,119
All Categories	300 Year	209	\$8,722,620
All Categories	700 Year	209	\$8,722,620

Source: GIS Analysis

Table 4.370: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Connelly Springs

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	25 Year	1	\$5,964

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	50 Year	1	\$13,839
Religious	100 Year	1	\$28,762
Religious	300 Year	1	\$96,392
Religious	700 Year	1	\$96,392
Residential	25 Year	2	\$886
Residential	50 Year	2	\$2,164
Residential	100 Year	2	\$4,605
Residential	300 Year	2	\$14,616
Residential	700 Year	2	\$14,616
All Categories	25 Year	3	\$6,850
All Categories	50 Year	3	\$16,003
All Categories	100 Year	3	\$33,367
All Categories	300 Year	3	\$111,008
All Categories	700 Year	3	\$111,008

Source: GIS Analysis

Table 4.371: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Drexel

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	6	\$7,988
Commercial	50 Year	6	\$14,705
Commercial	100 Year	6	\$28,281
Commercial	300 Year	6	\$113,400
Commercial	700 Year	6	\$113,400
Government	25 Year	1	\$1,596
Government	50 Year	1	\$2,370
Government	100 Year	1	\$3,881

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	300 Year	1	\$12,881
Government	700 Year	1	\$12,881
Religious	25 Year	1	\$381
Religious	50 Year	1	\$688
Religious	100 Year	1	\$1,351
Religious	300 Year	1	\$5,522
Religious	700 Year	1	\$5,522
Residential	25 Year	2	\$452
Residential	50 Year	2	\$1,390
Residential	100 Year	2	\$3,115
Residential	300 Year	2	\$8,972
Residential	700 Year	2	\$8,972
Utilities	25 Year	1	\$8,003
Utilities	50 Year	1	\$11,446
Utilities	100 Year	1	\$18,804
Utilities	300 Year	1	\$60,722
Utilities	700 Year	1	\$60,722
All Categories	25 Year	11	\$18,420
All Categories	50 Year	11	\$30,599
All Categories	100 Year	11	\$55,432
All Categories	300 Year	11	\$201,497
All Categories	700 Year	11	\$201,497

Source: GIS Analysis

Table 4.372: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Glen Alpine

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$560
Commercial	50 Year	1	\$1,335
Commercial	100 Year	1	\$2,802
Commercial	300 Year	1	\$8,878
Commercial	700 Year	1	\$8,878
Government	25 Year	1	\$4,356
Government	50 Year	1	\$10,239
Government	100 Year	1	\$21,285
Government	300 Year	1	\$71,616
Government	700 Year	1	\$71,616
Residential	25 Year	1	\$1,190
Residential	50 Year	1	\$2,064
Residential	100 Year	1	\$3,415
Residential	300 Year	1	\$7,755
Residential	700 Year	1	\$7,755
All Categories	25 Year	3	\$6,106
All Categories	50 Year	3	\$13,638
All Categories	100 Year	3	\$27,502
All Categories	300 Year	3	\$88,249
All Categories	700 Year	3	\$88,249

Source: GIS Analysis

Table 4.373: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Hildebran

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	3	\$4,425

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	50 Year	3	\$9,809
Commercial	100 Year	3	\$21,404
Commercial	300 Year	3	\$85,765
Commercial	700 Year	3	\$85,765
Government	25 Year	2	\$2,053
Government	50 Year	2	\$3,003
Government	100 Year	2	\$4,872
Government	300 Year	2	\$16,582
Government	700 Year	2	\$16,582
Industrial	25 Year	6	\$7,868
Industrial	50 Year	6	\$12,420
Industrial	100 Year	6	\$21,328
Industrial	300 Year	6	\$80,538
Industrial	700 Year	6	\$80,538
Utilities	25 Year	2	\$2,960
Utilities	50 Year	2	\$4,432
Utilities	100 Year	2	\$7,306
Utilities	300 Year	2	\$28,051
Utilities	700 Year	2	\$28,051
All Categories	25 Year	13	\$17,306
All Categories	50 Year	13	\$29,664
All Categories	100 Year	13	\$54,910
All Categories	300 Year	13	\$210,936
All Categories	700 Year	13	\$210,936

Source: GIS Analysis

Table 4.374: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Rutherford College

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	2	\$8,731
Commercial	50 Year	2	\$19,622
Commercial	100 Year	2	\$40,725
Commercial	300 Year	2	\$118,082
Commercial	700 Year	2	\$118,082
Government	25 Year	1	\$1,246
Government	50 Year	1	\$2,376
Government	100 Year	1	\$4,578
Government	300 Year	1	\$19,480
Government	700 Year	1	\$19,480
Industrial	25 Year	2	\$3,279
Industrial	50 Year	2	\$5,447
Industrial	100 Year	2	\$10,086
Industrial	300 Year	2	\$39,470
Industrial	700 Year	2	\$39,470
Residential	25 Year	3	\$4,531
Residential	50 Year	3	\$11,863
Residential	100 Year	3	\$27,628
Residential	300 Year	3	\$119,896
Residential	700 Year	3	\$119,896
All Categories	25 Year	8	\$17,787
All Categories	50 Year	8	\$39,308
All Categories	100 Year	8	\$83,017
All Categories	300 Year	8	\$296,928

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	700 Year	8	\$296,928

Source: GIS Analysis

Table 4.375: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Valdese

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	9	\$6,801
Commercial	50 Year	9	\$11,510
Commercial	100 Year	9	\$20,936
Commercial	300 Year	9	\$76,803
Commercial	700 Year	9	\$76,803
Government	25 Year	5	\$7,858
Government	50 Year	5	\$13,301
Government	100 Year	5	\$24,057
Government	300 Year	5	\$94,043
Government	700 Year	5	\$94,043
Industrial	25 Year	4	\$15,822
Industrial	50 Year	4	\$26,534
Industrial	100 Year	4	\$48,622
Industrial	300 Year	4	\$184,683
Industrial	700 Year	4	\$184,683
Residential	25 Year	3	\$925
Residential	50 Year	3	\$2,725
Residential	100 Year	3	\$6,819
Residential	300 Year	3	\$31,127
Residential	700 Year	3	\$31,127
Utilities	25 Year	9	\$17,422

Category	Event	Number of Buildings At Risk	Estimated Damages
Utilities	50 Year	9	\$25,961
Utilities	100 Year	9	\$42,783
Utilities	300 Year	9	\$161,616
Utilities	700 Year	9	\$161,616
All Categories	25 Year	30	\$48,828
All Categories	50 Year	30	\$80,031
All Categories	100 Year	30	\$143,217
All Categories	300 Year	30	\$548,272
All Categories	700 Year	30	\$548,272

Source: GIS Analysis

Table 4.376: High Potential Loss Properties Exposed to the Thunderstorm Winds - Caldwell County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	34	\$288,317
Commercial	50 Year	34	\$620,218
Commercial	100 Year	34	\$1,179,073
Commercial	300 Year	34	\$3,104,181
Commercial	700 Year	34	\$3,104,181
Government	25 Year	12	\$169,420
Government	50 Year	12	\$382,696
Government	100 Year	12	\$776,355
Government	300 Year	12	\$2,241,073
Government	700 Year	12	\$2,241,073
Industrial	25 Year	9	\$26,323
Industrial	50 Year	9	\$58,674

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	100 Year	9	\$120,210
Industrial	300 Year	9	\$367,513
Industrial	700 Year	9	\$367,513
Religious	25 Year	3	\$5,761
Religious	50 Year	3	\$11,826
Religious	100 Year	3	\$23,788
Religious	300 Year	3	\$78,422
Religious	700 Year	3	\$78,422
Residential	25 Year	8	\$3,670
Residential	50 Year	8	\$9,121
Residential	100 Year	8	\$20,273
Residential	300 Year	8	\$79,691
Residential	700 Year	8	\$79,691
Utilities	25 Year	1	\$1,371
Utilities	50 Year	1	\$1,986
Utilities	100 Year	1	\$3,266
Utilities	300 Year	1	\$11,113
Utilities	700 Year	1	\$11,113
All Categories	25 Year	67	\$494,862
All Categories	50 Year	67	\$1,084,521
All Categories	100 Year	67	\$2,122,965
All Categories	300 Year	67	\$5,881,993
All Categories	700 Year	67	\$5,881,993

Source: GIS Analysis

Table 4.377: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Lenoir

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	52	\$152,225
Commercial	50 Year	52	\$297,992
Commercial	100 Year	52	\$601,040
Commercial	300 Year	52	\$2,218,356
Commercial	700 Year	52	\$2,218,356
Government	25 Year	14	\$73,332
Government	50 Year	14	\$163,252
Government	100 Year	14	\$341,317
Government	300 Year	14	\$1,147,756
Government	700 Year	14	\$1,147,756
Industrial	25 Year	19	\$286,121
Industrial	50 Year	19	\$612,623
Industrial	100 Year	19	\$1,149,485
Industrial	300 Year	19	\$3,122,136
Industrial	700 Year	19	\$3,122,136
Religious	25 Year	8	\$10,024
Religious	50 Year	8	\$22,831
Religious	100 Year	8	\$47,689
Religious	300 Year	8	\$169,414
Religious	700 Year	8	\$169,414
Residential	25 Year	29	\$207,223
Residential	50 Year	29	\$409,273
Residential	100 Year	29	\$772,961
Residential	300 Year	29	\$2,253,709

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	700 Year	29	\$2,253,709
Utilities	25 Year	14	\$13,481
Utilities	50 Year	14	\$19,643
Utilities	100 Year	14	\$32,384
Utilities	300 Year	14	\$112,704
Utilities	700 Year	14	\$112,704
All Categories	25 Year	136	\$742,406
All Categories	50 Year	136	\$1,525,614
All Categories	100 Year	136	\$2,944,876
All Categories	300 Year	136	\$9,024,075
All Categories	700 Year	136	\$9,024,075

Source: GIS Analysis

Table 4.378: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Cajah's Mountain

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	3	\$4,898
Commercial	50 Year	3	\$10,539
Commercial	100 Year	3	\$22,121
Commercial	300 Year	3	\$75,636
Commercial	700 Year	3	\$75,636
Residential	25 Year	1	\$815
Residential	50 Year	1	\$2,538
Residential	100 Year	1	\$6,846
Residential	300 Year	1	\$34,482
Residential	700 Year	1	\$34,482

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	4	\$5,713
All Categories	50 Year	4	\$13,077
All Categories	100 Year	4	\$28,967
All Categories	300 Year	4	\$110,118
All Categories	700 Year	4	\$110,118

Source: GIS Analysis

Table 4.379: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Gamewell

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$436
Commercial	50 Year	1	\$796
Commercial	100 Year	1	\$1,508
Commercial	300 Year	1	\$5,799
Commercial	700 Year	1	\$5,799
Government	25 Year	2	\$68,298
Government	50 Year	2	\$155,303
Government	100 Year	2	\$317,265
Government	300 Year	2	\$975,118
Government	700 Year	2	\$975,118
Industrial	25 Year	3	\$13,953
Industrial	50 Year	3	\$31,587
Industrial	100 Year	3	\$65,937
Industrial	300 Year	3	\$209,143
Industrial	700 Year	3	\$209,143
All Categories	25 Year	6	\$82,687
All Categories	50 Year	6	\$187,686

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	100 Year	6	\$384,710
All Categories	300 Year	6	\$1,190,060
All Categories	700 Year	6	\$1,190,060

Source: GIS Analysis

Table 4.380: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Granite Falls

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	12	\$39,202
Commercial	50 Year	12	\$86,443
Commercial	100 Year	12	\$186,662
Commercial	300 Year	12	\$789,385
Commercial	700 Year	12	\$789,385
Government	25 Year	5	\$14,875
Government	50 Year	5	\$29,363
Government	100 Year	5	\$58,836
Government	300 Year	5	\$235,622
Government	700 Year	5	\$235,622
Industrial	25 Year	2	\$5,716
Industrial	50 Year	2	\$13,413
Industrial	100 Year	2	\$29,050
Industrial	300 Year	2	\$107,999
Industrial	700 Year	2	\$107,999
Religious	25 Year	2	\$662
Religious	50 Year	2	\$1,446
Religious	100 Year	2	\$3,072

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	300 Year	2	\$11,213
Religious	700 Year	2	\$11,213
Residential	25 Year	7	\$2,988
Residential	50 Year	7	\$8,064
Residential	100 Year	7	\$19,092
Residential	300 Year	7	\$81,711
Residential	700 Year	7	\$81,711
Utilities	25 Year	9	\$28,930
Utilities	50 Year	9	\$45,620
Utilities	100 Year	9	\$85,139
Utilities	300 Year	9	\$433,728
Utilities	700 Year	9	\$433,728
All Categories	25 Year	37	\$92,373
All Categories	50 Year	37	\$184,349
All Categories	100 Year	37	\$381,851
All Categories	300 Year	37	\$1,659,658
All Categories	700 Year	37	\$1,659,658

Source: GIS Analysis

Table 4.381: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Hudson

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	8	\$6,594
Commercial	50 Year	8	\$13,444
Commercial	100 Year	8	\$28,442
Commercial	300 Year	8	\$120,887
Commercial	700 Year	8	\$120,887

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	25 Year	9	\$11,839
Government	50 Year	9	\$26,111
Government	100 Year	9	\$55,786
Government	300 Year	9	\$208,214
Government	700 Year	9	\$208,214
Industrial	25 Year	7	\$10,833
Industrial	50 Year	7	\$19,781
Industrial	100 Year	7	\$38,170
Industrial	300 Year	7	\$160,304
Industrial	700 Year	7	\$160,304
Religious	25 Year	1	\$1,335
Religious	50 Year	1	\$2,515
Religious	100 Year	1	\$4,833
Religious	300 Year	1	\$20,315
Religious	700 Year	1	\$20,315
Residential	25 Year	5	\$5,847
Residential	50 Year	5	\$11,557
Residential	100 Year	5	\$21,016
Residential	300 Year	5	\$62,356
Residential	700 Year	5	\$62,356
All Categories	25 Year	30	\$36,448
All Categories	50 Year	30	\$73,408
All Categories	100 Year	30	\$148,247
All Categories	300 Year	30	\$572,076
All Categories	700 Year	30	\$572,076

Source: GIS Analysis

Table 4.382: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Rhodhiss

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$4,247
Commercial	50 Year	1	\$9,562
Commercial	100 Year	1	\$19,244
Commercial	300 Year	1	\$56,727
Commercial	700 Year	1	\$56,727
Government	25 Year	1	\$1,696
Government	50 Year	1	\$2,723
Government	100 Year	1	\$4,846
Government	300 Year	1	\$17,884
Government	700 Year	1	\$17,884
Residential	25 Year	1	\$384
Residential	50 Year	1	\$1,025
Residential	100 Year	1	\$2,406
Residential	300 Year	1	\$9,390
Residential	700 Year	1	\$9,390
All Categories	25 Year	3	\$6,327
All Categories	50 Year	3	\$13,310
All Categories	100 Year	3	\$26,496
All Categories	300 Year	3	\$84,001
All Categories	700 Year	3	\$84,001

Source: GIS Analysis

Table 4.383: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Sawmills

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	8	\$29,263

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	50 Year	8	\$63,138
Commercial	100 Year	8	\$121,989
Commercial	300 Year	8	\$332,730
Commercial	700 Year	8	\$332,730
Government	25 Year	2	\$6,412
Government	50 Year	2	\$11,772
Government	100 Year	2	\$21,846
Government	300 Year	2	\$75,419
Government	700 Year	2	\$75,419
Industrial	25 Year	2	\$9,122
Industrial	50 Year	2	\$19,724
Industrial	100 Year	2	\$37,098
Industrial	300 Year	2	\$92,305
Industrial	700 Year	2	\$92,305
Residential	25 Year	1	\$237
Residential	50 Year	1	\$641
Residential	100 Year	1	\$1,523
Residential	300 Year	1	\$6,034
Residential	700 Year	1	\$6,034
All Categories	25 Year	13	\$45,034
All Categories	50 Year	13	\$95,275
All Categories	100 Year	13	\$182,456
All Categories	300 Year	13	\$506,488
All Categories	700 Year	13	\$506,488

Source: GIS Analysis

Table 4.384: High Potential Loss Properties Exposed to the Thunderstorm Winds - Catawba County (Unincorporated Area)

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	41	\$147,851
Commercial	50 Year	41	\$324,488
Commercial	100 Year	41	\$647,043
Commercial	300 Year	41	\$1,860,884
Commercial	700 Year	41	\$1,885,687
Government	25 Year	22	\$407,746
Government	50 Year	22	\$892,048
Government	100 Year	22	\$1,762,607
Government	300 Year	22	\$5,183,296
Government	700 Year	22	\$5,184,864
Industrial	25 Year	8	\$50,391
Industrial	50 Year	8	\$98,728
Industrial	100 Year	8	\$192,123
Industrial	300 Year	8	\$754,650
Industrial	700 Year	8	\$754,650
Religious	25 Year	4	\$3,283
Religious	50 Year	4	\$7,524
Religious	100 Year	4	\$15,764
Religious	300 Year	4	\$52,993
Religious	700 Year	4	\$52,993
Residential	25 Year	20	\$21,683
Residential	50 Year	20	\$44,258
Residential	100 Year	20	\$79,513
Residential	300 Year	20	\$208,100

Category	Event	Number of Buildings At Risk	Estimated Damages
Residential	700 Year	20	\$262,669
Utilities	25 Year	24	\$105,771
Utilities	50 Year	24	\$171,816
Utilities	100 Year	24	\$318,072
Utilities	300 Year	24	\$1,492,416
Utilities	700 Year	24	\$2,887,385
All Categories	25 Year	119	\$736,725
All Categories	50 Year	119	\$1,538,862
All Categories	100 Year	119	\$3,015,122
All Categories	300 Year	119	\$9,552,339
All Categories	700 Year	119	\$11,028,248

Source: GIS Analysis

Table 4.385: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Claremont

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	10	\$27,386
Commercial	50 Year	10	\$53,242
Commercial	100 Year	10	\$104,248
Commercial	300 Year	10	\$315,250
Commercial	700 Year	10	\$315,250
Government	25 Year	2	\$1,873
Government	50 Year	2	\$2,968
Government	100 Year	2	\$5,321
Government	300 Year	2	\$25,060
Government	700 Year	2	\$25,060
Industrial	25 Year	12	\$54,020

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	50 Year	12	\$107,178
Industrial	100 Year	12	\$216,561
Industrial	300 Year	12	\$834,833
Industrial	700 Year	12	\$834,833
All Categories	25 Year	24	\$83,279
All Categories	50 Year	24	\$163,388
All Categories	100 Year	24	\$326,130
All Categories	300 Year	24	\$1,175,143
All Categories	700 Year	24	\$1,175,143

Source: GIS Analysis

Table 4.386: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Conover

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	35	\$76,543
Commercial	50 Year	35	\$163,867
Commercial	100 Year	35	\$335,977
Commercial	300 Year	35	\$1,181,328
Commercial	700 Year	35	\$1,181,328
Government	25 Year	5	\$104,594
Government	50 Year	5	\$238,988
Government	100 Year	5	\$489,630
Government	300 Year	5	\$1,442,675
Government	700 Year	5	\$1,442,675
Industrial	25 Year	23	\$89,435
Industrial	50 Year	23	\$175,954
Industrial	100 Year	23	\$348,819

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	300 Year	23	\$1,240,388
Industrial	700 Year	23	\$1,240,388
Residential	25 Year	6	\$7,072
Residential	50 Year	6	\$16,187
Residential	100 Year	6	\$30,949
Residential	300 Year	6	\$87,328
Residential	700 Year	6	\$87,328
Utilities	25 Year	6	\$8,680
Utilities	50 Year	6	\$13,959
Utilities	100 Year	6	\$25,219
Utilities	300 Year	6	\$116,402
Utilities	700 Year	6	\$116,402
All Categories	25 Year	75	\$286,324
All Categories	50 Year	75	\$608,955
All Categories	100 Year	75	\$1,230,594
All Categories	300 Year	75	\$4,068,121
All Categories	700 Year	75	\$4,068,121

Source: GIS Analysis

Table 4.387: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Hickory

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	207	\$723,468
Commercial	50 Year	207	\$1,597,355
Commercial	100 Year	207	\$3,268,905
Commercial	300 Year	207	\$10,482,350
Commercial	700 Year	207	\$10,482,350

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	25 Year	35	\$204,362
Government	50 Year	35	\$449,805
Government	100 Year	35	\$892,129
Government	300 Year	35	\$2,666,559
Government	700 Year	35	\$2,666,559
Industrial	25 Year	33	\$89,660
Industrial	50 Year	33	\$184,552
Industrial	100 Year	33	\$385,794
Industrial	300 Year	33	\$1,554,286
Industrial	700 Year	33	\$1,554,286
Religious	25 Year	4	\$25,053
Religious	50 Year	4	\$55,751
Religious	100 Year	4	\$118,103
Religious	300 Year	4	\$406,815
Religious	700 Year	4	\$406,815
Residential	25 Year	40	\$62,795
Residential	50 Year	40	\$131,443
Residential	100 Year	40	\$259,138
Residential	300 Year	40	\$854,478
Residential	700 Year	40	\$854,478
Utilities	25 Year	26	\$22,342
Utilities	50 Year	26	\$32,505
Utilities	100 Year	26	\$53,481
Utilities	300 Year	26	\$185,036
Utilities	700 Year	26	\$185,036

Category	Event	Number of Buildings At Risk	Estimated Damages
All Categories	25 Year	345	\$1,127,680
All Categories	50 Year	345	\$2,451,411
All Categories	100 Year	345	\$4,977,550
All Categories	300 Year	345	\$16,149,524
All Categories	700 Year	345	\$16,149,524

Source: GIS Analysis

Table 4.388: High Potential Loss Properties Exposed to the Thunderstorm Winds - City of Newton

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	26	\$169,922
Commercial	50 Year	26	\$418,057
Commercial	100 Year	26	\$1,077,415
Commercial	300 Year	26	\$5,590,689
Commercial	700 Year	26	\$5,590,689
Government	25 Year	9	\$17,092
Government	50 Year	9	\$31,356
Government	100 Year	9	\$62,142
Government	300 Year	9	\$279,168
Government	700 Year	9	\$279,168
Industrial	25 Year	17	\$58,917
Industrial	50 Year	17	\$121,998
Industrial	100 Year	17	\$254,122
Industrial	300 Year	17	\$1,016,319
Industrial	700 Year	17	\$1,016,319
Religious	25 Year	1	\$425
Religious	50 Year	1	\$809

Category	Event	Number of Buildings At Risk	Estimated Damages
Religious	100 Year	1	\$1,638
Religious	300 Year	1	\$6,951
Religious	700 Year	1	\$6,951
Residential	25 Year	3	\$3,551
Residential	50 Year	3	\$6,746
Residential	100 Year	3	\$11,936
Residential	300 Year	3	\$34,212
Residential	700 Year	3	\$34,212
Utilities	25 Year	10	\$11,155
Utilities	50 Year	10	\$16,284
Utilities	100 Year	10	\$26,793
Utilities	300 Year	10	\$93,907
Utilities	700 Year	10	\$93,907
All Categories	25 Year	66	\$261,062
All Categories	50 Year	66	\$595,250
All Categories	100 Year	66	\$1,434,046
All Categories	300 Year	66	\$7,021,246
All Categories	700 Year	66	\$7,021,246

Source: GIS Analysis

Table 4.389: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Catawba

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	1	\$4,714
Commercial	50 Year	1	\$8,920
Commercial	100 Year	1	\$17,711
Commercial	300 Year	1	\$77,193

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	700 Year	1	\$77,193
Government	25 Year	2	\$47,766
Government	50 Year	2	\$108,892
Government	100 Year	2	\$229,702
Government	300 Year	2	\$683,620
Government	700 Year	2	\$683,620
All Categories	25 Year	3	\$52,480
All Categories	50 Year	3	\$117,812
All Categories	100 Year	3	\$247,413
All Categories	300 Year	3	\$760,813
All Categories	700 Year	3	\$760,813

Source: GIS Analysis

Table 4.390: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Long View

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	5	\$42,564
Commercial	50 Year	5	\$87,218
Commercial	100 Year	5	\$160,849
Commercial	300 Year	5	\$420,322
Commercial	700 Year	5	\$420,322
Government	25 Year	2	\$16,124
Government	50 Year	2	\$27,833
Government	100 Year	2	\$45,811
Government	300 Year	2	\$103,796
Government	700 Year	2	\$103,796
Industrial	25 Year	2	\$2,148

Category	Event	Number of Buildings At Risk	Estimated Damages
Industrial	50 Year	2	\$3,308
Industrial	100 Year	2	\$5,717
Industrial	300 Year	2	\$23,693
Industrial	700 Year	2	\$23,693
Residential	25 Year	1	\$458
Residential	50 Year	1	\$1,185
Residential	100 Year	1	\$2,726
Residential	300 Year	1	\$11,065
Residential	700 Year	1	\$11,065
All Categories	25 Year	10	\$61,294
All Categories	50 Year	10	\$119,544
All Categories	100 Year	10	\$215,103
All Categories	300 Year	10	\$558,876
All Categories	700 Year	10	\$558,876

Source: GIS Analysis

Table 4.391: High Potential Loss Properties Exposed to the Thunderstorm Winds - Town of Maiden

Category	Event	Number of Buildings At Risk	Estimated Damages
Commercial	25 Year	7	\$6,247
Commercial	50 Year	7	\$12,451
Commercial	100 Year	7	\$34,979
Commercial	300 Year	7	\$249,444
Commercial	700 Year	7	\$249,444
Government	25 Year	4	\$22,436
Government	50 Year	4	\$54,322
Government	100 Year	4	\$118,916

Category	Event	Number of Buildings At Risk	Estimated Damages
Government	300 Year	4	\$473,650
Government	700 Year	4	\$473,650
Industrial	25 Year	7	\$45,354
Industrial	50 Year	7	\$91,000
Industrial	100 Year	7	\$185,590
Industrial	300 Year	7	\$719,840
Industrial	700 Year	7	\$719,840
Utilities	25 Year	7	\$20,621
Utilities	50 Year	7	\$33,908
Utilities	100 Year	7	\$65,176
Utilities	300 Year	7	\$310,676
Utilities	700 Year	7	\$310,676
All Categories	25 Year	25	\$94,658
All Categories	50 Year	25	\$191,681
All Categories	100 Year	25	\$404,661
All Categories	300 Year	25	\$1,753,610
All Categories	700 Year	25	\$1,753,610

Source: GIS Analysis

The following tables provide counts and estimated damages for Historic Properties by jurisdiction in the plan. Because there is a large number of categories and events, the table is sorted by category and then by event. Totals across all categories are shown at the bottom of each table.

No Historic Properties were identified in the planning area.

4.5.14 Erosion

Erosion Hazard Analysis

Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth's formation and continues at a very slow and uniform rate each year. There are two types of soil

erosion: wind erosion and water erosion. Wind erosion can cause significant soil loss. Winds blowing across sparsely vegetated or disturbed land can pick up soil particles and carry them through the air, thus displacing them. Water erosion can occur over land or in streams and channels. Water erosion that takes place over land may result from raindrops, shallow sheets of water flowing off the land, or shallow surface flow, which becomes concentrated in low spots. Stream channel erosion may occur as the volume and velocity of water flow increases enough to cause movement of the streambed and bank soils. An area's potential for erosion is determined by four factors: soil characteristics, vegetative cover, climate or rainfall, and topography. Soils composed of a large percentage of silt and fine sand are most susceptible to erosion. As the clay and organic content of these soils increases, the potential for erosion decreases. Well-drained and well-graded gravels and gravel-sand mixtures are the least likely to erode. Coarse gravel soils are highly permeable and have a good capacity for absorption, which can prevent or delay the amount of surface runoff. Vegetative cover can be very helpful in controlling erosion by shielding the soil surface from falling rain, absorbing water from the soil, and slowing the velocity of runoff. Runoff is also affected by the topography of the area including size, shape, and slope. The greater the slope length and gradient, the more potential an area has for erosion. Climate can affect the amount of runoff, especially the frequency, intensity, and duration of rainfall and storms. When rainstorms are frequent, intense, or of long duration, erosion risks are high. Seasonal changes in temperature and rainfall amounts define the period of highest erosion risk of the year. During the past 20 years, the importance of erosion control has gained the increased attention of the public. Implementation of erosion control measures consistent with sound agricultural and construction operations is needed to minimize the adverse effects associated with harmful chemicals run-off due to wind or water events. The increase in government regulatory programs and public concern has resulted in a wide range of erosion control products, techniques, and analytical methodologies in the United States. The preferred method of erosion control in recent years has been the restoration of vegetation.

Location within the Planning Area

No data is currently available with which to map identified areas of erosion concern.

Extent (Magnitude and Severity)

Definition:

The extent of erosion can be defined by the measurable rate of erosion that occurs over time for a specific land area

Extent Event:

No data is currently available with which to determine magnitudes or severity of erosion hazard areas within the Unifour Region.

Historical Occurrences

No historical occurrences were identified in the planning area.

Probability of Future Occurrences

The probability of future Erosion is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low

Jurisdiction	Probability of Future Occurrence
Town of Cahah's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Erosion Hazard Vulnerability

Based upon a lack of historical events, relevant GIS data, and any immediate threat to life or property, a detailed vulnerability assessment has not been conducted for this hazard.

4.5.15 Sinkholes

Sinkholes Hazard Analysis

There are three general types of sinkholes known to occur in North Carolina: geologic, debris-related, and infrastructure failure-related. Typical geologic sinkholes are directly related to the dissolving of limestone

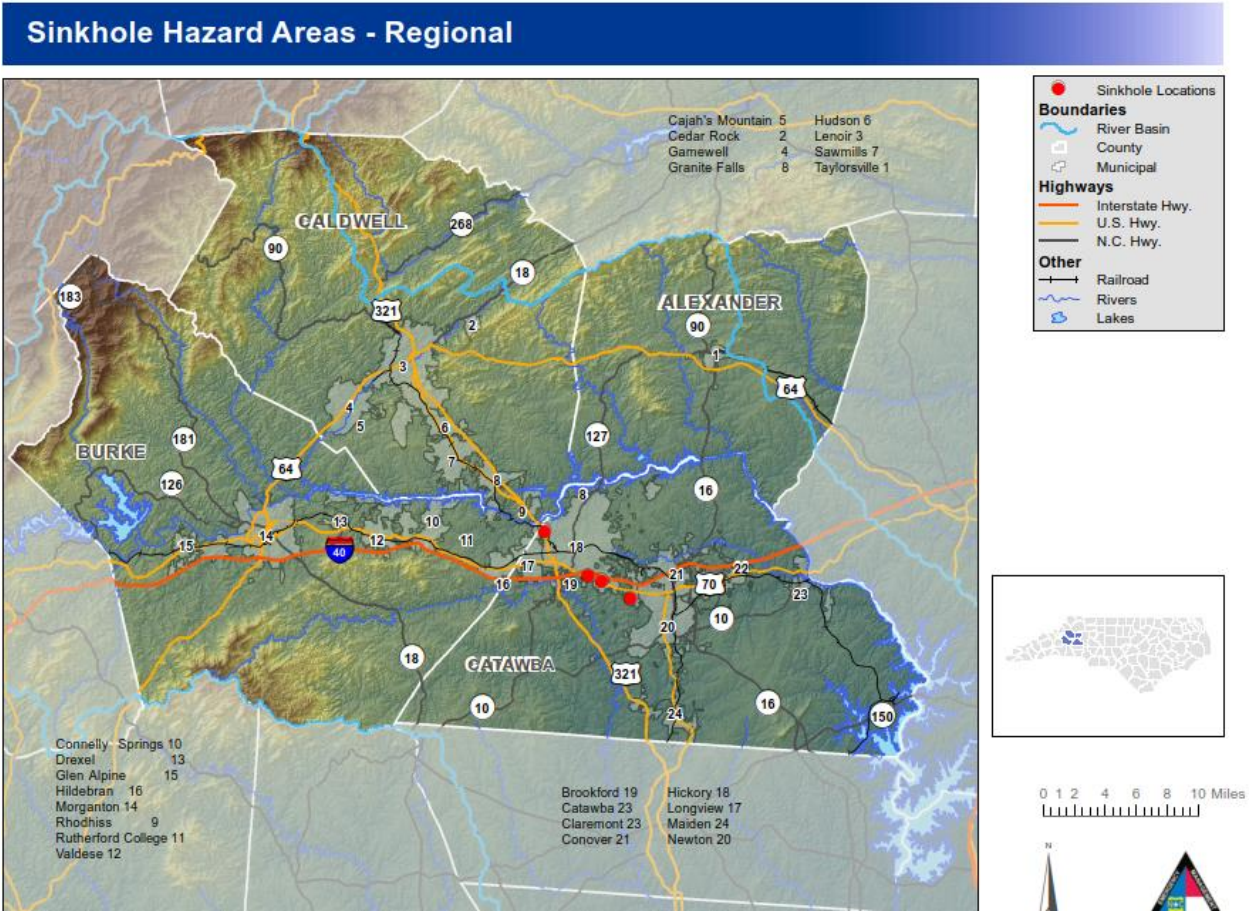
or other carbonate rocks by rain water which has become slightly acidic from contact with either tannic acid from leaf litter or acids emitted from the burning of fossil fuels. This is the process of how caverns are formed. The surface water melts the carbonate as the water percolates downward. When a cavern is created, the thickness of the remaining carbonate continues to diminish until the weight of the cover rock exceeds the strength of the cover rock. The hole which is created can be circular or elongated. The second type of sinkhole is one that is debris-related and is caused by the decomposition of building materials such as buried wood. Many times a circular sinkhole develops along a newly paved or widened road, where a tree was cut down but the root ball was never removed. When the root ball rots, the pavement collapses. The final type of sinkhole is one associated with the failure of buried infrastructure, such as pipes, culverts, or the settling of soil used to cover buried power lines, cables, water lines, or sewer lines. In most cases, sinkholes associated with settling are from recently buried pipes or utility lines, where the cover material was not completely compacted and settled naturally over time. Significant infrastructure failure-related sinkholes are also caused by water (stormwater, potable water, or sewer) which carries soil and sediment from a crack, hole, or other point of failure in a pipe. The failure of a stormwater pipe can be dramatic because, during storm events when there are high water flows, there can be very rapid erosion of the soil and fill material used to cover buried pipes. In addition to the sinkhole causes explained above, there is a fourth potential cause of ground collapse in North Carolina and that is mine collapse. While not specifically considered a sinkhole occurrence, the effects are similar.

Location within the Planning Area

The geologic formations under Alexander, Burke, Caldwell, and Catawba counties are composed of igneous and metamorphic granitic rocks, which are not the types of rocks which can be dissolved by acidic water. Therefore, geologic sinkholes are not a significant concern for the planning area.

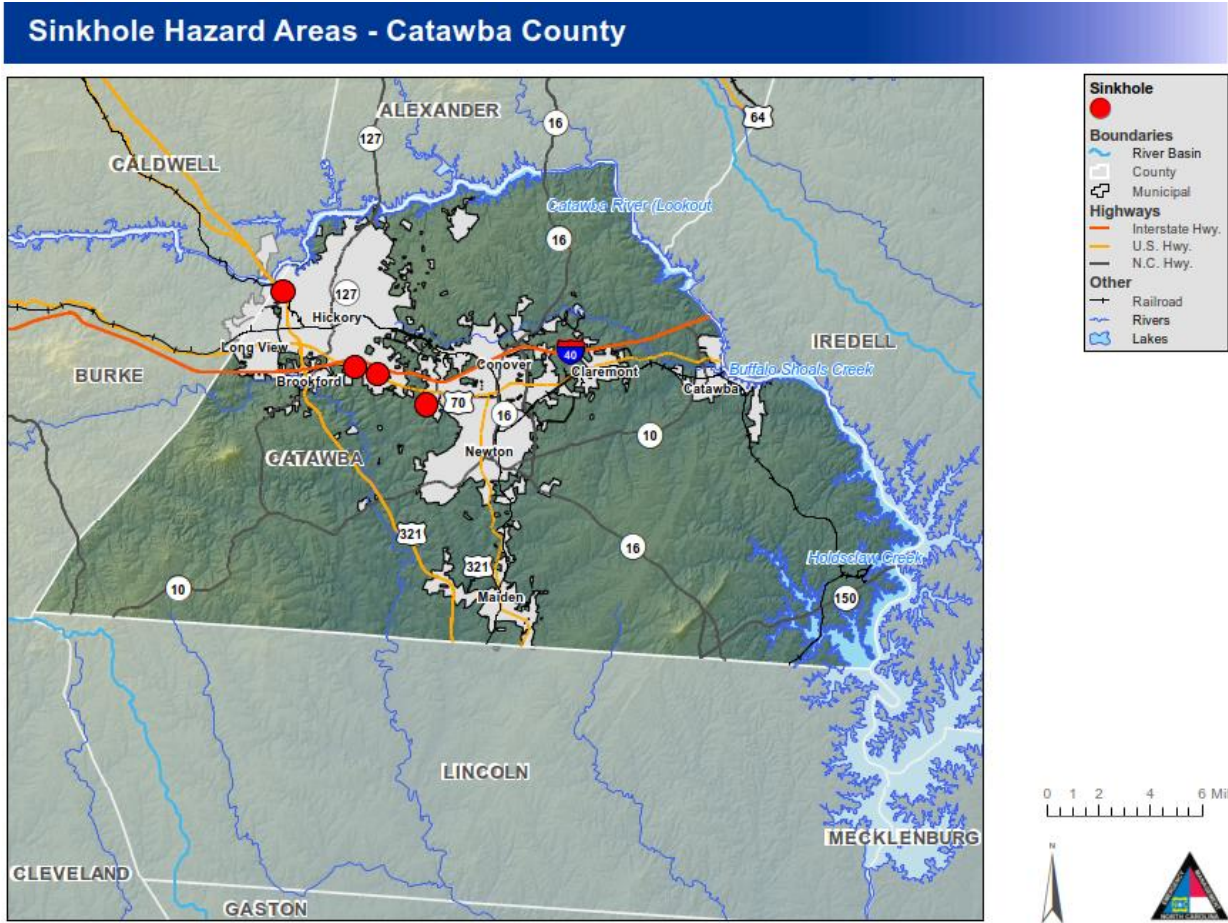
Debris and infrastructure-related sinkholes are largely dependent upon undocumented human activity, construction practices, and natural course of events and therefore no portions of the planning area can be specifically mapped as known sinkhole hazard areas.

Figure 4.122: Sinkhole Hazard Areas



Source: GIS Analysis

Figure 4.123: Sinkhole Hazard Areas



Source: GIS Analysis

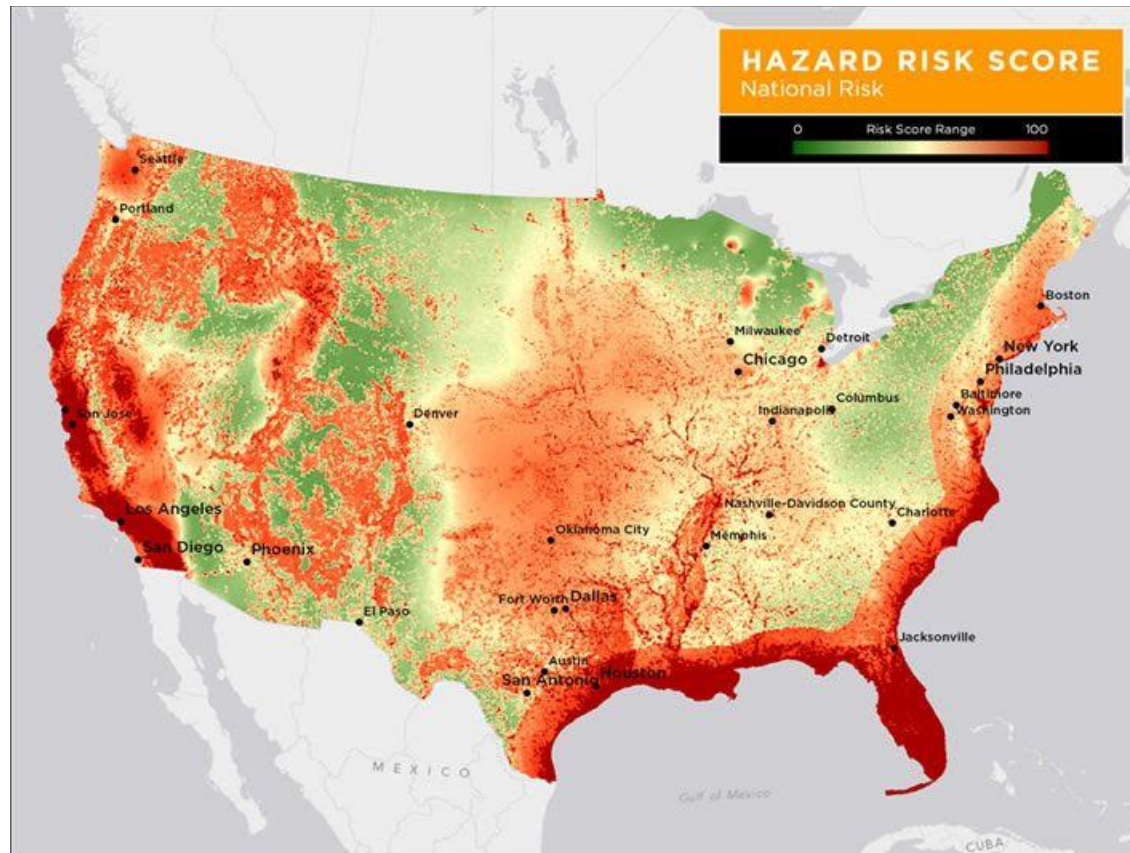
Extent (Magnitude and Severity)**Definition:**

The lengths of these natural conduits are often *measured* in feet for width and depth.

Extent Event:

Sinkholes are typically small, highly localized events that can have a varied magnitude and severity based on a wide range of site-specific variables. Since all historical data was provided by the HMPC no further information is available on the severity or depth of the previously occurred sinkholes.

Historical Occurrences



Source: CoreLogic 2014.

Table 4.392: Historical Occurrences of Sinkholes (2002 to 2019)

Location	Date	Type	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Catawba								
City of Hickory	08/17/02		0	0	\$0	\$0	\$0	\$0
City of Hickory	07/01/05		0	0	\$0	\$0	\$0	\$0
City of Hickory	05/19/11		0	0	\$0	\$0	\$0	\$0
City of Hickory	07/30/13		0	0	\$0	\$0	\$0	\$0
Subtotal Catawba	4 Events		0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4 Events		0	0	\$0	\$0	\$0	\$0

Source: Catawba County Emergency Management.

Table 4.393 provides a summary of this historical information by participating jurisdiction. It is important to note that many of the events attributed to the county are countywide or cover large portions of the county. The individual counts by jurisdiction are for those events that are only attributed to that one jurisdiction.

Table 4.393: Summary of Historical Sinkholes Occurrences by Participating Jurisdiction

Jurisdiction	Number of Occurrences	Deaths	Injuries	Reported Property Damage	Reported Property Damage (PV)	Reported Crop Damage	Reported Crop Damage (PV)
Catawba							
City of Hickory	4	0	0	\$0	\$0	\$0	\$0
Subtotal Catawba	4	0	0	\$0	\$0	\$0	\$0
TOTAL PLAN	4	0	0	\$0	\$0	\$0	\$0

Source: Catawba County Emergency Management

Probability of Future Occurrences

The probability of future Sinkholes is shown in the table below, by jurisdiction.

Definitions for Descriptors Used for Probability of Future Hazard Occurrences

- Low: Less than 1% annual probability
- Medium: Between 1% and 10% annual probability
- High: Greater than 10% annual probability

Jurisdiction	Probability of Future Occurrence
Alexander County (Unincorporated Area)	Low
Burke County (Unincorporated Area)	Low
Caldwell County (Unincorporated Area)	Low
Catawba County (Unincorporated Area)	Low
City of Claremont	Low
City of Conover	Low
City of Hickory	Low
City of Lenoir	Low
City of Morganton	Low
City of Newton	Low
Town of Brookford	Low
Town of Cahj's Mountain	Low
Town of Catawba	Low
Town of Connelly Springs	Low
Town of Drexel	Low
Town of Gamewell	Low
Town of Glen Alpine	Low
Town of Granite Falls	Low
Town of Hildebran	Low

Jurisdiction	Probability of Future Occurrence
Town of Hudson	Low
Town of Long View	Low
Town of Maiden	Low
Town of Rhodhiss	Low
Town of Rutherford College	Low
Town of Sawmills	Low
Town of Taylorsville	Low
Town of Valdese	Low
Village of Cedar Rock	Low

Sinkhole Hazard Vulnerability

Due to what is assumed to be a relatively low probability of a sinkhole occurrence producing significant damages in the participating jurisdictions, as well as insufficient data and methodology to produce a region-wide assessment, a detailed vulnerability analysis was not conducted for this hazard.

4.6 Hazard Extent Summary

The table below is a summary of the extent and impacts of the various hazards shown in this plan.

Table 4.394: Summary of Hazard Extents

Hazard		Description
River Flooding	Definition	Flood Extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. Flood depth and velocity are recorded via the USGS stream gages throughout the region.
River Flooding	Extent Event	The highest recorded peak river stage on record is 28.6 feet at John’s River in Burke County, recorded September 7-9, 2004 during Hurricane Frances. It is worth noting that this is based on available records from existing river gages and may not represent the worst flooding in the Region’s history. Similarly, a database of high water marks is not available for all areas of the Region for comparison, validation, or further reliable research on the magnitude of historical occurrences.
Wildfire	Definition	The average size of wildfires in the Uni four Region is typically small.

Hazard		Description
Wildfire	Extent Event	Wildfire data was provided by the North Carolina Division of Forest Resources and is reported annually by county
Tornado	Definition	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale.
Tornado	Extent Event	Tornadoes of any magnitude and severity are possible within the planning area. Since 1951, the highest magnitude tornado to impact the Unifour Region has been an F4 on the Fujita Scale for Tornado Damage which has occurred on two separate occasions in two different counties in the planning area.
Earthquake	Definition	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale.
Earthquake	Extent Event	The most severe earthquake felt in the Unifour Region since the mid-1800s was a six (VI) on the Modified Mercalli Intensity Scale. This event occurred in 1886, the effects of which were reported specifically in the City of Hickory which was 337 miles from the epicenter of the earthquake. The effects of this magnitude earthquake typically include trees swaying, suspended objects swinging, and objects falling off of shelves. Earthquakes of greater magnitude may be possible within the region, however this is known to be the greatest severity currently on record.
Landslide	Definition	Landslide data is provided from United States Geological Survey (USGS).
Landslide	Extent Event	The magnitude and severity of landslides can vary greatly depending on terrain and other highly localized factors. In addition, there is no overall severity rating scale for landslides that can be applied to the Unifour Region.
Snow	Definition	The extent of winter storms can be measured by the amount of snowfall received (in inches).
Snow	Extent Event	There is currently no overall scale to rank the potential severity of severe winter weather events of this type but it is assumed that the magnitude and severity of future occurrences will be similar to that of historical occurrences.
Ice	Definition	There is currently no overall scale to rank the potential severity of ice storms.
Ice	Extent Event	There is currently no overall scale to rank the potential severity of severe winter weather events of this type but it is assumed that the magnitude and severity of future occurrences will be similar to that of historical occurrences.
Hail	Definition	There is currently no specific overall scale to rank the potential severity of severe events of this type
Hail	Extent Event	Hail is known to be a damaging hazard occurrence in the Unifour Region that can result in multiple injuries. There is currently no specific overall scale to rank the potential severity of severe events of this type but it is assumed that the magnitude and severity of future occurrences will be similar to that of historical occurrences.
Drought	Definition	Drought extent is defined by the North Carolina Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the North Carolina Drought Monitor Classifications, the most severe drought condition is Exceptional.

Hazard		Description
Drought	Extent Event	As supported by the historical occurrences presented in the following subsection, the magnitude and severity of the drought/extreme heat hazard in the planning area is considered to be relatively mild. No deaths, injuries, property damages, or crop damages have been reported according to NCDC since 1998 so it is difficult to assign any specific severity rating to this hazard.
Hurricane Winds	Definition	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5.
Hurricane Winds	Extent Event	Hurricanes and tropical storms of any magnitude and severity are theoretically possible within the planning area, however major hurricanes (Category 3 and greater) are less likely to retain that classification as far inland as the Uni four Region. Since the 1850s, the greatest magnitude hurricane to impact the planning area has been a Category 1 hurricane in 1989 (Hurricane Hugo) (see Historical Occurrences section below). A Category 1 hurricane typically results in minimal damages, including damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage, etc. that is not applicable to the planning area.
Thunderstorm Winds	Definition	Thunderstorm extent is defined by the number of thunder events and wind speeds reported.
Thunderstorm Winds	Extent Event	Thunderstorms are known to be damaging hazard occurrences in the Uni four Region that can result in multiple injuries. There is currently no specific overall scale to rank the potential severity of severe events of this type but it is assumed that the magnitude and severity of future occurrences will be similar to that of historical occurrences.
Erosion	Definition	The extent of erosion can be defined by the measurable rate of erosion that occurs.
Erosion	Extent Event	No data is currently available with which to determine magnitudes or severity of erosion hazard areas within the Uni four Region.
Sinkholes	Definition	The lengths of these natural conduits are often measured in feet.
Sinkholes	Extent Event	Sinkholes are typically small, highly localized events that can have a varied magnitude and severity based on a wide range of site-specific variables.

4.7 Conclusions on Hazard Risk

No changes in development impacted the Region and all its jurisdiction's overall vulnerability for all hazards addressed. Based on consensus of the Hazard Mitigation Planning Committee, in addition to the results presented in this Risk Assessment, the hazards addressed in this plan have been ranked according to the following prioritized list:

High Risk Hazards

- Flood
- Tornado
- Thunderstorm
- Wildfire

Moderate Risk Hazards

- Snow
- Ice
- Sinkhole
- Dam Failure
- Hail
- Hurricane

Low Risk Hazards

- Drought
- Erosion
- Landslide
- Levee Failure

In addition to the results presented throughout this Risk Assessment, the annualized losses presented in **Table 4.395** and summarized above further help substantiate the priority ranking stated here in these conclusions on hazard risk.

In addition to the results presented throughout this Risk Assessment, the annualized losses presented in Table 4.405 and summarized above further help substantiate the priority ranking stated here in these conclusions on hazard risk. Certain hazards (such as Hail, Ice, Snow, Thunderstorm Winds and Wildfire) occur very frequently, and are only summarized by total counts and total damages in each jurisdiction. Those hazards do not include the period of record. Therefore, the ALE is not calculated or shown for those hazards in Table 4.45.

Table 4.395: Annualized Loss Estimates (ALEs) by Hazard by Jurisdiction

Jurisdiction	River Flooding	Tornado	Landslide	Drought	Sinkholes
Alexander County	NEG	\$295,918	NA	NEG	NA
Burke County	\$82,329	\$10,089,444	NA	NEG	NA
City of Morganton	\$79,827	\$230,430	NA	NA	NA
Town of Drexel	NEG	NA	NA	NA	NA
Caldwell County	\$556,965	\$449,851	NEG	NEG	NA
City of Lenoir	\$26,570	NA	NA	NA	NA
Town of Hudson	NEG	\$81,299	NA	NA	NA

Jurisdiction	River Flooding	Tornado	Landslide	Drought	Sinkholes
Town of Sawmills	NA	\$10,000	NA	NA	NA
Village of Cedar Rock	NEG	NA	NA	NA	NA
Catawba County	\$2,426,935	\$5,532,087	NA	NEG	NA
City of Claremont	NA	\$6,610,000	NA	NA	NA
City of Conover	\$900,000	NA	NA	NA	NA
City of Hickory	\$1,250,714	\$55,795	NA	NA	NEG
City of Newton	NEG	\$25,000	NA	NA	NA
Town of Long View	NEG	NA	NA	NA	NA
Town of Maiden	\$50,000	\$25,000	NA	NA	NA
PLAN TOTALS	\$5,374,841	\$23,404,825	NEG	NEG	NEG

*“Neg” = “Negligible” which indicates that sufficient historical losses in dollar values were not available to produce an Annualized Loss Estimate (ALE). *“NA” = “Not Applicable” which indicates that an ALE is only applicable at the county level.

Section 5: Capability Assessment

This section discusses the capability of the Plan Area to implement hazard mitigation activities. It consists of the following four subsections:

- 5.1 Overview
- 5.2 Conducting the Capability Assessment
- 5.3 Capability Assessment Findings
- 5.4 Conclusions on Local Capability

5.1 Overview

The purpose of conducting a *Capability Assessment* is to determine the ability of a local jurisdiction to implement a comprehensive *Mitigation Strategy*, and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. As in any planning process, it is important to try to establish which goals, objectives, and actions are feasible, based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A *Capability Assessment* helps to determine which mitigation actions are practical and likely to be implemented over time given a local government's planning and regulatory framework, level of administrative and technical support, amount of fiscal resources, and current political climate.

A *Capability Assessment* has two primary components: 1) an inventory of a local jurisdiction's relevant plans, ordinances, and programs already in place; and 2) an analysis of its capacity to carry them out. Careful examination of local capabilities will detect any existing gaps, shortfalls, or weaknesses with ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. *Capability Assessment* also highlights the positive mitigation measures already in place or being implemented at the local government level, which should continue to be supported and enhanced through future mitigation efforts.

The *Capability Assessment* completed for the Plan Area serves as a critical planning step and an integral part of the foundation for designing an effective *Mitigation Strategy*. Coupled with the *Risk Assessment*, the *Capability Assessment* helps identify and target meaningful mitigation actions for incorporation into the *Mitigation Strategy* portion of the Plan. It not only helps establish the goals and objectives for the Region to pursue under this Plan, but also ensures that those goals and objectives are realistically achievable under given local conditions.

5.2 Conducting the Capability Assessment

In order to facilitate the inventory and analysis of local government capabilities within the Plan counties, a detailed *Local Capability Assessment Survey* was distributed to members of the Hazard Mitigation Planning Committee (HMPC) at the second planning committee meeting. The survey questionnaire requested information on a variety of "capability indicators" such as existing local plans, policies, programs, or ordinances that contribute to and/or hinder the Region's ability to implement hazard mitigation actions. Other indicators included information related to the Region's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes, as well as any existing education and outreach programs that can be used to promote mitigation.

Survey respondents were also asked to comment on the current political climate with respect to hazard mitigation, an important consideration for any local planning or decision making process.

At a minimum, the survey results provide an extensive and consolidated inventory of existing local plans, ordinances, programs, and resources in place or under development, in addition to their overall effect on hazard loss reduction. In completing the survey, local officials were also required to conduct a self assessment of their jurisdiction's specific capabilities. The survey instrument thereby not only helps accurately assess the degree of local capability, but it also serves as a good source of introspection for counties and local jurisdictions that want to improve their capabilities as identified gaps, weaknesses, or conflicts can be recast as opportunities for specific actions to be proposed as part of the

The information provided in response to the survey questionnaire was incorporated into a database for further analysis. A general scoring methodology was then applied to quantify each jurisdiction's overall capability. According to the scoring system, each capability indicator was assigned a point value based on its relevance to hazard mitigation. Additional points were added based on the jurisdiction's self assessment of their own planning and regulatory capability, administrative and technical capability, fiscal capability, education and outreach capability, and political capability.

Using this scoring methodology, a total score and an overall capability rating of "High," "Moderate," or "Limited" could be determined according to the total number of points received. These classifications are designed to provide nothing more than a general assessment of local government capability. In combination with the narrative responses provided by local officials, the results of this *Capability Assessment* provide critical information for developing an effective and meaningful mitigation strategy.

5.3 Capability Assessment Findings

The findings of the *Capability Assessment* are summarized in this Plan to provide insight into the relevant capacity of the Plan Area to implement hazard mitigation activities. All information is based upon the input provided by local government officials through the

5.3.1 Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of plans, ordinances, and programs that demonstrate a local jurisdiction's commitment to guiding and managing growth, development, and redevelopment in a responsible manner, while maintaining the general welfare of the community. It includes emergency response and mitigation planning, comprehensive land use planning, and transportation planning, in addition to the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built, as well as protecting environmental, historic, and cultural resources in the community. Although some conflicts can arise, these planning initiatives generally present significant opportunities to integrate hazard mitigation principles and practices into the local decision making process.

This assessment is designed to provide a general overview of the key planning and regulatory tools or programs in place or under development for the Plan Area, along with their potential effect on loss reduction. This information will help identify opportunities to address existing gaps, weaknesses, or

conflicts with other initiatives in addition to integrating the implementation of this Plan with existing planning mechanisms where appropriate.

Table 5.1 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for the Plan Area. A checkmark indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the Hazard Mitigation Plan.

Listed below are existing plans, studies, reports and technical information reviewed for plan development and update. Relevant information such as, hazard analysis, NFIP data, building codes, ordinances and communication procedures were incorporated into the mitigation plan via coordination with relevant agencies, prioritizing hazards, prioritizing mitigation actions.

Table 5.1: Review and Incorporation of Existing Plans, Studies, Reports, Ordinances, Technical Information and Programs

Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Emergency Operations Plan	SARA Title III Plan	Radiological Emergency Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Transportation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Site Plan Review Requirements	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	Community Wildfire Protection Plan	National Flood Insurance Program	Community Rating System
Burke County	✓	✓	✓			✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓	
City of Morganton	✓	✓	✓	✓	✓	✓	✓					✓	✓		✓	✓	✓	✓	✓			✓	✓		✓	
Caldwell County	✓	✓	✓	✓	✓	✓	✓		✓				✓			✓	✓	✓	✓	✓		✓	✓		✓	✓
City of Lenoir	✓	✓			✓	✓	✓					✓		✓	✓	✓	✓	✓	✓				✓	✓	✓	
Town of Rhodhiss	✓		✓			✓		✓	✓			✓				✓		✓				✓	✓		✓	
Catawba County	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓		✓	
Town of Brookford	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Town of Catawba	✓	✓										✓	✓		✓	✓	✓	✓	✓						✓	

Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Emergency Operations Plan	SARA Title III Plan	Radiological Emergency Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Transportation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Site Plan Review Requirements	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	Community Wildfire Protection Plan	National Flood Insurance Program	Community Rating System
City of Conover	√	√	√	√	√	√		√	√	√	√	√	√		√	√	√	√	√			√	√	√	√	
City of Hickory	√	√	√	√	√	√						√	√	√	√	√	√	√	√	√	√	√	√		√	
Town of Long View	√	√	√		√	√		√	√	√	√		√		√	√	√	√	√			√	√		√	
Town of Maiden	√	√	√	√	√	√			√	√		√			√	√	√	√	√	√	√	√	√		√	
City of Newton	√	√	√	√	√	√		√	√			√	√		√	√	√	√	√			√	√		√	
Town of Drexel	√	√										√					√	√							√	
Town of Valdese	√	√	√		√	√	√		√	√						√	√	√	√			√	√	√	√	
Alexander County	√	√	√	√		√	√		√	√	√				√	√	√	√				√	√		√	
Town of Granite Falls	√	√			√							√				√	√	√	√							
Town of Hudson	√	√			√										√	√	√	√	√			√	√		√	
Town of Gamewell	√	√			√										√	√	√	√	√			√	√		√	

Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Emergency Operations Plan	SARA Title III Plan	Radiological Emergency Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Transportation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Site Plan Review Requirements	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	Community Wildfire Protection Plan	National Flood Insurance Program	Community Rating System
Town of Taylorsville	√	√													√	√	√	√	√			√	√		√	
Town of Hildebran	√	√													√	√	√	√	√			√	√		√	
City of Claremont	√	√		√	√	√	√					√	√		√	√	√	√				√	√		√	
Town of Glen Alpine	√		√	√	√	√	√	√	√							√	√	√	√			√	√	√	√	
Town of Connelly Springs	√	√	√		√											√	√	√							√	
Town of Rutherford College	√	√													√	√	√	√	√			√	√		√	
Town of Sawmills	√	√			√										√	√	√	√	√			√	√		√	
Town of Cahah's Mountain	√	√			√	√						√			√	√	√	√				√	√		√	
Village of Cedar Rock	√														√	√	√	√	√			√	√			

A more detailed discussion on the Region’s planning and regulatory capability follows, along with the incorporation of additional information based on the narrative comments provided by local officials in response to the survey questionnaire.

5.3.1.1 Emergency Management

Hazard mitigation is widely recognized as one of the four primary phases of emergency management. The three other phases are preparedness, response, and recovery. In reality each phase is interconnected with hazard mitigation, as **Figure 5.1** suggests. Opportunities to reduce potential losses through mitigation practices are most often implemented before a disaster event, such as elevation of flood-prone structures or through the continuous enforcement of policies that prevent and regulate development that is vulnerable to hazards because of its location, design, or other characteristics. Mitigation opportunities can also be identified during immediate preparedness or response activities (such as installing storm shutters in advance of a hurricane), and in many instances during the long-term recovery and redevelopment process following a disaster event.



Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions. As a result, the **Local Capability Assessment Survey** asked several questions across a range of emergency management plans in order to assess the Area’s willingness to plan and their level of technical planning proficiency.

Hazard Mitigation Plan

A hazard mitigation plan represents a community’s blueprint for how it intends to reduce the impact of natural, and in some cases human-caused, hazards on people and the built environment. The essential elements of a hazard mitigation plan include a risk assessment, capability assessment, and mitigation strategy.

- 28 of the 28 participating jurisdictions in this regional planning effort have previously been covered by their county’s multi-jurisdictional hazard mitigation plan.

Disaster Recovery Plan

A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster event. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment policies and ordinances to be enacted following a hazard event.

- 9 of the 28 participating jurisdictions have a disaster recovery plan either in place or under development. (5 jurisdictions have one in place; 4 have one under development; 0 covered under a county plan)

Emergency Operations Plan

An emergency operations plan outlines responsibilities and the means by which resources are deployed during and following an emergency or disaster.

- 17 of the 28 participating jurisdictions have an emergency operations plan either in place or are covered under a county plan. (17 jurisdictions have one in place; 0 have one under development; 0 covered under a county plan)

Continuity of Operations Plan

A continuity of operations plan establishes a chain of command, line of succession, and plans for backup or alternate emergency facilities in case of an extreme emergency or disaster event.

- 12 of the 28 participating jurisdictions have a continuity of operations plan in place.

5.3.1.2 General Planning

The implementation of hazard mitigation activities often involves agencies and individuals beyond the emergency management profession. Stakeholders may include local planners, public works officials, economic development specialists, and others. In many instances, concurrent local planning efforts will help to achieve or complement hazard mitigation goals, even though they are not designed as such. **Local Capability Assessment Survey** also asked questions regarding general planning capabilities and the degree to which hazard mitigation is integrated into other ongoing planning efforts in the Plan Area.

Comprehensive/General Plan

A comprehensive land use plan, or general plan, establishes the overall vision for what a community wants to be and serves as a guide for future governmental decision making. Typically a comprehensive plan contains sections on demographic conditions, land use, transportation elements, and community facilities. Given the broad nature of the plan and its regulatory standing in many communities, the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives, and actions.

- 26 of the 28 participating jurisdictions have a comprehensive land use plan either in place or under development (25 jurisdictions have one in place; 1 have one under development; 0 covered under a county plan)

Capital Improvements Plan

A capital improvements plan guides the scheduling of spending on public improvements. A capital improvements plan can serve as an important mechanism for guiding future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

- 17 of the 28 participating jurisdictions have a capital improvements plan in place or under development.

Historic Preservation Plan

A historic preservation plan is intended to preserve historic structures or districts within a community. An often overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards, and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards, or are within a historic district that cannot easily be relocated out of harm's way.

- 7 of the 28 participating jurisdictions have an historic preservation plan in place or under development.

Zoning Ordinance

Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety, and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas.

- 27 of the 28 participating jurisdictions have a zoning ordinance in place or under development.

Subdivision Ordinance

A subdivision ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

- 28 of the 28 participating jurisdictions have a subdivision ordinance in place or under development.

Building Codes, Permitting, and Inspections

Building codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community.

- 23 of the 28 participating jurisdictions have building codes in place.

The adoption and enforcement of building codes by local jurisdictions is routinely assessed through the Building Code Effectiveness Grading Schedule (BCEGS) program, developed by the Insurance Services Office, Inc. (ISO). In North Carolina, the North Carolina Department of Insurance assesses the building codes in effect in a particular community and how the community enforces its building codes, with special emphasis on mitigation of losses from natural hazards. The results of BCEGS assessments are routinely provided to ISO's member private insurance companies, which in turn may offer ratings credits for new buildings constructed in communities with strong BCEGS classifications. The concept is that communities with well-enforced, up-to-date codes should experience fewer disaster-related losses, and as a result should have lower insurance rates.

In conducting the assessment, ISO collects information related to personnel qualification and continuing education, as well as number of inspections performed per day. This type of information combined with local building codes is used to determine a grade for that jurisdiction. The grades range from 1 to 10, with a BCEGS grade of 1 representing exemplary commitment to building code enforcement, and a grade of 10 indicating less than minimum recognized protection.

5.3.1.3 Floodplain Management

Flooding represents the greatest natural hazard facing the nation. At the same time, the tools available to reduce the impacts associated with flooding are among the most developed when compared to other hazard-specific mitigation techniques. In addition to approaches that cut across hazards such as education, outreach, and the training of local officials, the National Flood Insurance Program (NFIP) contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments; however, program participation is strongly encouraged by FEMA as a first step for implementing and sustaining an effective hazard mitigation program. It is therefore used as part of this *Capability Assessment* as a key indicator for measuring local capability.

In order for a county or municipality to participate in the NFIP, they must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by a 100-year flood event, and that new development in the floodplain will not exacerbate existing flood problems or increase damage to other properties.

A key service provided by the NFIP is the mapping of identified flood hazard areas. Once completed, the Flood Insurance Rate Maps (FIRMs) are used to assess flood hazard risk, regulate construction practices, and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials, and the private sector about the likelihood of flooding in their community.

Table 5.2 provides NFIP policy and claim information for each participating jurisdiction in the Plan Area.

Table 5.2: NFIP Policy and Claim Information

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies In Force	Insurance In Force	Written Premium In Force	Closed Losses	Total Payments
Alexander							
Alexander County (Unincorporated Area)	06/09/78	12/18/07	27	\$7,202,000	\$26,294	2	\$4,910
Town of Taylorsville	12/18/07	12/18/07	3	\$1,150,000	\$4,891	0	0
Subtotal Alexander	-	-	30	\$8,352,000	\$31,185	2	\$4,910
Burke							
Burke County (Unincorporated Area)	01/15/74	09/05/07	64	\$14,516,600	\$48,847	22	\$743,362
City of Morganton	03/22/74	09/05/07	50	\$14,583,800	\$108,301	21	\$1,202,461
Town of Connelly Springs	01/15/74	09/05/07	1	\$250,000	\$346	0	0
Town of Drexel	08/08/75	09/05/07	3	\$593,000	\$1,385	0	\$0
Town of Glen Alpine	01/15/74	09/05/07	1	\$210,000	\$320	0	0
Town of Hildebran	09/05/07	09/05/07	1	\$70,000	\$244	0	0
Town of Rutherford College	01/15/74	09/05/07	0	0	0	0	0
Town of Valdese	07/25/75	09/05/07	1	\$550,000	\$10,763	0	0
Subtotal Burke	-	-	121	\$30,773,400	\$170,206	43	\$1,945,823
Caldwell							
Caldwell County (Unincorporated Area)	04/28/78	07/07/09	73	\$15,126,500	\$76,055	14	\$233,720
City of Lenoir	12/03/76	07/07/09	98	\$23,112,300	\$138,328	22	\$185,873

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies In Force	Insurance In Force	Written Premium In Force	Closed Losses	Total Payments
Town of Cahj's Mountain	08/16/88	07/07/09	0	0	0	0	0
Town of Gamewell	08/16/88	07/07/09	3	\$283,500	\$2,032	0	0
Town of Granite Falls	08/16/88	07/07/09	8	\$1,714,200	\$8,327	0	\$0
Town of Hudson	08/16/88	07/07/09	6	\$2,819,000	\$4,648	0	0
Town of Rhodhiss	06/21/74	09/05/07	5	\$1,290,100	\$3,223	2	\$12,587
Town of Sawmills	04/28/78	07/07/09	0	0	0	0	0
Village of Cedar Rock	04/28/78	07/07/09	0	0	0	0	0
Subtotal Caldwell	-	-	193	\$44,345,600	\$232,613	38	\$432,180
Catawba							
Catawba County (Unincorporated Area)	06/10/77	09/05/07	102	\$24,804,100	\$60,886	65	\$1,102,685
City of Claremont	09/05/07	09/05/07	5	\$922,700	\$2,919	0	0
City of Conover	06/21/74	09/05/07	18	\$3,666,900	\$12,990	3	\$21,468
City of Hickory	09/13/74	09/05/07	86	\$21,986,100	\$47,843	16	\$200,273
City of Newton	06/28/74	09/05/07	19	\$3,872,700	\$18,391	3	\$50,078
Town of Brookford	09/06/74	09/05/07	0	0	0	0	0
Town of Catawba	06/28/74	09/05/07	1	\$350,000	\$654	0	\$0
Town of Long View	06/28/74	09/05/07	3	\$481,900	\$1,023	0	0

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies In Force	Insurance In Force	Written Premium In Force	Closed Losses	Total Payments
Town of Maiden	09/20/74	09/05/07	10	\$4,022,500	\$11,235	1	\$2,378
Subtotal Catawba	-	-	244	\$60,106,900	\$155,941	88	\$1,376,882
TOTAL PLAN	-	-	588	\$143,577,900	\$589,945	171	\$3,759,795

Source: FEMA NFIP Policy Statistics

All jurisdictions listed above participate in the National Flood Insurance Program and will continue to comply with all required provisions of the program and work to adequately comply in the future utilizing a number of strategies. Floodplain management is managed through zoning ordinances, building code restrictions, and the county building inspection program. The jurisdictions will coordinate with NCEM and FEMA to develop maps and regulations related to Special Flood Hazard Areas within their jurisdictional boundaries and, through a consistent monitoring process, will design and improve their floodplain management program in a way that reduces the risk of flooding to people and property. Each county and its municipalities while participating in the National Flood Insurance Program comply with regulations as demonstrated in regular Community Assessment Visits (see attached in Appendix X).

Community Rating System

An additional indicator of floodplain management capability is the active participation of local jurisdictions in the Community Rating System (CRS). The CRS is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP, adding extra local measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point values. As points are accumulated and reach identified thresholds, communities can apply for an improved CRS class. Class ratings, which range from 10 to 1, are tied to flood insurance premium reductions as shown in **Table 5.3**. As class ratings improve (the lower the number, the better), the percent reduction in flood insurance premiums for NFIP policyholders in that community increases.

Table 5.3: CRS Premium Discounts, By Class

CRS Class	Premium Reduction
1	45%
2	40%
3	35%
4	30%
5	25%
6	20%
7	15%
8	10%
9	5%
10	0%

Source: NFIP Community Rating System.

Community participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The

CRS application process has been greatly simplified over the past several years, based on community comments intended to make the CRS more user friendly, and extensive technical assistance available for communities who request it.

Floodplain Management Plan

A floodplain management plan (or a flood mitigation plan) provides a framework for action regarding corrective and preventative measures to reduce flood-related impacts.

- 15 of the 28 participating jurisdictions have a floodplain management plan in place.

Open Space Management Plan

An open space management plan is designed to preserve, protect, and restore largely undeveloped lands in their natural state, and to expand or connect areas in the public domain such as parks, greenways, and other outdoor recreation areas. In many instances open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands or other flood-prone areas in their natural state in perpetuity.

- 13 of the 28 participating jurisdictions have an open space management plan in place or under development.

Stormwater Management Plan

A stormwater management plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding.

- 18 of the 28 participating jurisdictions have a stormwater management plan in place.

5.3.2 Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability can be evaluated by determining how mitigation-related activities are assigned to local departments and if there are adequate personnel resources to complete these activities. The degree of intergovernmental coordination among departments will also affect administrative capability for the implementation and success of proposed mitigation activities.

Technical capability can generally be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in using geographic information systems (GIS) to analyze and assess community hazard vulnerability. The Local Capability Assessment Survey was used to capture information on administrative and technical capability through the identification of available staff and personnel resources. *Local Capability Assessment Survey* was used to capture information on administrative and technical capability through the identification of available staff and personnel resources.

Table 5.4 provides a summary of the *Local Capability Assessment Survey* results for the Plan Area with regard to relevant staff and personnel resources. A checkmark indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

Table 5.4: Relevant Staff/Personnel Resources

Jurisdiction	Planners with knowledge of land development and land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural land/or human-caused hazards	Building Official	Emergency manager	Floodplain manager	Land surveyors	Scientist familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in Geographic Information Systems (GIS) and/or HAZUS	Resource development staff or grant writers	Maintenance programs to reduce risk	Warning systems/services	Mutual Aid Agreements
Burke County	√	√	√	√	√	√			√	√	√		√	√
City of Morganton	√	√	√	√		√	√		√	√	√	√	√	√
Caldwell County	√		√	√	√	√			√	√	√		√	√
City of Lenoir	√	√	√		√	√			√	√	√	√	√	√
Town of Rhodhiss					√	√			√			√	√	√
Catawba County	√	√	√	√	√	√			√	√	√		√	√
Town of Brookford					√	√						√		√
Town of Catawba	√			√		√				√	√	√		
City of Conover	√	√	√		√	√			√	√	√	√	√	√
City of Hickory	√	√	√			√	√		√	√	√	√		
Town of Long View	√	√	√		√	√			√	√	√	√	√	

Jurisdiction	Planners with knowledge of land development and land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Building Official	Emergency manager	Floodplain manager	Land surveyors	Scientist familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in Geographic Information Systems (GIS) and/or HAZUS	Resource development staff or grant writers	Maintenance programs to reduce risk	Warning systems/services	Mutual Aid Agreements
Town of Maiden	√	√	√	√		√	√		√	√	√	√	√	√
City of Newton	√	√	√	√	√	√			√	√	√	√	√	√
Town of Drexel												√		√
Town of Valdese	√	√	√	√	√	√				√	√		√	√
Alexander County	√			√	√	√				√	√	√		√
Town of Granite Falls	√		√			√				√	√	√	√	√
Town of Hudson	√	√	√	√	√	√				√	√		√	√
Town of Gamewell	√	√	√	√	√					√	√		√	√
Town of Taylorsville	√	√	√		√	√							√	√
Town of Hildebran	√	√	√	√	√	√				√	√		√	
City of Claremont	√	√	√	√	√	√			√	√	√	√	√	√

Jurisdiction	Planners with knowledge of land development and land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Building Official	Emergency manager	Floodplain manager	Land surveyors	Scientist familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in Geographic Information Systems (GIS) and/or HAZUS	Resource development staff or grant writers	Maintenance programs to reduce risk	Warning systems/services	Mutual Aid Agreements
Town of Glen Alpine	√		√		√	√			√	√	√	√	√	√
Town of Connelly Springs	√			√		√								√
Town of Rutherford College	√	√	√	√	√	√				√	√		√	√
Town of Sawmills	√	√	√	√	√	√				√	√		√	√
Town of Cahah's Mountain	√	√	√	√	√	√					√			
Village of Cedar Rock	√	√	√	√	√					√	√		√	√

5.3.3 Fiscal Capability

The ability of a local government to take action is often closely associated with the amount of money available to implement policies and projects. This may take the form of outside grant funding awards or locally based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative costs associated with the creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project such as the acquisition of flood-prone houses, which can require a substantial commitment from local, state, and federal funding sources.

The *Local Capability Assessment Survey* was used to capture information on the Region’s fiscal capability through the identification of locally available financial resources.

Table 5.5 provides a summary of the results for the Plan Area with regard to relevant fiscal resources. A checkmark indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds).

Table 5.5: Relevant Fiscal Resources

Jurisdiction	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation Bonds	Revenue Bonds	Special Tax Bonds	Other
Burke County	√	√	√		√			√	√	√	
City of Morganton	√			√	√						
Caldwell County		√	√	√	√			√			
City of Lenoir	√	√			√						
Town of Rhodhiss	√	√			√						
Catawba County	√	√			√						
Town of Brookford		√									
Town of Catawba	√	√			√			√	√	√	
City of Conover	√	√			√		√	√			

Jurisdiction	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation Bonds	Revenue Bonds	Special Tax Bonds	Other
City of Hickory	√	√			√			√			
Town of Long View	√	√			√			√	√		
Town of Maiden	√	√		√	√			√	√		
City of Newton	√	√		√	√			√			
Town of Drexel				√	√						
Town of Valdese	√	√	√		√	√	√	√	√	√	
Alexander County		√			√			√	√		√
Town of Granite Falls	√	√									
Town of Hudson	√	√									
Town of Gamewell	√	√									
Town of Taylorsville		√									
Town of Hildebran											
City of Claremont		√			√						
Town of Glen Alpine		√									
Town of Connelly Springs		√			√						
Town of Rutherford College	√	√									

Jurisdiction	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation Bonds	Revenue Bonds	Special Tax Bonds	Other
Town of Sawmills	√	√									
Town of Cahah's Mountain					√						
Village of Cedar Rock	√	√									

Source: Local Capability Assessment Survey.

5.3.4 Education and Outreach Capability

This type of local capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include natural disaster or safety related school programs; participation in community programs such as Firewise or StormReady; and activities conducted as part of hazard awareness campaigns such as a Tornado Awareness Month.

Table 5.6 provides a summary of the results for the Plan Area with regard to relevant education and outreach resources. A checkmark indicates that the given resource is locally available for hazard mitigation purposes.

Table 5.6: Education and Outreach Resources

Jurisdiction	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Natural disaster or safety related school programs	StormReady certification	Firewise Communities certification	Public-private partnership initiatives addressing disaster-related issues	Other
Burke County	√	√	√	√	√		

Jurisdiction	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Natural disaster or safety related school programs	StormReady certification	Firewise Communities certification	Public-private partnership initiatives addressing disaster-related issues	Other
City of Morganton		√					
Caldwell County	√	√					
City of Lenoir		√					
Town of Rhodhiss		√	√				
Catawba County	√	√	√	√		√	
Town of Brookford		√				√	
Town of Catawba							
City of Conover							
City of Hickory	√	√					
Town of Long View	√	√		√			
Town of Maiden	√	√	√				
City of Newton		√					
Town of Drexel		√					
Town of Valdese		√	√	√	√	√	√
Alexander County	√	√				√	
Town of Granite Falls		√	√				
Town of Hudson							
Town of Gamewell							

Jurisdiction	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Natural disaster or safety related school programs	StormReady certification	Firewise Communities certification	Public-private partnership initiatives addressing disaster-related issues	Other
Town of Taylorsville							
Town of Hildebran							
City of Claremont		√					
Town of Glen Alpine		√					
Town of Connelly Springs							
Town of Rutherford College							
Town of Sawmills							
Town of Cahah's Mountain		√					
Village of Cedar Rock							

5.3.5 Mitigation Capability

This type of local capability refers to the mitigation strategies and actions that are developed by the communities in this plan.

Table 5.7 provides a summary of the results for the planning area with regard to relevant mitigation resources. A checkmark (X) indicates that the given resource is locally available for hazard mitigation purposes.

Table 5.7: Mitigation Resources

Jurisdiction	Do you apply for mitigation grant funding?	Do you perform reconstruction projects?	Do you perform building elevations?	Do you perform acquisitions?
Burke County				
City of Morganton				
Caldwell County				
City of Lenoir				
Town of Rhodhiss				
Catawba County				
Town of Brookford				
Town of Catawba				
City of Conover				
City of Hickory				
Town of Long View				
Town of Maiden				
City of Newton				
Town of Drexel				
Town of Valdese				
Alexander County	√			
Town of Granite Falls				

Jurisdiction	Do you apply for mitigation grant funding?	Do you perform reconstruction projects?	Do you perform building elevations?	Do you perform acquisitions?
Town of Hudson				
Town of Gamewell				
Town of Taylorsville	√			
Town of Hildebran				
City of Claremont				
Town of Glen Alpine				
Town of Connelly Springs				
Town of Rutherford College				
Town of Sawmills				
Town of Cahah's Mountain				
Village of Cedar Rock				

5.3.6 Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to reduce the impact of future hazard events. Hazard mitigation may not be a local priority, or may conflict with or be seen as an impediment to other goals of the community, such as growth and economic development. Therefore the local political climate must be considered in designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation.

The *Local Capability Assessment Survey* was used to capture information on political capability of the Plan Area. Survey respondents were asked to identify some general examples of local political capability, such as guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum state or federal requirements (e.g., building codes, floodplain management, etc.). The comments provided by the participating jurisdictions are listed below:

The agency with the overall responsibility for monitoring this Plan is the Caldwell County Emergency Management Department. Periodic revisions and updates of the Unifour Regional Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, taking into account potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations. Periodic evaluation of the Plan will also ensure that specific mitigation actions are being reviewed and carried out according to each jurisdiction's individual Mitigation Action Plan.

The HMPC will continue to meet regularly, as determined by the Caldwell County Emergency Management Department. These regular meetings will take place in the fall of each year so that sufficient time is available to prepare public outreach messages and assess the status of any mitigation actions relevant to the upcoming severe seasonal spring weather and the start of hurricane season. Meetings will also be convened as necessary following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed by the participating jurisdictions.

County and local staff of each participating jurisdiction will also continue to attend training workshops sponsored by the North Carolina Division of Emergency Management or others as appropriate in order to keep up-to-date with any changing guidance or planning requirements and to communicate that information to other representatives of participating jurisdictions.

As part of this monitoring, evaluation, and enhancement process, each participating jurisdiction will be expected to provide an annual status update to Caldwell County for their respective Mitigation Action Plans in order to evaluate the Plan's implementation effectiveness. This will ensure that the Plan is continuously maintained and updated to reflect changing conditions and needs within the Region. If determined appropriate or as requested, an annual report on the Plan will be developed and presented to local governing bodies of participating jurisdictions in order to report progress on the actions identified in the Plan and to provide information on the latest legislative requirements and/or changes to those requirements.

5.3.7 Local Self-Assessment

In addition to the inventory and analysis of specific local capabilities, the *Local Capability Assessment Survey* asked counties and local jurisdictions within the Plan Area to conduct a self assessment of their perceived capability to implement hazard mitigation activities. As part of this process, local officials were encouraged to consider the barriers to implementing proposed mitigation strategies in addition to the mechanisms that could enhance or further such strategies. In response to the survey questionnaire, county officials classified each of the aforementioned capabilities as either "limited," "moderate," or "high."

Table 5.8 summarizes the results of the self assessment for the Plan Area.

Table 5.8: Self Assessment of Capability

Jurisdiction	Plans, Ordinances, Codes and Programs	Administrative and Technical Capability	Fiscal Capability	Education and Outreach Capability	Mitigation Capability	Political Capability	OVERALL CAPABILITY
Burke County	Moderate	Moderate	Limited	Limited	High	Moderate	
City of Morganton	Moderate	Moderate	Moderate	Limited	Moderate	Moderate	
Caldwell County	Limited	High	Limited	Moderate	Limited	Limited	
City of Lenoir	High	High	Moderate	High	Moderate	High	
Town of Rhodhiss	Limited	Limited	Limited	Limited	Moderate	Limited	
Catawba County	High	High	Moderate	Moderate	Moderate	Moderate	
Town of Brookford	Moderate	Limited	Limited	Limited	Moderate	Limited	
Town of Catawba	High	Moderate	Limited	Limited	Moderate	High	
City of Conover	High	Limited	Limited	Limited	Limited	Limited	
City of Hickory	High	High	Moderate	Moderate	Moderate	Moderate	
Town of Long View	Moderate	Moderate	Limited	Moderate	High	Moderate	
Town of Maiden	High	High	Limited	High	High	High	
City of Newton	High	Moderate	Limited	Moderate	High	Moderate	
Town of Drexel	Limited	Limited	Limited	Limited	Limited	Limited	
Town of Valdese	High	Moderate	Limited	Moderate	Moderate	Moderate	
Alexander County	Moderate	Limited	Moderate	Moderate	Limited	Limited	Limited
Town of Granite Falls	Moderate	Limited	Limited	Moderate	Moderate	Moderate	

Jurisdiction	Plans, Ordinances, Codes and Programs	Administrative and Technical Capability	Fiscal Capability	Education and Outreach Capability	Mitigation Capability	Political Capability	OVERALL CAPABILITY
Town of Hudson	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	
Town of Gamewell	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	
Town of Taylorsville	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	Limited
Town of Hildebran	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	
City of Claremont	Moderate	Moderate	Moderate	Moderate	High	Moderate	
Town of Glen Alpine	Limited	Limited	Limited	Limited	Limited	Limited	
Town of Connelly Springs	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	
Town of Rutherford College	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	
Town of Sawmills	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	
Town of Cahah's Mountain	Moderate	Moderate	Limited	Limited	Limited	Moderate	
Village of Cedar Rock	Moderate	Moderate	Limited	Moderate	Moderate	Moderate	

Source: Local Capability Assessment Survey.

5.4 Conclusions on Local Capability

In order to form meaningful conclusions on the assessment of local capability, a quantitative scoring methodology was designed and applied to results of the Local Capability Assessment Survey. This methodology attempts to assess the overall level of capability of the Plan Area to implement hazard mitigation actions. *Local Capability Assessment Survey* This methodology attempts to assess the overall level of capability of the Plan Area to implement hazard mitigation actions.

Table 5.9 shows the results of the *Capability Assessment* using the designed scoring methodology. The capability score is based solely on the information provided by local officials in response to the *Local Capability Assessment Survey*. According to the assessment, the average local capability score for all responding jurisdictions is 68, which falls into the Low capability ranking.

Table 5.9: Capability Assessment Results

Jurisdiction	Overall Capability Score	Overall Capability Rating
Alexander County	75	Moderate
Burke County	88	Moderate
Caldwell County	84	Moderate
Catawba County	96	Moderate
City of Claremont	74	Moderate
City of Conover	87	Moderate
City of Hickory	86	Moderate
City of Lenoir	76	Moderate
City of Morganton	79	Moderate
City of Newton	85	Moderate
Town of Brookford	90	Moderate
Town of Cahj's Mountain	54	Low
Town of Catawba	54	Low
Town of Connelly Springs	42	Low
Town of Drexel	29	Low
Town of Gamewell	55	Low
Town of Glen Alpine	76	Moderate

Jurisdiction	Overall Capability Score	Overall Capability Rating
Town of Granite Falls	46	Low
Town of Hildebran	50	Low
Town of Hudson	56	Low
Town of Long View	84	Moderate
Town of Maiden	99	Moderate
Town of Rhodhiss	53	Low
Town of Rutherford College	53	Low
Town of Sawmills	56	Low
Town of Taylorsville	51	Low
Town of Valdese	89	Moderate
Village of Cedar Rock	46	Low

Source: Local Capability Assessment Survey.

As previously discussed, one of the reasons for conducting a Capability Assessment is to examine local capabilities to detect any existing gaps or weaknesses within ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. These gaps or weaknesses have been identified, for each jurisdiction, in the tables found throughout this section. The participating jurisdictions used the Capability Assessment as part of the basis for the mitigation actions that are identified in Section 7; therefore, each jurisdiction addresses their ability to expand on and improve their existing capabilities through the identification of their mitigation actions.

Section 6: Mitigation Strategy

The *Mitigation Strategy* section provides the blueprint for the participating jurisdictions in the Plan Area to follow to become less vulnerable to the negative effects of the natural hazards identified and addressed in this Plan. It is based on the general consensus of the Hazard Mitigation Planning Committee (HMPC) and the findings and conclusions of the *Risk Assessment* and *Capability Assessment*. It consists of the following five subsections:

- 6.1 Overview
- 6.2 Mitigation Goals
- 6.3 Identification and Analysis of Mitigation Techniques
- 6.4 Selection of Mitigation Techniques for the Plan Area
- 6.5 Plan Update Requirement

6.1 Overview

The intent of the *Mitigation Strategy* is to provide the Plan Area with overall goals that will serve as guiding principles for future mitigation policy and project administration, along with an analysis of mitigation techniques deemed available to meet those goals and reduce the impact of identified hazards. The HMPC identified and analyzed a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure. It is designed to be comprehensive, strategic, and functional in nature:

- In being comprehensive, the development of the Mitigation Strategy included a thorough review of all-natural hazards and identifies extensive mitigation measures intended to not only reduce the future impacts of high risk hazards, but also to help the Plan Area achieve compatible economic, environmental, and social goals.
- In being strategic, the development of the Mitigation Strategy ensures that all policies and projects proposed for implementation are consistent with pre-identified, long-term planning goals.
- In being functional, each proposed mitigation action is linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target completion deadlines. When necessary, funding sources are identified that can be used to assist in project implementation.

The first step in designing the *Mitigation Strategy* included the identification of mitigation goals. Mitigation goals represent broad statements that are achieved through the implementation of more specific mitigation actions. These actions include both hazard mitigation policies (such as the regulation of land in known hazard areas through a local ordinance), as well as hazard mitigation projects that seek to address specifically targeted hazard risks (such as the acquisition and relocation of a repetitive loss structure).

The second step involves the identification, consideration, and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue to be

considered as future mitigation opportunities are identified, as data and technology improve, as mitigation funding becomes available, and as the Plan is maintained over time.

The third and last step in designing the *Mitigation Strategy* is the selection and prioritization of specific mitigation actions for the Plan Area (found in Section 7: *Mitigation Action Plans*). Each County and participating jurisdiction has its own *Mitigation Action Plans* (MAP) that reflects the needs and concerns of that jurisdiction. The MAP represents an unambiguous and functional plan for action and is considered to be the most essential outcome of the mitigation planning process. A significant amount of time and effort was applied to this step in the process.

The MAP includes a prioritized listing of proposed hazard mitigation actions (policies and projects) for the plan counties and incorporated municipalities to complete. Each action has accompanying information, such as those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. The MAP provides the departments or individuals responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring success or progress over time. The cohesive collection of actions listed in the MAP can also serve as an easily understood menu of mitigation policies and projects for those local decision makers who want to quickly review the recommendations and proposed actions of the area Hazard Mitigation Plan.

In preparing each *Mitigation Action Plans* for the Plan Area, officials considered the overall hazard risk and capability to mitigate the effects of hazards as recorded through the risk and capability assessment process, in addition to meeting the adopted mitigation goals and unique needs of the planning area. Prioritization of the proposed mitigation actions was based on the factors outlined in subsection 6.1.1.

6.1.1 Mitigation Action Prioritization

The priority for each mitigation action was determined by the participating jurisdiction by identifying each action as high, moderate, or low priority. In order to make this decision, local government officials reviewed and considered the findings of the *Risk Assessment and Capability Assessment*. Other considerations included each individual mitigation action's effect on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary). Benefits include losses avoided and population protected from injury and loss of life.

6.2 Mitigation Goals

The primary goal of all local governments is to promote the public health, safety, and welfare of its citizens. In keeping with this standard, the Plan area counties and participating municipalities have developed 4 goal statements for local hazard mitigation planning in the Plan Area. These goals are presented in **Table 6.1**.

Each goal, purposefully broad in nature, serves to establish the parameters that were used to review and update existing mitigation actions and to aid in formulating new ones. The consistent implementation of mitigation actions over time will ensure that these mitigation goals are achieved.

Table 6.1: Regional Mitigation Goals

GOAL #1	Encourage conservation of natural environments including forests, surface waters, wetlands, floodplains, and stream corridors
GOAL #2	Evaluate and revise existing and/or create new plans, policies, procedures, regulations and ordinances that will help reduce the damaging effects of natural hazards through effective mitigation
GOAL #3	Increase capabilities to support and implement effective mitigation measures
GOAL #4	Increase public awareness of hazard mitigation and hazard risk

6.3 Identification and Analysis of Mitigation Techniques

In formulating the *Mitigation Strategy* for the Plan Area, a wide range of activities were considered in order to help achieve the established mitigation goals, in addition to addressing any specific hazard concerns. These activities were discussed during the HMPC meetings. In general, all activities considered by the planning committee can be classified under one of the following four broad categories of mitigation techniques: local plans and regulations, structure and infrastructure projects, natural systems protection, and education and awareness programs. These are described in detail below.

6.3.1 Local Plans and Regulations

Mitigation actions that fall under this category include government authorities, policies, or codes that influence the way land and buildings are developed and built. Examples of these types of actions include:

- Comprehensive plans
- Land use ordinances
- Subdivision regulations
- Development review
- NFIP Community Rating System
- Capital improvement programs
- Open space preservation
- Stormwater management regulations and master plans

6.3.2 Structure and Infrastructure Projects

Mitigation actions that fall under this category involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards. Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance (HMA) program. Examples of these types of actions include:

- Acquisitions and elevations of structures in flood-prone areas
- Utility undergrounding
- Structural retrofits

- Floodwalls and retaining walls
- Detention and retention structures
- Culverts
- Safe rooms

6.3.3 Natural Systems Protection

Mitigation actions that fall under this category minimize damage and losses and also preserve or restore the functions of natural systems. Examples of these types of actions include:

- Sediment and erosion control
- Stream corridor restoration
- Forest management
- Conservation easements
- Wetland restoration and preservation

6.3.4 Education and Awareness Programs

Mitigation actions that fall under this category inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as Storm Ready or Fire wise communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions. Examples of these types of actions include:

- Radio or television spots
- Websites with maps and information
- Real estate disclosure
- Presentations to school groups or neighborhood organizations
- Mailings to residents in hazard-prone areas
- StormReady
- Firewise

6.3.5 Other Types of Actions

Participating jurisdictions may wish to include other types of actions in their *Mitigation Action Plans* that do not fit into one of the categories listed above. In some cases, these may not be viewed as pure examples of mitigation, but they may be related in ways that make sense to the local government adopting the actions. Examples of these types of actions include:

- Warning systems
- Communications enhancements
- Emergency response training and exercises
- Evacuation management

- Sandbagging for flood protection
- Installing temporary shutters for immediate wind protection
- Other forms of emergency services

6.4 Selection of Mitigation Techniques for the Plan Area

To determine the most appropriate mitigation techniques for the jurisdictions in the Plan Area, the HMPC thoroughly reviewed and considered the findings of the *Risk Assessment and Capability Assessment* to determine the best activities for their respective communities.

Other considerations included the effect of each mitigation action on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary).

6.5 Plan Update Requirement

In keeping with FEMA requirements for plan updates, the mitigation actions identified in the previous Plan Area county plans were evaluated to determine their current implementation status. Updates on the implementation status of each existing mitigation action are provided as part of the *Mitigation Action Plans* found in Section 7.

Section 7: Mitigation Action Plans

The *Mitigation Action Plans* section includes a *Mitigation Action Plans* (MAP) for each participating jurisdiction. As stated in Section 6, each County and participating jurisdiction has its own MAP that reflects the needs and concerns of that jurisdiction. The MAP represents an unambiguous and functional plan for action and is considered to be the most essential outcome of the mitigation planning process.

The participating jurisdictions are listed below in the order that the MAPs are included in this section.

Alexander County

- Town of Taylorsville

Burke County

- City of Morganton
- Town of Connelly Springs
- Town of Drexel
- Town of Glen Alpine
- Town of Hildebran
- Town of Rutherford College
- Town of Valdese

Caldwell County

- City of Lenoir
- Town of Cahah's Mountain
- Town of Gamewell
- Town of Granite Falls
- Town of Hudson
- Town of Rhodhiss
- Town of Sawmills
- Village of Cedar Rock

Catawba County

- City of Claremont
- City of Conover
- City of Hickory
- City of Newton
- Town of Brookford
- Town of Catawba
- Town of Long View
- Town of Maiden

Mitigation Action Plan

Alexander County

Mitigation Action 1	Conduct outreach to the public regarding Alexander County’s Community Alert System to educate them on how to obtain information both pre- and post- disaster event.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Alexander County Emergency Services Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status	In progress: Implementation of community wide notification platform “Code Red” completed.

Mitigation Action 2	Improve information sharing with Duke Energy regarding its operational procedures for the movement of water through its hydro-electric systems on the Catawba River. This can be achieved by meeting formally at least once a year, when significant weather events are anticipated and when upgrades or improvements to the system are scheduled.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Alexander County Emergency Services Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status	Completed: Regularly meet and share information; establishment of critical contacts list and information flow accomplished.

Mitigation Action 3	Establish a protocol for monitoring the tailrace areas below the Catawba River dams during high water events to ensure security of the area and limiting public access.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Alexander County Emergency Services Department; Sheriff's Office
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status	Completed: Data sharing webpage established by Duke Energy for real time information and alerts to impacted areas.

Mitigation Action 4	Install generator transfer switch connections during the construction of new public facilities (schools, fire stations, County buildings, etc.).
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Alexander County Finance Department; Alexander County Emergency Services Department
Estimated Cost:	To be determined
Potential Funding Sources:	Alexander County General Fund; Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status	In progress. All VFDs now have generators. One newly constructed elementary school has generator, work underway at new county offices to install transfer switch.

Mitigation Action 5	Integration of a cooperative hazard mitigation program into new development, commercial districts, infrastructure, and land use planning.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Alexander County Emergency Services Department; Alexander County Planning Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	High
2019 Status	In progress. As new development and land use planning occurs

Mitigation Action 6	Promote a standard hookup for emergency generators such that any portable generator can be simply connected to it for supply of power to vital circuits in homes and/or public buildings. Priority locations are nursing homes, schools, and government buildings.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Alexander County Emergency Services Department; American Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security: EMPG, HMGP, Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate to High
2019 Status	In progress: Continue to persuade adult care facilities and health care providers of need for transfer switches

Mitigation Action 7	To establish, where feasible, additional emergency response forces, by at least 10%, that are trained, equipped and prepared to respond to a variety of emergency and disaster situations. This concept is concurred by Alexander County and the Town of Taylorsville.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm, Lightning and Hail; Tornado; Wildfire; Drought; Winter Weather
Lead Agency/Department Responsible:	Alexander County Manager and Commissioners
Estimated Cost:	Local staff time only
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Low

Mitigation Action 7	To establish, where feasible, additional emergency response forces, by at least 10%, that are trained, equipped and prepared to respond to a variety of emergency and disaster situations. This concept is concurred by Alexander County and the Town of Taylorsville.
2019 Status	In progress. Due to declining interest in volunteerism. Additional funding has been secured for part time rescue and VFD daytime staffing needs; Volunteer fire fighter incentive program funding secured and implemented; County CERT team created and trained to assist with response and recovery activities

Mitigation Action 8	Retrofit or relocate residential structures in 100-year floodplain. Recent count of structures inside the 100-year floodplain indicates that flooding could occur of such magnitude to cause a significant impact on citizens. This action will depend upon state and federal assistance through the “buy-out” program for floodplains and flood-prone areas. Zero tolerance for persons building in floodplain or flood-prone areas will be incorporated.
----------------------------	---

Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Alexander County Planning Department; Alexander County Emergency Services Department
Estimated Cost:	To be determined during the feasibility phase
Potential Funding Sources:	Alexander County; State of North Carolina; Federal Government
Implementation Schedule:	5-10 years
Priority (High, Moderate, Low):	Moderate
2019 Status	Deferred: No progress due to funding

Mitigation Action 9	Retrofit critical facilities to reduce collapsing materials. Funding is the most important issue for this action. Public education and awareness must be accomplished prior to implementations.
----------------------------	--

Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Alexander County Building Inspection Department; Alexander County Emergency Services Department
Estimated Cost:	To be determined during the feasibility phase
Potential Funding Sources:	Alexander County and Hazard Mitigation Grant monies
Implementation Schedule:	5-10 years
Priority (High, Moderate, Low):	Low
2019 Status	Deferred: No progress due to funding

Town of Taylorsville

Mitigation Action 1	Maintain street rights of way and ditches to prevent damage to streets and property in the event of a natural hazard occurrence.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Thunderstorm, Lightning, and Hail; Hurricane and Tropical Storm; Winter Weather
Lead Agency/Department Responsible:	Town of Taylorsville Public Works
Estimated Cost:	\$100,000
Potential Funding Sources:	Power bill revenue
Implementation Schedule:	2025
Priority (High, Moderate, Low):	High
2019 Status	In progress: Work has been done to widen streets and improve storm water drainage.

Mitigation Action 2	Improve drainage on Muddy Creek.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Floods; Thunderstorms; Hurricanes and Tropical Storms
Lead Agency/Department Responsible:	Town of Taylorsville; North Carolina Department of Transportation (NCDOT); Alexander County
Estimated Cost:	>\$200,000
Potential Funding Sources:	State/federal grants
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status	Completed: New culvert installed.

Mitigation Action 3	Assist Alexander County with all mitigation actions that have a countywide impact and that benefit the Town of Taylorsville.
Category:	Multiple
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Taylorsville
Estimated Cost:	As funded by the County
Potential Funding Sources:	Local, state, federal grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Low
2019 Status	In progress: A unified development ordinance has been adopted that combines the County and Town of Taylorsville zoning districts.

Mitigation Action 4	In coordination with Alexander County, conduct outreach to the public regarding Alexander County's Community Alert System to educate them on how to obtain information both pre- and post-disaster event.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Taylorsville
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status	In progress: Code Red Alert System, Storm Ready community program

Mitigation Action 5	To establish, where feasible, additional emergency response forces, by at least 10%, that are trained, equipped and prepared to respond to a variety of emergency and disaster situations. This concept is concurred by Alexander County and the Town of Taylorsville.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm, Lightning and Hail; Tornado; Wildfire; Drought; Winter Weather
Lead Agency/Department Responsible:	Town of Taylorsville
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Alexander County General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Low
2019 Status	In progress due to declining interest in volunteerism. Additional funding has been secured for part time rescue and VFD daytime staffing needs; Volunteer fire fighter incentive program funding secured and implemented; County CERT team created and trained to assist with response and recovery activities

Burke County

Mitigation Action 1	Review/update Flood Damage Prevention Ordinance.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Building Inspections Department; Burke County Emergency Services Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Initiated in 2007 and reviewed annually based on changing hazard information. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Revise/update regulatory floodplain maps of any known flood areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Land Records/GIS Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: The County adopts and utilizes current North Carolina Floodplain Mapping Program data. Updates coincide with state map updates.

Mitigation Action 3		Adopt zoning and subdivision regulations in floodplain, steep slope, and wildfire hazard areas.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Emergency Services Department; Burke County Building Inspections Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Annually	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Completed and reviewed annually. Floodplain ordinance adopted. All development projects reviewed for floodplain compliance prior to issuance.	

Mitigation Action 4		Update Comprehensive Land Use Plan.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Planning & Development Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	2025	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: The Comprehensive Land Use Plan is reviewed and updated annually for the last 5 years and will continue to be updated annually.	

Mitigation Action 5		Step up centralized coordinated permitting process, including effective filing/permitting system to ensure compliance with floodplain regulations.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Burke County Emergency Services Department; Burke County Planning & Development Department; Burke County Building Inspections Department; Burke County Environmental Health Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	2025	
Priority (High, Moderate, Low):	Moderate	

Mitigation Action 5	Step up centralized coordinated permitting process, including effective filing/permitting system to ensure compliance with floodplain regulations.
2019 Status:	To be continued: Updating for 2019/2020. Annual reviews for the last 5 years

Mitigation Action 6	Upgrade and maintain Early Warning System.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Emergency Services Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal; private (Duke Energy) grants
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Continuous monitoring. Duke Energy maintains the early warning system for dam failures and potential hazards dealing with Lake James. Hyper-Reach is used for a reverse 911 system to notify residences of potentially hazardous conditions. A local radio station is used for National Weather Service severe weather.

Mitigation Action 7	Establish a program for evaluating and improving critical services (roads, bridges, water, sewer, electricity, etc.) and critical facilities (fire, rescue, medical, etc.) to reduce risk to natural hazards.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Emergency Services Department; Burke County Planning & Development Department; North Carolina Department of Transportation (NCDOT)
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	Annually
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Review occurred annually over the last 5 years to coordinate and collaborate among agencies.

Mitigation Action 8	Prepare countywide stormwater management plan covering the Catawba River basin.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood

Mitigation Action 8	Prepare countywide stormwater management plan covering the Catawba River basin.
Lead Agency/Department Responsible:	Burke County Planning & Development Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state grants
Implementation Schedule:	2020
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Updated in 2015. Reviewed annually over the last 5 years to coordinate among agencies.

Mitigation Action 9	Prepare development plan for relocating public infrastructure out of hazardous areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Building Inspections Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	To be continued: The Comprehensive Land Use Plan is reviewed and updated annually and during Hazard Mitigation Plan Update.

Mitigation Action 10	Improve Hazardous Warning and Response Plan, which outlines warning and evacuation procedures for critical facilities, instructions for getting persons out of flood-prone or isolated areas, and protocols for controlling vehicles on evacuation routes.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Emergency Services Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local, State, Federal
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Updated plan in 2015. Reviewed and revise annually for opportunities to integrate with mitigation planning

Mitigation Action 11		Review/update Flood Damage Prevention Ordinance.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Building Inspections Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: Initiated in 2007 and reviewed annually for possible improvements	

Mitigation Action 12		Adopt zoning and subdivision regulations in floodplain, steep slope, and wildfire areas.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Planning & Development Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Annually	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Completed and reviewed annually. Floodplain ordinance adopted. All development projects reviewed for floodplain compliance prior to issuance.	

Mitigation Action 13		Revise/update regulatory floodplain maps.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Land Records/GIS Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local; state; federal grants	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: The County adopts and utilizes current North Carolina Floodplain Mapping Program data. Updates coincide with state map updates.	

Mitigation Action 14		Acquire federal funds to purchase destroyed or substantially damaged properties and relocate households.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Emergency Services Department; Burke County Planning & Development Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	State; federal grants	
Implementation Schedule:	Case-by-case basis	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: Continuous on a case-by-case basis. In 2019, CDBG monies were used to repair 22 residential properties. No properties were purchased, and no households were relocated. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 15		Complete Community Rating System (CRS) application. Ensure participation in the National Flood Insurance Program (NFIP).
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Burke County Emergency Services Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Within five years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: Requires continuous monitoring. All development applications reviewed for floodplain compliance prior to issuance. Floodplain areas identified on applicable zoning permits. Burke County does not intend to apply for CRS.	

Mitigation Action 16		Update 1993 Comprehensive Land Use Plan.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Planning & Development Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Annually	
Priority (High, Moderate, Low):	High	

Mitigation Action 16	Update 1993 Comprehensive Land Use Plan.
2019 Status:	To be continued: The Comprehensive Land Use Plan is reviewed and updated annually as needed. Measurable progress is slow due to staff availability and funding.

Mitigation Action 17	Step up centralized, coordinated permitting process including effective filing/permitting system to ensure compliance with floodplain regulations.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Burke County Building Inspections Department; Burke County Planning & Development Department; Burke County Emergency Services Department; Burke County Environmental Health Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	Within five years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Updating in 2019/2020. Measurable progress is slow due to staff availability and funding.

Mitigation Action 18	Develop a comprehensive Capital Improvement Plan for public facilities that steers capital projects out of hazardous areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Burke County Management; all departments
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Continuous monitoring. No public facilities have been built since last plan update. All capital improvements made have been on facilities that are out of hazardous area.

Mitigation Action 19	Maintain library on retrofitting techniques. Publicize through bulletins/newsletters.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Building Inspections Department; Burke County Emergency Services Department; Burke County Planning & Development Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Floodplain manager maintains documentation related to suggested retrofitting techniques. There have been no activities related to the website, newsletter, etc. within the past 5 years.

Mitigation Action 20	Continuation and expansion of E-911 Addressing Program to include all municipalities with goal to cover entire county with one system.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Emergency Services Department; 911 Addressing; Burke County Land Records/GIS Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Requires continuous monitoring. Our addressing office along with the E-911 Center updates the addresses on a continuous basis when new residences and businesses are built. Before building permits are issued, a 911 address must be given for the new construction project.

Mitigation Action 21	Drainage system management—prepare countywide storm water management plan covering the Catawba River basin.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Burke County Planning & Development Department; West Piedmont Council of Governments (WPCOG)
Estimated Cost:	N/A due to this action being completed in 2015.
Potential Funding Sources:	Local; state
Implementation Schedule:	To be updated in 2015
Priority (High, Moderate, Low):	High
2019 Status:	Completed in 2015

Mitigation Action 22	Upgrade and maintain Early Warning System.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Burke County Emergency Services Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal; private (Duke Energy) grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Continuous monitoring. Duke Energy maintains the early warning system for dam failures and potential hazards dealing with Lake James. Hyper-Reach is used for a reverse 911 system to notify residences of potentially hazardous conditions. A local radio station is used for National Weather Service severe weather.

Mitigation Action 23	Acquisition of properties susceptible to flood damage and wildland fires.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood, Wildfire
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Building Inspections Department; Burke County Emergency Services Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Under annual review. No property acquisitions were conducted within the past 5 years. No federal grant funds were applied for or received.

City of Morganton

Mitigation Action 1	Review/update Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events (CRS 430).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Morganton Planning Commission; City Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The City is currently in the process of amending its Zoning Regulations to require appropriate open space preservation in flood hazard areas. The City is also working with the surrounding jurisdictions to promote consistent land use policies, preserve open space, and maintain consistent utility extension policies in flood-prone areas.

Mitigation Action 2	Revise/update regulatory floodplain maps (CRS 410).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Federal Emergency Management Agency (FEMA); North Carolina Department of Environment and Natural Resources (NCDENR); North Carolina Division of Emergency Management (NCDEM)
Estimated Cost:	Local staff time
Potential Funding Sources:	Local and State grants; FEMA
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Initiated in 2007. The City continues to work with FEMA and NCEM to appropriately adopt updated flood maps as released Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Update Land Development Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Morganton Planning Commission; City Council
Estimated Cost:	\$175,000
Potential Funding Sources:	Local staff time

Mitigation Action 3		Update Land Development Plan.
Implementation Schedule:	2025	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Completed Mission 203 Land Development Plan in 2009. This 20-year plan initiates new policies that encourage preservation of open space along flood hazard areas.	

Mitigation Action 4		Merge E-911 dispatch programs to include all municipalities within the county to cover the entire county with one system.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	E-911/MIS	
Estimated Cost:	\$7 million	
Potential Funding Sources:	Local; State grants	
Implementation Schedule:	2014	
Priority (High, Moderate, Low):	High	
2019 Status:	Completed: City and local jurisdictions combined 911 dispatch through the construction of a new call center and consolidation of services. Completion and implementation was in the Fall 2014.	

Mitigation Action 5		Establish/maintain coordinated Drainage System Inspection Program.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	City of Morganton Public Works Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: The City Public Works Department appropriates funding in each fiscal year to address deficiencies in City maintained drainage systems. This includes annual cleaning and inspection of critical systems and repair and replacement of failed systems. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 6		Utilize an early warning system to ensure adequate evacuation time in case of a major hazard event.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Morganton Public Safety Department; Burke County Emergency Services	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local; State grants and staff time	
Implementation Schedule:	2019-2025	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Duke Energy maintains the early warning system for dam failures and potential hazards dealing with Lake James. Hyper-Reach is used for a reverse 911 system to notify residences of potentially hazardous conditions. A local radio station is used for National Weather Service severe weather.	

Mitigation Action 7		Establish a list of priority properties for acquisition in the event of another natural disaster.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	City of Morganton Development & Design Department, Public Information Office	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local Federal and state grants	
Implementation Schedule:	2019-2025	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: The City continues to identify and acquire high risk properties as funding is made available to eliminate catastrophic loss of life and damage to property. Most of these properties are incorporated into parks and greenways within flood-prone areas Measurable progress is slow due to staff availability and funding.	

Mitigation Action 8	Evaluate flood or access problems for critical facilities; develop recommendations for protecting critical parts (e.g., police and fire command centers); and identify alternate command posts, if necessary.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Morganton Public Safety Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The City is currently undertaking major upgrades to the City's wastewater sewer systems including plant renovations and line upgrades. These actions will help prevent infiltration of sewage during flooding events through upgrades. The City has also recently installed a new water plant generator in a location above flood hazard areas. This generator will serve as a power source backup during catastrophic events to maintain system drinking water.

Mitigation Action 9	Develop and implement a hazard awareness program to include: a) Elevation certificates. b) Flood Insurance Rate Map (FIRM) data. c) Bulletin on property protection measures and flood insurance. d) Other activities under CRS 310/320/330/340/440.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Morganton Development & Design Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2019-2025
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The City offers access to online Flood Elevation Certificates, FIRMs, and other flood mapping protection services through NCEM. City staff consults with property owners and developers as to how to access this information and obtain guidance on a routine basis.

Mitigation Action 10		Develop a tracking system to evaluate progress and revise mitigation activities as necessary.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Morganton Public Information Office	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	2019-2025	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Each year the City evaluates and improves upon the information it provides to the general public regarding mitigation activities. Weekly department head assessment meetings and interdepartmental review of the information provided generates routine updates through the City's website, CoMPAS Cable Programming, public awareness notices, press releases, and other educational brochures.	

Mitigation Action 11		Capital Improvements Program—development plan for relocating public infrastructure out of hazards areas.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Planning & Development Department; Burke County Building Inspections Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status:	In progress: Requires continuous monitoring. The only infrastructure Burke County has in hazardous areas is a Sewer Pump Station that is in a floodplain area. It is not possible to relocate the pump station due to the terrain and the cost to relocate. Any new projects are reviewed for hazardous areas before construction begins.	

Town of Connelly Springs

Mitigation Action 1		Require structures to be built in the floodplain to be constructed 2 feet above base flood elevation or be floodproofed.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Connelly Springs Planning Board; Burke County Building Inspections Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status:	To be continued: The Town contracts with Burke County for services provided by the Certified Floodplain Manager (CFM) to review all development within the floodplain. No known development has occurred in the floodplain over the past five years.	

Mitigation Action 2		Track rebuilding activities after severe storms and consider policies to minimize repetitive losses.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Connelly Springs Board of Alderman (Planning Board)	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: No severe storms have impacted the town in the past five years that would trigger this activity. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 3		Require floodproofing for structures not elevated 2 feet above base flood elevation.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Connelly Springs Planning Board; Burke County Building Inspections Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Local, Federal and State grant funded	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status:	In progress: All development within the floodplain is reviewed by the Burke County Floodplain Manager in accordance with a Resolution of Intent adopted September 8, 2003.	

Mitigation Action 4		Require/maintain FEMA elevation certificates for all new permits for buildings or improvements in the floodplain.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Connelly Springs Board of Alderman (Planning Board); Burke County Building Inspections Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local, Federal and State grant funded	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status:	In progress: No known new development has occurred in the floodplain.	

Mitigation Action 5		Receive and begin using regulatory floodplain maps.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Connelly Springs Board of Alderman (Planning Board)	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local, Federal and State grant funded	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: The Town adopts and utilizes current North Carolina Floodplain Mapping Program data. Updates coincide with state map updates.	

Mitigation Action 6	Review zoning and subdivision regulations to better control future development in these susceptible areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Connelly Springs Board of Alderman (Planning Board)
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: The Town has contracted with Burke County to provide zoning and code enforcement services which has identified gaps in zoning enforcement which are currently being addressed.

Mitigation Action 7	Work in cooperation with Burke County, surrounding local governments, and state and federal agencies to maintain appropriate mitigation strategies.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Connelly Springs Board of Alderman (Planning Board)
Estimated Cost:	To be determined
Potential Funding Sources:	Local, Federal and State grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Connelly Springs participates in interagency meetings organized by Burke County and encourages participation in projects developed at the county level to the residents of Connelly Springs such as the E-911 Addressing System and sign-up for the emergency notification system (Hyper Reach). Projects are shared with residents through town council meetings, traditional media, and community flyers. The Town currently contracts zoning and code enforcement activities with Burke County and planning duties with the Western Piedmont Council of Governments (WPCOG). Measurable progress is slow due to staff availability and funding.

Town of Drexel

Mitigation Action 1	Revise zoning and subdivision regulations in floodplain areas to better control future development in these hazard susceptible areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Drexel Zoning Board; Town Council
Estimated Cost:	To be determined (staff time only)
Potential Funding Sources:	Town of Drexel General Fund
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status	To be continued. New Subdivision Ordinance was adopted in 2014. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Revise subdivision regulations to require all perennial and intermittent streams be shown on plats.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Drexel Zoning Board; Town Council
Estimated Cost:	To be determined (staff time only)
Potential Funding Sources:	Town of Drexel General Fund
Implementation Schedule:	2019-2025
Priority (High, Moderate, Low):	Moderate
2019 Status	To be continued: Currently required for major subdivisions.

Mitigation Action 3	In cooperation with Burke County, assist in establishing a program for evaluating and improving critical services (roads, bridges, water, sewer, electricity, etc.) and critical facilities (fire, rescue, medical, etc.) to reduce risk to natural hazards.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Drexel Town Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	Annually
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress. All Critical Facilities are located at Town hall but could use improvements. More than Burke County. The whole region is taking initiative (WPCOG).

Mitigation Action 4	In cooperation with Burke County, assist (as needed) in preparing a countywide stormwater management plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Drexel Town Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; state grants
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress. No measurable activity occurred due to funding, limited staff time.

Mitigation Action 5	Install generator transfer switch connections during the construction of new public facilities (schools, fire stations, public buildings, etc.).
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Drexel Planning and Zoning Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local; State, Federal Hazard Mitigation Grant Program (HMGP)
Implementation Schedule:	2025
Priority (High, Moderate, Low):	High
2019 Status	Deferred. Town has not built any new public facilities.

Town of Glen Alpine

Mitigation Action 1		Maintain continued compliance with the National Flood Insurance Program (NFIP) and NPDES Phase 2 stormwater control compliance.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Glen Alpine Zoning Department/Code Enforcement Officer	
Estimated Cost:	\$1,000	
Potential Funding Sources:	General budget	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: The Town continues to review on an annual basis ordinances and compliance. Monitoring of stormwater drains and best management practices (BMPs) on all Town stormwater drains and property.	

Mitigation Action 2		The Town, through continuous programs, will offer education in fire prevention, safety training and mitigating natural hazards to the schools and citizens focusing on talks to civic groups, children, Town citizens, and elderly adults.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Glen Alpine Fire Department	
Estimated Cost:	\$500	
Potential Funding Sources:	General budget	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: The Fire Department visits schools and civic clubs annually to present programs on fire prevention and safety, natural hazard awareness.	

Mitigation Action 3	The Planning Board reviews on an annual basis local zoning ordinances and land use plans for subdivisions, construction of new homes, and commercial development.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Glen Alpine Planning Board; Zoning Officer
Estimated Cost:	\$2,000
Potential Funding Sources:	General fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: The Planning Board and staff meet monthly to review ordinances, subdivision plans, future projects, and public concerns.

Mitigation Action 4	The Glen Alpine Fire Department, Burke County Emergency Management, and North Carolina Emergency Management will continue to evaluate and conduct a detailed needs assessment of emergency services, response, and critical needs.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Glen Alpine Fire Department
Estimated Cost:	\$1,000
Potential Funding Sources:	General budget; grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Fire Department, Burke County, and state emergency management review emergency service capabilities and needs. Drills and training is conducted annually with multiple agencies.

Town of Hildebran

Mitigation Action 1	Install quick-connect emergency generator hook-ups for remaining critical facilities.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Hildebran Town Council
Estimated Cost:	\$75,000
Potential Funding Sources:	Local funds; grants
Implementation Schedule:	0-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress: Look at Municipal Complex and Town Hall. no measurable activity occurred due to funding, limited staff time.

Mitigation Action 2	Participate in public outreach on hazard mitigation both locally and regionally.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Hildebran Planning Department
Estimated Cost:	<\$5000
Potential Funding Sources:	Local funds; grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status	To be continued: The Town has participated in local outreach and will continue in the future.

Mitigation Action 3	Inventory all critical facilities' capabilities and needs.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Hildebran Planning Department
Estimated Cost:	<\$5,000
Potential Funding Sources:	Local funds
Implementation Schedule:	0-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4		Maintain updated database of all infrastructure.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Hildebran Planning Department; Town of Hildebran Engineering Department	
Estimated Cost:	<\$5,000	
Potential Funding Sources:	Local funds; grants	
Implementation Schedule:	0-2 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status	Deferred: Town of Hildebran does not own any utility infrastructure. And no current database has been developed for other infrastructure (buildings).	

Mitigation Action 5		Manage future development in flood-prone areas.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Hildebran Planning Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status	In progress: The Town will continue to work with property owners and developers to look at the BMP for development in flood-prone areas outside of the designated floodplain. At this time no development has occurred in flood-prone or floodplain areas.	

Mitigation Action 6		In cooperation with Burke County, assist in establishing a program for evaluating and improving critical services (roads, bridges, water, sewer, electricity, etc.) and critical facilities (fire, rescue, medical, etc.) to reduce risk to natural hazards.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Hildebran Planning Department; Town of Hildebran Engineering Department	
Estimated Cost:	Staff time	
Potential Funding Sources:	Local; state; federal grants	
Implementation Schedule:	5 Year review	

Mitigation Action 6	In cooperation with Burke County, assist in establishing a program for evaluating and improving critical services (roads, bridges, water, sewer, electricity, etc.) and critical facilities (fire, rescue, medical, etc.) to reduce risk to natural hazards.
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress: All Critical Facilities (fire, rescue, medical, etc.) are County owned but have a presence in Town. More than Burke County. The whole region is taking initiative (WPCOG).

Mitigation Action 7	In cooperation with Burke County, assist (as needed) in preparing a countywide stormwater management plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Hildebran Planning Department; Town of Hildebran Engineering Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local; state grants
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	Phase II Stormwater Implementation.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Severe Storms
Lead Agency/Department Responsible:	Town of Hildebran Planning Department; Town of Hildebran Engineering Department
Estimated Cost:	Unspecified
Potential Funding Sources:	Local funds; grants
Implementation Schedule:	Not immediate
Priority (High, Moderate, Low):	Low
2019 Status:	Deleted. The Town received an exemption based on population.

Town of Rutherford College

Mitigation Action 1	Require and maintain FEMA elevation certificates for new buildings or improvements to buildings on lots including portions of the 100-year floodplain (CRS 31).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Rutherford College Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Low
2019 Status:	Completed.

Mitigation Action 2	Revise/update regulatory floodplain maps (CRS 410).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Federal Emergency Management Agency (FEMA)
Estimated Cost:	Unspecified
Potential Funding Sources:	State funding
Implementation Schedule:	As needed
Priority (High, Moderate, Low):	Low
2019 Status:	Completed.

Mitigation Action 3	Prepare and implement a town-wide stormwater management plan to meet federal Phase II stormwater regulations. Complete stormwater map and conduct stormwater outreach.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Erosion; Sinkhole
Lead Agency/Department Responsible:	Town of Rutherford College Town Council
Estimated Cost:	\$5,000
Potential Funding Sources:	Local
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: 50% complete

Mitigation Action 4	Require 50-foot buffers for new development activities along the Catawba River.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	North Carolina Department of Water Quality
Estimated Cost:	To be determined
Potential Funding Sources:	State funding
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Low
2019 Status:	Completed.

Mitigation Action 5	Maintain portable backup generator for emergency power needs.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Rutherford College Town Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	Immediate (1 year)
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Obtain short-wave radio to provide direct communication with Burke County use existing walkie-talkies with number assigned to Burke County EMS.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Rutherford College Public Works Department
Estimated Cost:	\$1,000
Potential Funding Sources:	Local grant
Implementation Schedule:	2024
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 7		Revise subdivision regulations to require all perennial and intermittent streams be shown on subdivision plats.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Rutherford College Administration Department	
Estimated Cost:	Unspecified	
Potential Funding Sources:	Local funding	
Implementation Schedule:	2009-2010	
Priority (High, Moderate, Low):	Medium	
2019 Status:	Completed.	

Mitigation Action 8		Trim trees along town power lines as needed.
Category:	Natural Systems Protection	
Hazard(s) Addressed:	Winter Weather	
Lead Agency/Department Responsible:	Duke Energy	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local funding	
Implementation Schedule:	Immediate (1 year)	
Priority (High, Moderate, Low):	High	
2019 Status:	Completed.	

Mitigation Action 9		Conduct outreach to educate the public on pre-disaster preparation targeting schools, churches, civic groups, etc.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Rutherford College Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding	
Implementation Schedule:	1-3 years	
Priority (High, Moderate, Low):	High	
2019 Status:	New Action	

Town of Valdese

Mitigation Action 1	Promote the advancement of early warning to the public by providing All Hazard Weather Alert radios at little or no cost to the general public and ensuring the placement of the radios in all schools, daycares, churches, etc.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Valdese Fire Department; Burke County Emergency Management
Estimated Cost:	To be determined
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: All Hazards Radios to be purchased prior to June 30, 2025 and distributed.

Mitigation Action 2	Conduct outreach to educate the public on pre-disaster preparation targeting schools, churches, civic groups, etc.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Valdese Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Pre-disaster preparation education has been assigned to new Valdese Fire Marshal duties.

Mitigation Action 3		Install quick-connect emergency generator transfer switch at Town of Valdese Water Department Pump Station.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Valdese Water Department	
Estimated Cost:	\$90,000	
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	Complete: Installed new generator at Valdese Water Plant. Cost = \$856,000. / Operational as of November 2018	

Mitigation Action 4		Maintain routine inspection and clearing of storm drainage system.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Valdese Public Works Department	
Estimated Cost:	Minimal (staff time only)	
Potential Funding Sources:	Town of Valdese General Fund	
Implementation Schedule:	2025	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.	

Mitigation Action 5	Maintain compliance with the National Flood Insurance Program (NFIP) by: a) Providing related training periodically for Town Planning Director and Town Emergency Management Coordinator. b) Encouraging or requiring certain staff positions to obtain Certified Floodplain Manager (CFM) certification.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Valdese Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	Town of Valdese General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Valdese is continuing to work with personnel to fulfill this action. Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	In cooperation with Burke County, assist in establishing a program for evaluating and improving critical services (roads, bridges, water, sewer, electricity, etc.) and critical facilities (fire, rescue, medical, etc.) to reduce risk to natural hazards.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Valdese Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred due to a lack of funding.

Mitigation Action 7		In cooperation with Burke County, assist (as needed) in preparing a countywide stormwater management plan.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Valdese Public Works Department / Wastewater Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Local; state grants	
Implementation Schedule:	Revise in 2015	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	Complete: Town of Valdese has Storm Water Management Program in place, with an assigned Director.	

Mitigation Action 8		Develop an open space plan, target properties for acquisition, and fund an acquisition program.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Valdese Planning Department	
Estimated Cost:	Unfunded (local staff time)	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	Deferred due to a lack of funding.	

Mitigation Action 9		Implement drainage system management project.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Valdese Public Works Department	
Estimated Cost:	Minimal (staff time only)	
Potential Funding Sources:	Town of Valdese General Fund	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: This project is addressed in the Town of Valdese Storm Water and Watershed Ordinances and will be continuous as part of that mechanism.	

Mitigation Action 10		Implement an early warning system.
Category:	Education and Awareness Programs	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Emergency Management; Town of Valdese Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: Plan to be completed by 2024	

Mitigation Action 11		Establishment of reserve fund for relocating damaged infrastructure.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Valdese Administration	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	Deferred due to lack of funding.	

Mitigation Action 12		Improve Hazard Warning and Response Plan.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Burke County Emergency Management; Town of Valdese Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Local; state; federal grants	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.	

Caldwell County

Mitigation Action 1	Require a finished floor elevation certificate for all development within the Special Flood Hazard Area (SFHA) within both incorporated and unincorporated portions of the county. All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined SFHA without the submittal of the required elevation certificate.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department; Planning Staff of all municipalities in Caldwell County
Estimated Cost:	\$50,000
Potential Funding Sources:	Existing staff and administrative resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In Progress; No measurable progress has been made due to a lack of funding and staff time.

Mitigation Action 2	Maintain a map information service involving the following: a) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. b) Provide information regarding the flood insurance purchase requirement. c) Maintain historical and current FIRMs. d) Advertise once annually in the local newspaper. e) Provide information to inquirers about local floodplain management requirements.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department; administrative staff of all participating jurisdictions within Caldwell County
Estimated Cost:	\$85,000
Potential Funding Sources:	Tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Caldwell County will annually mail a notice to all property owners whose land is located within a Special Flood Hazard Area (SFHA). The notice should clearly state that the recipient's property is susceptible to flooding and provide information pertinent to emergency evacuation and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$8,500
Potential Funding Sources:	Maintain present activities under the funding available
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	The Caldwell County Planning Department will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a Special Flood Hazard Area (SFHA). Caldwell County will provide these agencies with brochures documenting the concerns relating to development located within flood-prone areas and ways that homeowners may make their homes more disaster resistant to strong winds, lightning, and heavy rains.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Winter Weather; Wildfire; Thunderstorm; Windstorm
Lead Agency/Department Responsible:	Caldwell County Planning Department; Caldwell County Emergency Management Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	<p>The Caldwell County Planning Department and Caldwell County Building Inspections will make information regarding hazards and development regulations within floodplains available through the following:</p> <ul style="list-style-type: none"> a) Ensuring that the local library maintains information relating to flooding and flood protection. b) Providing a link on their website to FEMA resources addressing flooding and flood protection. c) Each of the county's municipalities, if a website is in place, will provide a link on their website to FEMA resources addressing flooding and flood protection, sheltering, evacuation procedures, disaster preparedness, and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Winter Weather; Thunderstorm; Dam/Levee Failure; Tornado
Lead Agency/Department Responsible:	Caldwell County Building Inspections and Planning Department; administrative staff of all participating jurisdictions within the county
Estimated Cost:	\$1,200 per year
Potential Funding Sources:	Maintain present activities under the funding available
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	<p>The Caldwell County Building Inspections will provide comprehensive services regarding planning and development activities within the defined Special Flood Hazard Area (SFHA) and issues relating to the construction of disaster resistant structures. These services will include:</p> <ul style="list-style-type: none"> a) Providing site specific flood and flood-related information on an as-needed basis. b) Maintaining a list of contractors with experience in floodproofing and retrofit techniques. c) Providing information on wind proofing construction methods for new and renovated structures. d) Maintaining materials providing an overview of how to select a qualified contractor. e) Making site visits upon request to review occurrences of flooding, drainage problems, and sewer problems. If applicable, the inspector should provide one-on-one advice to the property owner. f) Providing advice and assistance regarding CRS activity 530. g) Advertising the availability of this service once annually within the local newspaper. h) Maintaining a log of all individuals assisted through this County service including all site visits.
---------------------	--

Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections; Caldwell County Planning Department
Estimated Cost:	Maintain present activities under the funding available
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	Caldwell County and its municipalities will continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. All parties will continue to proactively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Building Inspections; Caldwell County Planning Department
Estimated Cost:	\$250,000+
Potential Funding Sources:	Grant fund resources; Lenoir EMS Base Budget
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	The Caldwell County Planning Department will maintain a comprehensive Geographic Information System (GIS) with current Flood Insurance Rate Map (FIRM) panels in an effort to make this information readily available to County citizens. In addition to this digital data, bound copies of all historical and current FIRM panels will be maintained within the Caldwell County Planning Department office.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department; Caldwell County Information Technology Department
Estimated Cost:	Unspecified
Potential Funding Sources:	Existing department and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed.

Mitigation Action 9	The Caldwell County Mitigation Advisory Committee, in conjunction with all municipal jurisdictions participating in the plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund

Mitigation Action 9	The Caldwell County Mitigation Advisory Committee, in conjunction with all municipal jurisdictions participating in the plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Caldwell County has participated in the regionalization of the Caldwell County hazard mitigation plan and is now a participating jurisdiction in the Unifour Regional Hazard Mitigation Plan. This process has taken the place of the previously planned county-level 5-year plan update.

Mitigation Action 10	Caldwell County, as well as all participating jurisdictions, will continue to support the North Carolina Office of Dam Safety's efforts to monitor and inspect all dams throughout the county, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; administrative staff of all participating jurisdictions
Estimated Cost:	\$2,500 per year
Potential Funding Sources:	Caldwell County Emergency Management Budget for registry
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 11	Caldwell County will maintain participation in the Community Rating System (CRS) program. Additionally, Caldwell County will work with all participating jurisdictions, upon request, to secure inclusion in the CRS program. Currently, only unincorporated Caldwell County is a participant in the program.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flooding; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department; elected boards of all participating jurisdictions
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 12	The Caldwell County Emergency Management Department will continue to work closely with the American Red Cross on the management and, when necessary, operation of emergency shelter facilities within the county. The County will operate only in a support role in dealing with individual shelter issues.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	American Red Cross; Caldwell County Emergency Management Department
Estimated Cost:	\$200,000
Potential Funding Sources:	Grant funding and possible donations
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 13	Caldwell County will work with the American Red Cross, and will attempt to obtain funding for locating switches and generators at all emergency shelter locations.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; American Red Cross
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources or grant funding
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: DPR controlled and no funding in the past two years. Looking for new ways to fund this project.

Mitigation Action 14	The Caldwell County Emergency Management Department will continue to coordinate with the Caldwell County Public Works Department, as well as all participating jurisdictions, regarding the monitoring of water resources statewide. When necessary the County will institute measures to conserve water resources according to the County's Drought Management Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department; administrative staff of all participating jurisdictions
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 15	Caldwell County, as well as all participating jurisdictions, will maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; administrative staff of all participating jurisdictions
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 16	Caldwell County will assist all communities within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; elected boards of all participating jurisdictions
Estimated Cost:	To be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 17	The Caldwell County Emergency Management Department will continue to work on the establishment of a comprehensive special needs registry. This effort will involve the cooperation of all participating jurisdictions.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; administrative staff of all participating jurisdictions
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	Deleted. This activity has fallen back into the hands of the North Carolina Department of Health and Human Services (NCDHHS). They have the legal obligation to maintain this type of registry.

Mitigation Action 18	The City of Lenoir will continue to serve an administrative role in the implementation and enforcement of the County's comprehensive stormwater management program. The stormwater regulations outlined within this program shall apply to Gamewell, Cahah's Mountain, Lenoir, Hudson, Sawmills, and Granite Falls.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Lenoir Planning and Building Inspections Department; administrative staff of Caldwell County; administrative staff of all municipalities within the county
Estimated Cost:	Staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 19	Caldwell County will consider the development and adoption of a slope control ordinance based on the findings outlined within this plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Landslide
Lead Agency/Department Responsible:	Caldwell County Planning Department; Caldwell County Board of Commissioners
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	In progress. The Caldwell County Planning Board holds the future of this proposed ordinance. Measurable has been slow to due to lack of funding priorities.

Mitigation Action 20	In an effort to incorporate discussions relating to the provision of electric service during or following natural hazard events, Caldwell County will consider inviting a staff member from each of the electric service providers operating in the county to attend and participate in all Local Emergency Planning Commission (LEPC) meetings.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Winter Weather; Thunderstorm; Windstorm
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; Electric Service Providers
Estimated Cost:	Local staff time
Potential Funding Sources:	Existing department and staff resources
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. Both Electrical Cooperatives have representation on the LEPC as of 2013.

City of Lenoir

Mitigation Action 1	Continue enforcement of Lenoir’s Flood Damage Prevention Ordinance. This ordinance regulates construction and development activities within Special Flood Hazard Areas (SFHAs).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Lenoir Planning Department
Estimated Cost:	Existing staff resources
Potential Funding Sources:	General Fund; User Fees for Floodplain Development Permits
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	The City of Lenoir will maintain compliance with all of the Minimum Measures outlined in the City’s Stormwater Management Plan, consistent with the requirements of the NC DEQ and the US EPA. These minimum measures include public input, public outreach and education, post construction stormwater controls, illicit discharge monitoring and enforcement, construction site run-off controls, and good housekeeping at City facilities.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood; Severe Storm
Lead Agency/Department Responsible:	Western Piedmont Council of Governments
Estimated Cost:	\$51,000/year
Potential Funding Sources:	General Fund; exploring a Stormwater Utility Fee
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High (FEDERAL MANDATE)
2019 Status:	Deleted. No longer applicable. The City of Lenoir has opted to contract with the WPCOG for services related to implementing and maintaining a compliant NPDES permit as an MS4 under Phase 2 requirements of the Clean Water Act. The towns of Lenoir, Gamewell, Cahah’s Mountain, Hudson, Sawmills, and Granite Falls are no longer co-permitted under a joint NPDES permit. The other previously co-permitted towns are individually responsible for compliance; however, the WPCOG will also be providing these services to the other towns in Caldwell as well as others in the 4-county Unifour region.

Mitigation Action 3	Remove obstructions from public drainage ways or where threats to public infrastructure have been identified. The removal of obstructions will lessen the risk of flooding and damage to roadways and bridges.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood; Severe Storm; Wind
Lead Agency/Department Responsible:	City of Lenoir Public Works Department
Estimated Cost:	Existing staff resources
Potential Funding Sources:	General Fund, exploring the adoption of a Stormwater Utility Fee
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Continue to provide educational outreach to civic groups, neighborhood groups, school children, and similar persons as to the importance of fire safety and prevention.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	City of Lenoir Fire Department
Estimated Cost:	Existing staff resources
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Explore options for pruning trees, clearing tree limbs hanging over rights of way, and removal of dead trees on public and private property to enhance safety and improve function during an emergency. In addition, develop an informational handout with resources to encourage the private clearing of unhealthy or dead trees/limbs on private property.
Category:	Natural Systems Protection; Education and Awareness Programs
Hazard(s) Addressed:	Severe Storm; Wind; Fire
Lead Agency/Department Responsible:	City of Lenoir Public Works Department; Nuisance Abatement (Police and Planning Departments)
Estimated Cost:	\$15,000
Potential Funding Sources:	Existing staff resources; General Fund; grants (City pruning currently unfunded)
Implementation Schedule:	5 Years

Mitigation Action 5	Explore options for pruning trees, clearing tree limbs hanging over rights of way, and removal of dead trees on public and private property to enhance safety and improve function during an emergency. In addition, develop an informational handout with resources to encourage the private clearing of unhealthy or dead trees/limbs on private property.
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Identify and map the location of piped/underground streams throughout the City, and monitor these locations for signs of structural failure. Make property owners aware of piped streams on their properties.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Severe Storm; Flood; Sinkhole
Lead Agency/Department Responsible:	City of Lenoir Planning and Public Works Department
Estimated Cost:	Existing staff resources
Potential Funding Sources:	General Fund, stormwater utility fund, grants
Implementation Schedule:	FY18-19; FY19-20
Priority (High, Moderate, Low):	High
2019 Status:	In progress: In 2018, the City of Lenoir hired Freese and Nichols, Inc. to begin an inventory of stormwater infrastructure and issues, to develop a Capital Improvements Program focused solely around Stormwater infrastructure needs. This includes a database to record reported issues, to develop an inventory of “stormwater hot spots” that are prone to flooding or known structural issues/failures within pipes, and a weighted prioritization system to allow Council to prioritize and fund the needs.

Mitigation Action 7	Explore the feasibility of establishing a Stormwater Utility Fee as a dedicated funding source for stormwater infrastructure projects to replace aging infrastructure, address erosion, and mitigate flood-prone areas.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Severe Storm; Flood; Sinkhole
Lead Agency/Department Responsible:	City of Lenoir Planning Department; City of Lenoir Finance Department; City of Lenoir Public Works Department
Estimated Cost:	General Fund
Potential Funding Sources:	Existing staff resources
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: In 2016, the City hired an intern in the Planning Department to begin to research and conduct GIS analysis

Mitigation Action 7	Explore the feasibility of establishing a Stormwater Utility Fee as a dedicated funding source for stormwater infrastructure projects to replace aging infrastructure, address erosion, and mitigate flood-prone areas.
	related to the establishment of this fund. From that effort, Council elected to delay the implementation of a stormwater utility fee until it could be based upon generating revenue related to funding stormwater infrastructure needs. To that end, in 2018, the City hired Freese and Nichols, Inc. to develop a Stormwater Capital Improvement Program, as well as analyze the feasibility of a stormwater utility fee and offer guidance to the Council on best practices moving forward to adopt both the CIP and the utility fee.

Mitigation Action 8	Continue to enforce the City’s Minimum Housing Ordinance to rehabilitate or remove unsafe structures. In addition, create a database of abandoned and at-risk structures in the city to aid enforcement.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Severe Storm; Wind; Fire
Lead Agency/Department Responsible:	City of Lenoir Planning Department
Estimated Cost:	Existing staff resources
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: In 2014, the City of Lenoir developed the City of Lenoir Minimum Housing database, cataloging all known vacant and substandard houses within the City, as well as prioritizing enforcement action based on a formula that weighted various scenarios like public safety. Within 5 years, over 150 houses have been removed from that list as being abated – either fixed up or torn down. Additionally, the City has implemented a strategic foreclosure program to take abandoned houses and get them back on the tax rolls, prior to any minimum housing enforcement action by the City. The City was also instrumental in partnering with the WPCOG in 2017 to create a Vacant and Substandard Housing Task Force, to share best practices to address this project across the region.

Mitigation Action 9	Continue to explore the feasibility of erecting a back-up power generator to serve City Hall in the event of power failure. This ensures communication lines remain open during natural and manmade disasters that result in power failure, as all City communications are routed through City Hall.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Lenoir Public Works Department; City of Lenoir Finance Department; City of Lenoir IT Department
Estimated Cost:	40,000
Potential Funding Sources:	General Fund; grants
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The City of Lenoir Finance, IT, and Building Maintenance (Public Works) departments have been restructuring the way the COL network servers' function; to enhance the security and lessen the vulnerability of our IT systems. This includes back-up power at City Hall to ensure that communications remain viable and no data is lost during an emergency loss of power. Some changes to the servers and building have already been completed; installation of a backup generator is expected to occur in FY19-20.

Mitigation Action 10	Conduct outreach to educate the public on pre-disaster preparation targeting schools, churches, civic groups, etc.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Lenoir Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	Hazard Mitigation Assistance (HMA) grants; Homeland Security grants; emergency management grants; local funding
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High
2019 Status:	New Action

Town of Cajah's Mountain

Mitigation Action 1	<p>Maintain a map information service involving the following:</p> <ul style="list-style-type: none"> a) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. b) Provide information on the flood insurance purchase requirement. c) Maintain historical and current FIRMs. d) Advertise once annually in the local newspaper. e) Provide information to inquirers about local floodplain management requirements.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	Town of Cajah's Mountain General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Caldwell County Online GIS maps include updated flood hazard area overlays and Town staff are available to answer questions and make determinations. Current and previous FIRMs available for review at Town Hall.

Mitigation Action 2	<p>The Caldwell County Planning and Development Department and the Caldwell County Building Inspections Department will make information regarding hazards and development regulations within floodplains available through the following:</p> <ul style="list-style-type: none"> a) Ensuring that the local library maintains information relating to flooding and flood protection. b) Providing a link on their website to FEMA resources addressing flooding and flood protection. c) All participating jurisdictions, if a website is in place, will provide a link on their website to FEMA resources addressing flooding and flood protection, sheltering, evacuation procedures, disaster preparedness, and post-disaster recovery.
Category:	Natural Systems Protection; Education and Awareness Programs
Hazard(s) Addressed:	Flood; Winter Weather; Wildfire; Thunderstorms, Lightning, and Hail; Dam/Levee Failure; Tornado
Lead Agency/Department Responsible:	Caldwell County Planning and Development Department; Caldwell County Building Inspections Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Cahah's Mountain has utilized its website to publicize FEMA resources for disaster preparedness.

Mitigation Action 3	<p>Caldwell County and all participating jurisdictions will continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. All parties will continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.</p>
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Commissioners
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town will participate in the county program to establish perpetual open space in Special Flood Hazard Areas as budget allows.

Mitigation Action 4	The Caldwell County Mitigation Advisory Committee, in conjunction with all municipal jurisdictions participating in the plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Cahah's Mountain has participated in the regionalization of the Caldwell County hazard mitigation plan and is now a participating jurisdiction in the Unifour Regional Hazard Mitigation Plan which has taken the place of the previously planned county-level 5-year plan update.

Mitigation Action 5	Caldwell County, as well as all participating jurisdictions, will continue to support the North Carolina Office of Dam Safety efforts to monitor and inspect all dams throughout the County, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town will work in conjunction with County Emergency Management staff to remain informed about the safety status of local dams to be able to pass this information along to citizens.

Mitigation Action 6	Caldwell County Emergency Services will continue to coordinate with the Caldwell County Public Works Department, as well as all participating jurisdictions, regarding the monitoring of water resources statewide. When necessary, the County will institute measures to conserve water resources according to the County's Drought Management Plan.
Category:	Natural Systems Protection; Education and Awareness Programs
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town will notify citizens if the County's Drought Management Plan must be implemented through its website, social media, and Town Hall informational sign.

Mitigation Action 7	Caldwell County will assist all communities within the County, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund; possible grant funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	The City of Lenoir will continue to serve an administrative role in the implementation and enforcement of the County's comprehensive stormwater management program. The stormwater regulations outlined within this program shall apply to Gamewell, Cahah's Mountain, Lenoir, Hudson, Sawmills, and Granite Falls.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	City of Lenoir Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town contracts with the City of Lenoir on a yearly basis for implementation and enforcement of the Stormwater regulations.

Town of Gamewell

Mitigation Action 1	Caldwell County will assist all communities (Town of Gamewell) within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local, state and federal grant sources
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Caldwell County has been and continues to aid when communities (Town of Gamewell) are applying for funding to help landowners bring at-risk structures into compliance.

Mitigation Action 2	Maintain a contract with a qualified post-disaster recovery service provider for essential services and equipment including generators and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Gamewell Town Council; Town of Gamewell Administration
Estimated Cost:	Local staff time
Potential Funding Sources:	Local, state and federal grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department
Estimated Cost:	\$1.5 million

Mitigation Action 3	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deleted. It is not feasible for the Town to institute drought management policies since it does not own or operate a water distribution facility.

Mitigation Action 4	Support the North Carolina Office of Dam Safety; make sure dams are regularly inspected.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	North Carolina Department of Environment and Natural Resources (NCDENR), Dams Program
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Caldwell County has started a registry to track the location and depth of all ponds and dams within the county.

Mitigation Action 5	Continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$250,000+
Potential Funding Sources:	Grant funds; Lenoir EMS Base Budget
Implementation Schedule:	2015
Priority (High, Moderate, Low):	High
2019 Status:	Deleted. It is not feasible for the Town to fully accomplish this action.

Mitigation Action 6	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within the floodplain available through the following: library, link on website to FEMA information addressing flood protection, disaster preparedness, and post-disaster recovery.
----------------------------	--

Mitigation Action 6	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within the flood plain available through the following: library, link on website to FEMA information addressing flood protection, disaster preparedness, and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All hazards
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department; Town of Gamewell
Estimated Cost:	\$1,200
Potential Funding Sources:	General Budget
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Gamewell is working in coordination with Caldwell County to fulfill this action. Measurable progress is slow due to lack of funding and staff availability.

Mitigation Action 7	Maintain a map information service about Flood Insurance Rate Maps (FIRMs), advertise annually in the newspaper, and provide information to inquirers about local floodplain management requirements.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$85,000
Potential Funding Sources:	Tax-based funding
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Maps are kept on file at Town Hall and are also available on the County website.

Mitigation Action 8	Require flood elevation certificates for development within the Special Flood Hazard Area (SFHA).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	\$50,000
Potential Funding Sources:	General Budget
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High

Mitigation Action 8	Require flood elevation certificates for development within the Special Flood Hazard Area (SFHA).
2019 Status:	In progress: This will be a part of the new Flood Damage Prevention Ordinance to be adopted in late 2019 or early 2020.

Town of Granite Falls

Mitigation Action 1	Establish and maintain Temporary Disaster Debris Staging Area by selecting suitable site and submitting to the North Carolina Department of Environment and Natural Resources (NCDENR) for approval for use during a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Tornado; Winter Weather; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; Town of Granite Falls Manager
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: The Town has not yet utilized the Granite Falls Recreation Center as a Temporary Disaster Debris Staging site and therefore has not asked the Solid Waste Section of NCDEQ to activate the site. Conditional approval granted October 9, 2013 remains in effect. This action item is carried forward to the 2019-2024 Plan.

Mitigation Action 2	Implement educational outreach to citizens on recognizing potential conflicts between trees and overhead power lines, tree trimming techniques to reduce potential for power outages due to downed trees or falling tree limbs, and the benefits of hiring an arborist and safety tips for cleanup after a storm.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Tornado; Winter Weather; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls Electric Department with assistance from ElectriCities
Estimated Cost:	Staff time
Potential Funding Sources:	Existing department budget, public power agency, and staff resources
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The Town has recently updated its website. There are currently no specific resources available on the website pertaining to this action item. This mitigation action will be deferred to the 2019-2024 Hazard Mitigation Plan.

Mitigation Action 3		Evaluate infrastructure upgrades to fresh water intake on Lake Rhodhiss to ensure water supply during severe drought conditions.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Drought	
Lead Agency/Department Responsible:	Town of Granite Falls Water Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	General fund, grant funding	
Implementation Schedule:	3-4 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: Measurable progress is slow due to lack of funding and staff availability. This remains a priority and has been carried forward as an action item for the 2019-2024 Plan.	

Mitigation Action 4		Incorporate hazard mitigation elements into the next update of the Town's Land Use Plan and any small area or corridor plans.
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Granite Falls Planning Department	
Estimated Cost:	Staff time, consultant fees to be determined	
Potential Funding Sources:	General fund, grant funding	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: The Town is planning to update to the Land Use Plan in the next 1-2 years. The Town has had preliminary discussions with the Western Piedmont Council of Governments regarding their assistance with the update.	

Mitigation Action 5	Caldwell County and all participating jurisdictions will continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. All parties will continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.
Category:	Local Plans and Regulations; Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Town of Granite Falls Town Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Town remains committed to maintaining any property that is acquired within a Special Flood Hazard Area as open space in perpetuity.

Mitigation Action 6	Caldwell County, as well as all participating jurisdictions, will continue to support the North Carolina Office of Dam Safety's efforts to monitor and inspect all dams throughout the county, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; Town of Granite Falls Town Council
Estimated Cost:	To be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: This mitigation action is carried forward to the 2019-2024 Hazard Mitigation Plan.

Mitigation Action 7	Caldwell County Emergency Management will continue to coordinate with the County Public Works Department, as well as all participating jurisdictions, regarding the monitoring of water resources statewide. When necessary the County will institute measures to conserve water resources according to the County's Drought Management Plan.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department; Town of Granite Falls Town Council
Estimated Cost:	To be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Town has policies in place for implementation should the need arise. The Town continues to maintain participation with the Drought Management Advisory Group and cooperation with Caldwell County Emergency Management. This action is carried forward as an action item for the 2019-2024 Plan.

Mitigation Action 8	Caldwell County will assist all communities within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	Caldwell County Emergency Management
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources/Grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: This remains a priority and has been carried forward as an action item for the 2019-2024 Plan.

Mitigation Action 9	Caldwell County Emergency Services will continue to work on the establishment of a comprehensive special needs registry. This effort will involve the cooperation of all participating jurisdictions.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; Granite Falls
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: The Town would be able to work with Caldwell County Emergency Management to develop a comprehensive special needs registry. This remains a priority and is hereby carried forward as a 2019-2024 Action Item.

Mitigation Action 10	The City of Lenoir will continue to serve an administrative role in the implementation and enforcement of the County's comprehensive stormwater management program. The stormwater regulations outlined within this program shall apply to Granite Falls, Gamewell, Cahah's Mountain, Lenoir, Hudson, and Sawmills.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	City of Lenoir Planning Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Following an audit of the local Stormwater program in late 2018, the NCDEQ is requiring each municipality to develop its own Stormwater Management Plan and maintain its own Stormwater MS4 Permit. The Town is currently working with NCDEQ and the City of Lenoir to develop a strategy going forward. This action item is carried forward to the 2019-2024 Plan.

Mitigation Action 11	Caldwell County, as well as all participating jurisdictions, will maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Capabilities/Structure & Infrastructure
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department; Granite Falls
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: This remains a priority and has been carried forward as an action item for the 2019-2024 Plan.

Mitigation Action 12	The Town of Granite Falls will aim to draft a comprehensive Parks and Recreation Plan over the next five years. This plan will incorporate recommendations regarding the purchase and development of flood-prone land for recreational purposes.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Town of Granite Falls Town Council
Estimated Cost:	Staff time and consultant fees to be determined
Potential Funding Sources:	Existing department budget and staff resources; grant funding
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: The Town developed a Parks & Recreation Master Plan in 2016; however, it does not include a specific recommendation regarding the acquisition of flood-prone properties. The Parks & Recreation Master Plan will be updated in the future; therefore, this action item is carried forward to the 2019-2024 Plan.

Mitigation Action 13	<p>Maintain a map information service involving the following:</p> <ul style="list-style-type: none"> a) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. b) Provide information regarding the flood insurance purchase requirement. c) Maintain historical and current FIRMs. d) Advertise once annually in the local newspaper. e) Provide information to inquirers about local floodplain management requirements.
-----------------------------	---

Category:	Natural Systems Protection, Education & Outreach
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town continues to make all the relevant information available and to provide information to those who inquire about floodplain management requirements. The Town can continue to find more effective ways to get floodplain information to the general public, particularly those whose property lies in Special Flood Hazard Areas. The Town will evaluate the effectiveness of a direct mailing to affected property owners in order to advise regarding the limitations that may exist on their property.

Mitigation Action 14	Install backup generator or transfer switch (to facilitate safe connection of portable generator) when any new Town facilities are constructed or existing buildings are substantially renovated.
-----------------------------	--

Category:	Capabilities/Structure & Infrastructure
Hazard(s) Addressed:	Tornado; Winter Weather; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls Electric Department with assistance from ElectriCities
Estimated Cost:	Variable (grants and local staff time)
Potential Funding Sources:	Existing department, public power agency, and grant funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 15	Amend Zoning Ordinance to require that any new manufactured home parks must include a buffer (vegetative, masonry, berm, etc.) that can serve as a wind break.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Tornado; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls Planning Department
Estimated Cost:	Staff Time – Legally Required Public Notice
Potential Funding Sources:	Existing department budget
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 16	Develop a map of all stormwater outfalls within the Town’s jurisdiction. Comprehensive map can serve as a tool for maintaining and periodically inspecting for any blockages or damage, particularly in advance of a heavy rain event.
Category:	Capabilities/Structure & Infrastructure
Hazard(s) Addressed:	Flooding; Tornado; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund, Grant Funding
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 17	Develop an informational brochure that explains the importance of keeping storm drains and catch basins clear of debris and encourages residents to be proactive about keeping them clean and reporting issues. This information could be disseminated through the Town’s website, social media and newsletter.
Category:	Education and Awareness
Hazard(s) Addressed:	Flooding; Severe Thunderstorm; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls
Estimated Cost:	Staff Time – Printing Costs
Potential Funding Sources:	General Fund, Grant Funding
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 18	Establish a new electric sub-station that would provide a secondary feed for the Town's electric distribution system.
Category:	Capabilities and Infrastructure
Hazard(s) Addressed:	Tornado; Severe Thunderstorm; Winter Weather; Hurricane and Tropical Storm
Lead Agency/Department Responsible:	Town of Granite Falls Electric Department
Estimated Cost:	\$2 million+
Potential Funding Sources:	Grant Funding
Implementation Schedule:	5-10 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 19	Maintain a map information service involving the following: <ul style="list-style-type: none"> f) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. g) Provide information regarding the flood insurance purchase requirement. h) Maintain historical and current FIRMs. i) Advertise once annually in the local newspaper. j) Provide information to inquirers about local floodplain management requirements.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Caldwell County Online GIS maps include updated flood hazard area overlays and Town staff are available to answer questions and make determinations. Current and previous FIRMs are available for review at Town offices. The Town of Granite Falls Flood Damage Prevention Ordinance is available on the Town website.

Mitigation Action 20	Caldwell County and all participating jurisdictions will continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. All parties will continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.
Category:	Local Plans and Regulations; Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Commissioners
Estimated Cost:	To be determined
Potential Funding Sources:	Grant fund resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 21	The Caldwell County Mitigation Advisory Committee (MAC), in conjunction with all municipal jurisdictions participating in this plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	General fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Town of Granite Falls has participated in the regionalization of the Caldwell County hazard mitigation plan and is now a participating jurisdiction in the Unifour Regional Hazard Mitigation Plan which has taken the place of the previously planned county-level 5-year plan update.

Mitigation Action 22	Caldwell County, as well as all participating jurisdictions, will continue to support the North Carolina Office of Dam Safety’s efforts to monitor and inspect all dams throughout the county, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	To be determined
Potential Funding Sources:	Existing department and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 23	Caldwell County Emergency Management will continue to coordinate with the County Public Works Department, as well as all participating jurisdictions, regarding the monitoring of water resources statewide. When necessary the County will institute measures to conserve water resources according to the County’s Drought Management Plan.
Category:	Natural Systems Protection; Education and Awareness Programs
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department
Estimated Cost:	To be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Granite Falls remains active in the Drought Management Advisory Group (DMAG). Water conservation measures are implemented when deemed necessary by the DMAG.

Mitigation Action 24	Caldwell County, as well as all participating jurisdictions, will maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 25	Caldwell County will assist all communities within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Management Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 26	Caldwell County Emergency Services will continue to work on the establishment of a comprehensive special needs registry. This effort will involve the cooperation of all participating jurisdictions.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Services
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium

Mitigation Action 26	Caldwell County Emergency Services will continue to work on the establishment of a comprehensive special needs registry. This effort will involve the cooperation of all participating jurisdictions.
2019 Status	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 27	The City of Lenoir will continue to serve an administrative role in the implementation and enforcement of the County’s comprehensive stormwater management program. The stormwater regulations outlined within this program shall apply to Granite Falls, Gamewell, Cahah’s Mountain, Lenoir, Hudson, and Sawmills.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	City of Lenoir Planning Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 28	The Town of Granite Falls will aim to draft a comprehensive Parks and Recreation Plan over the next five years. This plan will incorporate recommendations regarding the purchase and development of flood-prone land for recreational purposes.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Town of Granite Falls Town Council
Estimated Cost:	Staff time and consultant fees to be determined
Potential Funding Sources:	Existing department budget and staff resources; grant funding
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	In progress: Funding for this action has not been acquired and other capital projects of more immediate concern have taken priority.

Town of Hudson

Mitigation Action 1	City of Lenoir to administer stormwater regulations.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Sinkhole; Erosion; Landslide
Lead Agency/Department Responsible:	City of Lenoir Planning and Building Inspections Department; Caldwell County; all participating jurisdictions in Caldwell County
Estimated Cost:	\$50,000
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2019 Status:	Completed. The City of Lenoir continues to administer stormwater regulations for the Town of Hudson. Prepare for new audits from NCDEQ and EPA. Implement new stormwater illicit discharge identification methods.

Mitigation Action 2	Caldwell County will assist all communities within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Caldwell County has been and continues to help when communities are applying for funding to help landowners bring at-risk structures into compliance.

Mitigation Action 3	Investigate maintaining a contract with a qualified post-disaster recovery service provider for essential services and equipment including generators and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Hudson Administration Department; Town of Hudson Police Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	Deferred to the next plan update: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department; Hudson
Estimated Cost:	\$1.5 million
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Support the North Carolina Office of Dam Safety; make sure dams are regularly inspected.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	North Carolina Department of Environment and Natural Resources (NCDENR) Dams Program; Hudson
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Caldwell County has started a registry to track the location and depth of all ponds and dams within the county.

Mitigation Action 6	Continue to maintain all property acquired with the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Planning Department; Hudson
Estimated Cost:	\$250,000+
Potential Funding Sources:	Grant funds; Lenoir EMS Base Budget
Implementation Schedule:	2021
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Action continues. Flood Damage Prevention Ordinance was adopted in 2015.

Mitigation Action 7	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within the floodplain available through the following: library, link on website to FEMA information addressing flood protection, disaster preparedness, and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; All Hazards
Lead Agency/Department Responsible:	Planning Dept. Caldwell County Building Inspections Department; Hudson
Estimated Cost:	\$1,200; local staff time
Potential Funding Sources:	General Budget
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town of Hudson is working in coordination with the Caldwell County Town Planner to fulfill this action

Mitigation Action 8	Maintain a map information service about Flood Insurance Rate Maps (FIRMs), advertise annually in the newspaper, and provide information to inquirers about local floodplain management requirements.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$85,000
Potential Funding Sources:	Tax-based funding
Implementation Schedule:	2021
Priority (High, Moderate, Low):	Low
2019 Status:	Completed. Maps are kept on file at Hudson Town Hall and are available on the Caldwell County Tax Mapping website.

Mitigation Action 9	Require flood elevation certificates for development within the Special Flood Hazard Area (SFHA).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood-Enforcement
Lead Agency/Department Responsible:	Planning Dept/Caldwell County Building Inspections Department
Estimated Cost:	\$50,000
Potential Funding Sources:	General Budget
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	In progress: This will be a part of the new Flood Damage Prevention Ordinance to be adopted. Enforced floodplain requirements work with NCDPS on implementation

Town of Rhodhiss

Mitigation Action 1	Require a finished floor elevation certificate for all development within the Special Flood Hazard Area (SFHA) within both incorporated and unincorporated portions of the County. All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined SFHA without the submittal of the required elevation certificate.
Category:	Prevention; Property Protection
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Burke County Building Inspections Department; Caldwell County Building Inspections Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Existing staff and administrative resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Maintain a map information service involving the following: <ol style="list-style-type: none"> a) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. b) Provide information regarding the flood insurance purchase requirement. c) Maintain historical and current FIRMs. d) Advertise once annually in the local newspaper. e) Provide information to inquirers about local floodplain management requirements.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Burke County; Caldwell County; Town of Rhodhiss
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Measurable progress is slow due to staff availability and funding. The Town is actively involved in assisting the North Carolina Floodplain Mapping Program in achieving their goals.

Mitigation Action 3	Caldwell County and its municipal jurisdictions will continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. All parties will continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.
Category:	Prevention
Hazard(s) Addressed:	Flood; Dam/Levee Failure; Wildfire
Lead Agency/Department Responsible:	Surrounding counties; Town of Rhodhiss
Estimated Cost:	To be determined on a case-by-case basis
Potential Funding Sources:	State and federal grant resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Continuing discussions with a property owner to create a greenway along the Catawba River. The Town has purchased property on the Burke County side of Town to develop a park on the Catawba River. The Town received a PARTF grant which will help in making this happen.

Mitigation Action 4	<p>The Caldwell County Building Inspections Department will provide comprehensive services regarding planning and development activities within the defined Special Flood Hazard Area (SFHA) and issues relating to the construction of disaster resistant structures. These services will include:</p> <ul style="list-style-type: none"> a) Providing site-specific flood and flood-related information on an as-needed basis. b) Maintaining a list of contractors with experience in floodproofing and retrofit techniques. c) Providing information on wind proofing construction methods for new and renovated structures. d) Maintaining materials providing an overview of how to select a qualified contractor. e) Making site visits upon request to review occurrences of flooding, drainage problems, and sewer problems. If applicable, the inspector should provide one-on-one advice to the property owner. f) Providing advice and assistance regarding CRS activity 530. g) Advertising the availability of this service once annually within the local newspaper. h) Maintaining a log of all individuals assisted through this County service including all site visits.
---------------------	---

Category:	Prevention
Hazard(s) Addressed:	Flood; Winter Weather; Wildfire; Thunderstorms, Lightning, and Hail; Dam/Levee Failure; Tornado
Lead Agency/Department Responsible:	Primary Responsible Party: Caldwell County Building Inspections Department. Secondary Responsible Party: Caldwell County Planning and Development Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Existing department and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Deleted: The Town of Rhodhiss relies on Caldwell County to implement the actions described above. Therefore, this action is not reflected in the Town's 2019 Mitigation Actions above.

Mitigation Action 5	The Caldwell County Mitigation Advisory Committee (MAC), in conjunction with all municipal jurisdictions participating in the plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.
Category:	Planning
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Primary Responsible Party: Caldwell County Emergency Services. Secondary Responsible Party: Caldwell County Mitigation Advisory Committee and Town of Rhodhiss
Estimated Cost:	To be determined based on future scope of work for 5-year plan update
Potential Funding Sources:	Funding for annual maintenance and implementation of the hazard mitigation plan will be provided through the Caldwell County annual budget ordinance.
Implementation Schedule:	5 -year interval
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Town of Rhodhiss has participated in the regionalization of the Caldwell County hazard mitigation plan and is now a participating jurisdiction in the Unifour Regional Hazard Mitigation Plan, which has taken the place of the previously planned county-level 5-year plan update.

Mitigation Action 6	Caldwell County, as well as all participating jurisdictions, including Duke Energy, will continue to support the North Carolina Office of Dam Safety efforts to monitor and inspect all dams throughout the County, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.
Category:	Prevention
Hazard(s) Addressed:	Flood; Dam/Levee Failure
Lead Agency/Department Responsible:	Primary Responsible Party: Caldwell County Emergency Services. Secondary Responsible Party: Town of Rhodhiss.
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	<p>In order to provide comprehensive and effective emergency response services to all Town residents, the Town of Rhodhiss will take steps to update and/or acquire the following equipment over the course of the next five years:</p> <ul style="list-style-type: none"> a) One new fire truck. b) Emergency communication equipment (hand-held radios). c) Rescue tools (per the recommendation of Caldwell County Emergency Services). d) One set of Jaws of Life (Hurst Tools). e) It should also be noted that the Town of Rhodhiss needs to rehabilitate the Town's existing fire department, or build a new facility. This effort will involve the replacement of all equipment.
----------------------------	---

Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Primary Responsible Party: Town of Rhodhiss Town Council. Secondary Responsible Party: Caldwell County Emergency Services.
Estimated Cost:	\$1,000,000 +
Potential Funding Sources:	State and federal grants
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	<p>Deferred: The Town of Rhodhiss fire department has acquired the emergency communication equipment (hand-held radios). The fire department cannot perform rescues because of a lack of availability of funding to purchase needed equipment and certification in rescue would be needed. We have made some improvements in the fire department such as: partial wiring of the upstairs and main breaker box; re-flooring the downstairs area and painting it; dividing the upstairs areas into individual rooms/wiring what can be done at present. We continue to apply for federal grants to help with the purchase of a new fire truck and the state grants have helped with purchasing turn-out gear. We are replacing turn-out gear as we can afford to do so. The following will be done as monies may be acquired: a sprinkler system, insulation, finish wiring, and a phone or alarm for rescue assistance at fire department (push button alarm). The Town of Rhodhiss requires additional grant management assistance to fully complete this Mitigation Action.</p>

Mitigation Action 8	Involve emergency preparedness staff in the development of all planning activities with hazard mitigation impacts.
----------------------------	---

Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Emergency Services Department; Planning Department; Economic Development
Estimated Cost:	Minimal (Staff Time only)

Mitigation Action 8	Involve emergency preparedness staff in the development of all planning activities with hazard mitigation impacts.
Potential Funding Sources:	Caldwell County General Fund
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Town of Rhodhiss will continue to involve all staff in all planning activities in the community

Town of Sawmills

Mitigation Action 1	City of Lenoir to administer stormwater regulations. Action apply for individual new NPDES permit, new ordinance adoption.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Sinkhole; Erosion; Landslide; Stormwater
Lead Agency/Department Responsible:	City of Lenoir Planning Department; Caldwell County; all participating jurisdictions in Caldwell County including Town of Sawmills.
Estimated Cost:	\$50,000
Potential Funding Sources:	Existing department budget and staff resources
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Will be amending in 2019 due to EPA/DEQ audit of City of Lenoir adoption of new ordinance, resolutions permit requirements, public outreach requirements.

Mitigation Action 2	Caldwell County will assist all communities within the county, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	Local staff time
Potential Funding Sources:	State and Federal Grant programs
Implementation Schedule:	2025
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred: Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Maintain a contract with a qualified post-disaster recovery service provider for essential services and equipment including generators and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Sawmills Public Works and Sanitation Department
Estimated Cost:	Local staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department
Estimated Cost:	\$1.5 million
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Support the North Carolina Office of Dam Safety; make sure dams are regularly inspected.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	North Carolina Department of Environment and Natural Resources (NCDENR) Dams Program
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress. Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Proactively establish open space within the floodplain.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$250,000+
Potential Funding Sources:	Grant funds; Lenoir EMS Base Budget
Implementation Schedule:	2020
Priority (High, Moderate, Low):	High
2019 Status:	Deleted: The Town of Sawmills is no longer willing to buy property in the floodplain because of costs.

Mitigation Action 7	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within floodplain available through the following: library, link on website to FEMA addressing flood protection, disaster preparedness, and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	\$1,200
Potential Funding Sources:	General Budget
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	Completed.

Mitigation Action 8	Maintain a map information service about Flood Insurance Rate Maps (FIRMs), advertise annually in the paper, and provide information to inquirers about local floodplain management requirements.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$85,000
Potential Funding Sources:	Tax-based funding
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Measurable progress is slow due to staff availability and funding.

Mitigation Action 9		Require flood elevation certificates for development within the Special Flood Hazard Area (SFHA).
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department	
Estimated Cost:	\$50,000	
Potential Funding Sources:	General Budget	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress for development. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 10		Maintain portable backup generator for emergency power needs.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Sawmills Town Council	
Estimated Cost:	<\$3,000	
Potential Funding Sources:	Caldwell County Emergency Management; State and Federal grants)	
Implementation Schedule:	5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.	

Village of Cedar Rock

Mitigation Action 1	Caldwell County will assist all communities within the County, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	\$1,200
Potential Funding Sources:	Unspecified
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed.

Mitigation Action 2	Investigate maintaining a contract with a qualified post-disaster recovery service provider for essential services and equipment including generators and will include documentation required for reimbursement from FEMA/NCEM.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Village of Cedar Rock Village Council
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Medium
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Caldwell County Water Department
Estimated Cost:	\$1.5 million
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High

Mitigation Action 3	Monitor water resources and when necessary institute measures to conserve water through Drought Management Plan.
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Support the North Carolina Office of Dam Safety; make sure dams are regularly inspected.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	North Carolina Department of the Environment and Natural Resources (NCDENR), Dam Program
Estimated Cost:	To be determined
Potential Funding Sources:	Grants and tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Dam Failure; Wildfire
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$250,000+
Potential Funding Sources:	Grant funds; Lenoir EMS Base Budget
Implementation Schedule:	2015
Priority (High, Moderate, Low):	High
2019 Status:	Deleted. Not feasible for the Village to complete.

Mitigation Action 6	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within the floodplain available through the following: library, link on website to FEMA addressing flood protection, disaster preparedness, and post-disaster recovery.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department; Village of Cedar Rock

Mitigation Action 6	Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within the flood plain available through the following: library, link on website to FEMA addressing flood protection, disaster preparedness, and post-disaster recovery.
Estimated Cost:	\$1,200
Potential Funding Sources:	General Budget
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	Maintain a map information service about Flood Insurance Rate Maps (FIRMs), advertise annually in the paper, and provide information to inquirers about local floodplain management requirements.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood; Dam Failure
Lead Agency/Department Responsible:	Caldwell County Planning Department
Estimated Cost:	\$85,000
Potential Funding Sources:	Tax-based funding
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Completed.

Mitigation Action 8	Require flood elevation certificates for development within the Special Flood Hazard Area (SFHA).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Caldwell County Building Inspections Department
Estimated Cost:	\$50,000
Potential Funding Sources:	General budget
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Completed.

Catawba County

Mitigation Action 1	Install generator transfer switch connections during the construction of new public facilities (schools, fire stations, County buildings, etc.).
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Catawba County Finance; Purchasing; and Emergency Services Departments
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund; Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Due to lack of funding County has not installed any additional transfer switches. Letter of Intent has been submitted to NC Emergency Management for HMGP Grant Funding for a transfer switch at CVCC – Tarlton Complex for regional sheltering but LOI was denied x two.

Mitigation Action 2	Continue to evaluate County policies to reduce greenhouse gases. These policies may include additional lighting retrofitting, “green” purchasing goals, upgrading of equipment in buildings, acquisition/dedication of parkland, and timber management at existing parks.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Designed to address climate change and its long-term potential to increase the frequency and severity of natural hazards including Floods; Hurricanes and Tropical Storms; Severe Thunderstorms; Tornadoes; Wildfire; Drought; Winter Storms; and Dam/Levee Failure.
Lead Agency/Department Responsible:	County Manager’s Office
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	Completed. All county owned buildings have been retrofitted for lighting, the county has established a green purchasing policy and a county employee committee to promote green friendly operations throughout county government.

Mitigation Action 3	Prepare a one-page information sheet that incorporates the floodplain development permitting process for all departments. In addition, when permits are being reviewed where access to the site requires new driveway/road construction across a floodplain, require stream crossing plans with drainage calculations, culvert size, and installation details.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Building Inspections; Planning, Parks & Development; and Environmental Health Departments
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Update the County's Parks Master Plan to identify locations and funding sources for greenways in order to preserve sensitive land along river systems.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Complete: The Parks Master Plan was updated in 2017. Funding sources include Clean Water Management Trust Fund, Carolina Thread Trail, and others.

Mitigation Action 5	In coordination with the Carolina Thread Trail organization, begin acquiring land and construct an interconnected trail network along Lyle Creek.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	To be determined
Potential Funding Sources:	Carolina Thread Trail; Parks and Recreation Trust Fund (PARTF); North Carolina State Trails Program; volunteers
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Grants have been received toward efforts of stream bank restorations and trail construction is part of the match toward grant receipt.

Mitigation Action 6	Conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies such as proper tree-trimming techniques.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. County did county-wide outreach campaign regarding the Community Alert System in September 2018. County also developed information used in public outreach programs about mitigation actions individual homeowners can take in 2015 that is continuing to be used.

Mitigation Action 7	Incorporate hazard mitigation elements into the development of new small area and corridor plans.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Updated corridor plans encourage growth in areas where utilities, public facilities, and emergency services exist (i.e. smart growth principles).

Mitigation Action 8	Improve information sharing with Duke Energy regarding its operational procedures for the movement of water through its hydro-electric systems on the Catawba River. This can be achieved by meeting formally at least once a year, when significant weather events are anticipated, and when upgrades or improvements to the system are scheduled.
Category:	Education and Awareness Program
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Emergency Management Coordinator meets at least annually with Hydro- Generation staff and speaks at least daily with Duke Energy Gov Relations Liaison during significant weather events. Relationship is on-going.

Mitigation Action 9	Establish a protocol for monitoring the tail race areas below the Catawba River dams during high water events to ensure security of the area and limiting public access.
Category:	Education and Awareness Program
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Emergency Services and Sheriff's Departments
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Emergency Services has developed a Flooding and High Water EOP Annex that addresses the dams, monitoring high water and public notification.

Mitigation Action 10	Work with local land trusts to secure conservation easements on farmland to preserve sensitive land along river systems.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development and Soil & Water Conservation Departments
Estimated Cost:	To be determined
Potential Funding Sources:	Farmland Preservation Trust Fund; other private funding sources
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: This is a continuous effort with two area land trusts.

Mitigation Action 11	Identify locations of log jamming in priority watersheds which could jeopardize bridge abutments and water supply using new GIS aerial photography available in late 2014. Relay this information to appropriate agencies and develop action plans for abatement.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Emergency Services and Planning, Parks & Development Departments
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund and Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program grants
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. When log jams are identified by the public, or municipal officials the County notifies appropriate agencies and community partners for assistance in clearing the log jam. NCDOT has been notified of possible and existing log jams which could jeopardize bridge abutments. It was determined that new aerial photography is not helpful in assessing locations of log jams or potential jams.

Mitigation Action 12	Evaluate the need for stronger building code requirements for structures constructed in the tail race areas below the Catawba River dams in order to prevent property damage downstream.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Building Codes & Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Complete: Determined that no structures exist nor will be built in the tail race area below the Catawba River dams.

Mitigation Action 13	Propose the requirement for a stormwater master plan for new major subdivisions that addresses the treatment of storm water for new roads and lots within the development.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Utilities & Engineering Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Stormwater treatment is required for all high-density subdivisions that exist within a watershed. Measurable progress is slow due to lack of funding and staff availability.

Mitigation Action 14	Preserve large, intact forest land through the acquisition and/or dedication of park land through the County's Unified Development Ordinance requirements. As part of the Parks Department forestry management program, non-native pine plantation stands in the park property will be selectively harvested to allow for the successional return of native forest vegetation. This action is aimed at reducing greenhouse gases through carbon sequestration and thereby also helping to reduce the potential of increased frequency and severity of natural hazards (particularly drought and wildfire, but many others identified in this Plan as well).
Category:	Natural Resource Protection
Hazard(s) Addressed:	Designed to address climate change and its long-term potential to All Hazards
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Catawba County acquired 580 acres of land on Lake Norman (referred to as the Mountain Creek tract) in late 2010. This tract of land consists of an old growth forest with planted pines which will be preserved in perpetuity. As development occurs in the county, either on-site dedication of park land will be provided, or a fee-in-lieu will be obtained to acquire additional preserved land. The Planning & Development Department, with the State, is in the process of coordinating the acquisition of 36 acres adjoining the Bunker Hill Covered Bridge in order to preserve additional acreage of an old growth forest. The Parks Department is evaluating

Mitigation Action 14	Preserve large, intact forest land through the acquisition and/or dedication of park land through the County's Unified Development Ordinance requirements. As part of the Parks Department forestry management program, non-native pine plantation stands in the park property will be selectively harvested to allow for the successional return of native forest vegetation. This action is aimed at reducing greenhouse gases through carbon sequestration and thereby also helping to reduce the potential of increased frequency and severity of natural hazards (particularly drought and wildfire, but many others identified in this Plan as well).
	non-native pine plantation stands at River Bend Park which may be harvested in the next two years.

Mitigation Action 15	Conduct a carbon footprint analysis for the County's facilities and evaluate current policies to identify ways to reduce greenhouse gases. Implement priority strategies identified in the study, which may include the production of biodiesel fuel at the County's EcoComplex, renewable energy sources such as windmills, reduction of particulate matter and ozone through recommendations of the Early Action Compact, and the development of an energy plan which may include purchasing policies that address energy reduction strategies and contractor policies for equipment emissions.
-----------------------------	---

Category:	Prevention
Hazard(s) Addressed:	Designed to address climate change and its long-term potential to increase the frequency and severity of all natural hazards.
Lead Agency/Department Responsible:	Multi-departmental through Green Initiatives Team, especially the Catawba County Public Health and Utilities & Engineering Departments
Estimated Cost:	Staff time with implementation to be determined
Potential Funding Sources:	General Fund and Energy Department grants
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Catawba County has decreased its carbon footprint by 4.24%. This has been achieved through light retrofitting in government buildings, replacing outdated air conditioners and other appliances with more energy efficient models, and designing newer buildings using resource efficient design techniques. To date, 63% of all County building space has been retrofitted with T-8 lighting or better. In addition, the County has a policy of purchasing recycled and other environmentally preferred products. In August 2011, the Catawba County-Appalachian State University Biodiesel Research Development and Production Facility was officially opened. Research at the facility includes the testing of biodiesel produced from feedstock crops grown around the Blackburn Landfill.

Mitigation Action 16	Develop a farmland preservation plan which will identify tools and techniques to preserve sensitive farmland, and particularly those areas prone to flooding.
Category:	Prevention; Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department; Cooperative Extension through the Agricultural Advisory Board
Estimated Cost:	To be determined
Potential Funding Sources:	Agricultural Development & Farmland Preservation (ADFP) trust fund grant; Catawba County General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. A Farm & Food Sustainability Plan was developed by a committee of over 20 partners which identified 66 action items to be implemented over the next 5+ years to help promote and sustain agriculture in the county. Action items included identifying conservation lands to be protected by local land trusts and advocating for bottomlands to be incorporated into the State's Ecosystem Enhancement Program.

Mitigation Action 17	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the specific actions. This includes evaluating the Community Rating System (CRS) and identifying strategies that can be implemented to reduce flood potential and in turn allow for a reduction in flood insurance rates for citizens of the County. These strategies may include maintaining digital FEMA elevation certificates, training for plan reviewers and building inspectors, sponsoring a training workshop for surveyors, and pursuing Certified Floodplain Manager (CFM) certification for a staff person. Supplies of FEMA and NFIP materials will also be made available to the public in various locations throughout the county such as libraries and on the Catawba County website.
Category:	Prevention and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development and Emergency Services Departments
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund and Grants
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. This action is considered complete as a mitigation action. Now that the practice is institutionalized within the Catawba County Planning, Parks and Development Department it is understood that compliance with the NFIP will continue and therefore this action has been deleted from the list of 2019 mitigation actions. Staff attended a 3-day workshop in 2012 on the CRS, which included an overview of the new CRS manual. After evaluating the program and the advantages to property owners, it was determined that there would be very little benefit weighed against the costs of implementing the CRS program. When the new CRS program manual is adopted, this may be re-evaluated again. The County has links to the NC Flood maps website and information about floodplain development permits on its website.

Mitigation Action 18	Develop a countywide greenway master plan to provide an interconnected trail network which preserves sensitive land along river systems. These trails can become part of the Carolina Thread Trail, Duke Energy Relicensing facilities, and the Lake Norman Bicycle Route.
Category:	Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	To be determined
Potential Funding Sources:	Carolina Thread Trail; Parks and Recreation Trust Fund (PARTF); Clean Water Management Trust Fund (CWMTF); other grant sources
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Catawba County prepared and adopted its Carolina Thread Trail Master Plan which lays out a plan for an interconnected trail system of 126 miles within the county. Of the 126 miles, 56 miles (or 45%) is proposed along river corridors which will preserve sensitive floodplain areas through the acquisition of easements. The County also adopted the Lake Norman Bicycle Route Plan which also will help to protect sensitive corridor areas.

Mitigation Action 19	Provide education to citizens about tree-trimming techniques to reduce the potential for power outages due to downed tree limbs.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Hurricane and Tropical Storm; Severe Thunderstorm; Tornado; Winter Weather
Lead Agency/Department Responsible:	Cooperative Extension through local power companies
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Newspaper articles have been written regarding tree-trimming techniques and periodically about weather threats and how to be prepared. Cooperative Extension, through its NC State website, has information on emergency preparedness which includes information on chainsaw safety, how to take care of storm damaged trees, and hiring an arborist.

Mitigation Action 20	Coordinate with the American Red Cross to install pre-wired connections (“Quick Connects”) to use portable generators at targeted critical public facilities and those designed to serve as shelters for disaster survivors. Evaluate other locations with existing wiring which can accommodate generators, for example, schools, churches, recreation centers.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazard
Lead Agency/Department Responsible:	Catawba County Emergency Services Department; American Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Pre-wired connections were installed at two schools (Startown Elementary and Bandys High School) within the last three years using Department of Homeland Security grants. Staff has met with representatives of the County schools to establish a policy to have pre-wired connections installed during the construction of new facilities in order to be more cost effective. An inventory of activity sites and outreach to churches and other shelter facilities has been conducted.

Mitigation Action 21	Provide outreach education to property owners along flood-prone areas, such as Carpenters Cove, about floodplain regulations and evacuation plans. This includes direct mailings to owners of repetitive loss properties (as identified by FEMA) about available mitigation grant programs. Also provide education opportunities for school-age children, such as the American Red Cross “Masters of Disaster” education program.
Category:	Emergency Services; Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Catawba County Emergency Services Department; American Red Cross; Catawba County Planning, Parks & Development Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Staff has conducted door-to-door meetings with property owners in the Carpenters Cove area of Lake Lookout. Information shared with the owners included: emergency preparedness, the County’s Community Alert System, and flood insurance information. This information has also been shared with property owners below the Marshall Steam Station dam on Lake Norman. Countywide community and school programs have been conducted about the County’s Community Alert System and flood prevention/insurance issues. An owner in Carpenters Cove applied for a flood mitigation grant and has completed mitigation actions for his structures.

Mitigation Action 22	Promote a standard hook up for emergency generators such that any portable generator can be simply connected to it for supply of power to vital circuits in homes and/or public buildings. Priority locations are hospitals, nursing homes, schools, and government buildings.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide
Lead Agency/Department Responsible:	Catawba County Emergency Services Department; American Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High-Moderate
2019 Status:	Completed. Staff has worked with the nursing homes in the county and conducted testing of generators at hospitals and schools.

Mitigation Action 23	Identify areas for emergency access to and from public properties, such as Bakers Mountain Park, Riverbend Park, and the Wildlife Club (off Lynn Mountain Road). These areas will be maintained for access by emergency personnel in the event of wildfires or other events. This includes working with key property owners adjoining the subject properties, developing cooperative agreements, and clearing/maintaining new or existing fire roads. Emphasis will be placed on securing access ways at each of these properties. Gating, ditching, signage, and fencing is necessary in high risk areas that are prone to vandalism that may result in forest fires. The first phase will be mapping of appropriate locations and training with EMS in the County's parks.
Category:	Natural Resource Protection; Public Education/Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Catawba County Emergency Services Department; Forest Service; Park Personnel
Estimated Cost:	To be determined
Potential Funding Sources:	Grants or community-service projects with organized groups
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. Procedures are established for evacuation of the parks which includes alternative routes when appropriate. Also, natural breaks are established in the parks which would reduce the spread of wildfires to adjoining properties. Due to the recent flooding events in the county, a closure plan for River Bend Park has been implemented; whereby, portions of trails are closed depending upon the level of flooding and gates open at Oxford Dam.

Mitigation Action 24	Evaluate the Firewise communities program and its application to develop communities and homes which are designed, built, and maintained to withstand wildfires.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Catawba County Emergency Services; Fire Department; and Planning, Parks & Development Departments
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. The County Forest Service Agency provided information about the Firewise program during various events throughout the past several years. They have also shared information with various fire departments when speaking about fire prevention. The County's Community Wildfire Protection Plan addresses areas of concern which are monitored by the Forest Service.

Mitigation Action 24	Evaluate the Firewise communities program and its application to develop communities and homes which are designed, built, and maintained to withstand wildfires.
Mitigation Action 25	Ensure that manufactured home parks have perimeter vegetative buffers to protect manufactured homes from high wind events.
Category:	Prevention
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm; Tornado
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	Requirement of ordinance
Potential Funding Sources:	Private
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deleted: As a matter of policy, this requirement was deleted from the Unified Development Ordinance and therefore is no longer a viable mitigation action.

Mitigation Action 26	Continue the work of the established multi-jurisdictional Stormwater Committee to prioritize stormwater issues/projects within the area. This committee will meet regularly to develop action plans and establish priorities for addressing stormwater issues which would minimize the impacts of flooding throughout the County. Examples of efforts would include coordination of stormwater review of subdivisions, public education on clearing stormwater drains and culverts, a stormwater plan to address flooding episodes at Carpenters Cove, and sharing of information with the North Carolina Department of Transportation (NCDOT) regarding debris accumulation at bridge abutments, culverts, etc.
Category:	Prevention; Natural Resource Protection; Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Multi-jurisdictional with staff of Catawba County Engineering and Planning Departments
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. A working group of fire, law enforcement, emergency managers, and NCDOT meet quarterly to discuss issues of concern, which include debris removal at bridge abutments and culverts. Also, Public Service Announcements are periodically run to encourage the clearing of private road/driveway culvert drains. The committee has been established to do the work and is up and running; therefore, this is no longer needed as a 2019 mitigation action.

Mitigation Action 27	Coordinate with Social Services to provide back-up power at family care, nursing, and adult care homes within the county.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide
Lead Agency/Department Responsible:	Catawba County Emergency Services; Social Services
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. Meetings have been conducted with nursing home operators within the last year about the importance of having back-up power generators. Due to the costs of retrofitting, very few have installed generators. Outreach with family care and adult care home operators has been conducted to encourage them to have emergency preparedness plans in place; whereby, they move residents to other facilities that have generators or have not been impacted by a hazard occurrence.

Mitigation Action 28	Evaluate ordinances and policies to develop ways to address mitigation for drought events. This may include implementation of a Low Inflow Protocol along the Catawba River and encouraging drought resistant vegetation and LEED standards for new development.
Category:	Prevention
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. The County's Unified Development Ordinance (UDO) was amended to encourage the planting of drought tolerant plant materials as part of the landscaping requirements for new development. A Landscaping Manual is in the final stages of development which will include specific drought tolerant species for planting in the county. Also, the UDO encourages the use of sustainable maintenance systems for landscaping, such as rain barrels or cisterns. Catawba County adopted a policy whereby it will rebate 50% of fees related to plan review or express plan review for commercial buildings seeking LEED, Energy Star, and/or NC Healthy Built Homes certification. Catawba County is a signatory to the Duke Energy Relicensing Agreements which established a Low Inflow Protocol (LIP) in managing the river system during times of drought.

Mitigation Action 29	Continue and expand the network of public-private partners, such as the Local Emergency Planning Committee (LEPC), to include other organizations like the Contingency Planning Association of the Carolinas (CPAC) to engage the business community in hazard mitigation activities.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide
Lead Agency/Department Responsible:	Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. The LEPC meets semi-annually to discuss emergency preparedness. Recently, an environmental specialist has been added to the group to provide additional expertise for the group. The committee has been established to do the work and is up and running; therefore, this is no longer needed as a 2019 mitigation action.

Mitigation Action 30	Develop a landscape manual which encourages the use of native trees and vegetation which are storm and drought resistant. This manual will be available to the development community as a tool to meet the landscaping requirements of the Unified Development Ordinance. The general public will also be encouraged to use this manual when landscaping individual home sites.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm; Tornado; Wildfire; Drought; Winter Weather
Lead Agency/Department Responsible:	Catawba County Planning, Parks & Development Department; Cooperative Extension
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Low
2019 Status:	Completed. Information about species of plants that grow well in the county has been obtained from various nurseries in the county. A list of the plants has been compiled and illustrations have been developed and incorporated into a user-friendly manual.

Mitigation Action 31	Provide outreach education to manufactured home park owners and residents on the need for developing an evacuation plan during imminent hazard threats.
Category:	Emergency Services; Public Education and Awareness
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide
Lead Agency/Department Responsible:	Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	Completed. Outreach has been conducted to manufactured home owners about emergency preparedness, such as participating in the County's Community Alert System. Information has been directly delivered to these owners and programs have also been conducted.

City of Claremont

Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ul style="list-style-type: none"> a) Maintain digital FEMA elevation certificates for all construction in the floodplain. b) Establish a goal to have each plan reviewer attend a related training periodically. c) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. d) Send information about the flood hazard and promote the availability of flood insurance through regularly scheduled mailings (such as the dissemination of handouts with annual property tax notices, utility bills, etc.).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Update Claremont Land Development Plan and Recreation Master Plan with current flood data and keep flood-prone areas designated for greenways.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Keep infrastructure database updated when repairs are made and new facilities are installed.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Claremont Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Take part in regional public outreach programs about hazard potential in our areas.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department; City of Claremont Administration Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Install quick-connect emergency generator hook-ups for remaining critical facilities: four (4) pump stations and City Hall.
Category:	Other
Hazard(s) Addressed:	All Hazard
Lead Agency/Department Responsible:	City of Claremont Public Works Department; City of Claremont Administration Department; City of Claremont Police Department; City of Claremont Fire Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; Department of Homeland Security (Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program).
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Create a public outreach program for City citizens about specific hazards that impact Claremont and the resources available for mitigation using social media, the City website, City newsletter, etc.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department; City of Claremont Administration Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	Routinely inspect and maintain fire hydrants.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	City of Claremont Fire Department; City of Claremont Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	Using social media, the City website, and other public outreach, encourage residents to keep storm drains and ditches clear of debris during storms (to assist, not rely solely on Public Works).
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 9	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a) Maintain digital FEMA elevation certificates for all construction in the floodplain. b) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). c) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Send information about the flood hazard and promote the availability of flood insurance through regularly scheduled mailings (such as the dissemination of handouts with annual property tax notices, utility bills, etc.).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: There has been no new development in need of elevation certificates; the City adopted additional freeboard

Mitigation Action 9	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Maintain digital FEMA elevation certificates for all construction in the floodplain. b) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). c) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Send information about the flood hazard and promote the availability of flood insurance through regularly scheduled mailings (such as the dissemination of handouts with annual property tax notices, utility bills, etc.).
	<p>above minimum standards; staff has attended floodplain management workshops; citizen outreach needs to continue.</p>

Mitigation Action 10	Install quick-connect emergency generator hook-ups for remaining critical facilities.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazard
Lead Agency/Department Responsible:	City of Claremont Public Works Department; City of Claremont Administration Department; City of Claremont Police Department; City of Claremont Fire Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local; Department of Homeland Security (Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program).
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The City of Claremont Fire Department, Police Department, Public Works Department, McLin Sewer Treatment Plant, Rescue Squad, and one (of five) lift stations now have emergency generators. Two more generators for lift stations are budgeted over the next 3 years.

Mitigation Action 11	Encourage residents to continue with voluntary water restrictions and water conservation actions.
Category:	Prevention
Hazard(s) Addressed:	Drought

Mitigation Action 11	Encourage residents to continue with voluntary water restrictions and water conservation actions.
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department; City of Claremont Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: More frequent during low precipitation periods; Measurable progress is slow due to staff availability and funding.

Mitigation Action 12	Verify height of manholes in flood zones with GPS and ensure proper equipment is present.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	Short range
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. The City collected GPS data for all water, sewer, and storm sewer facilities in 2011.

Mitigation Action 13	Explore the feasibility of a Capital Improvement Plan to extend water lines to areas near the City with well problems.
Category:	Prevention
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred due to budgetary reasons. Measurable progress is slow due to staff availability and funding.

Mitigation Action 14	Explore the feasibility of municipal purchase or private donations of floodplain areas for use as greenways.
Category:	Prevention/Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Claremont Planning and Zoning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local/private donation
Implementation Schedule:	Moderate range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: This is a staff priority when development occurs. These areas are still designated as greenway in the Claremont Land Development Plan.

Mitigation Action 15		Routinely inspect and maintain fire hydrants.
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	City of Claremont Fire Department; City of Claremont Public Works Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In Progress. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 16		Encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works).
Category:	Property Protection	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	City of Claremont Public Works Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In Progress. Measurable progress is slow due to staff availability and funding.	

City of Conover

Mitigation Action 1	Maintain continued community compliance with the National Flood Insurance Program (NFIP). Provide education to property owners, elected officials, and appointed officials about flood prevention.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Conover Planning and Economic Development Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Provide education via website, social media, brochures, etc. regarding what to do before, during, and after storm events.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Thunderstorm, Lightning, and Hail; Winter Weather; Tornado
Lead Agency/Department Responsible:	City of Conover Fire Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Educate public about maintenance of property and trimming of trees located near streets and power lines.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather
Lead Agency/Department Responsible:	City of Conover Public Works Department; Duke Energy Corporation
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate

Mitigation Action 3	Educate public about maintenance of property and trimming of trees located near streets and power lines.
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Ensure firefighters are properly trained in brush fire fighting techniques.
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	City of Conover Fire Department
Estimated Cost:	\$1,400
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Conover; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Install generator transfer switch connections during the construction of new public facilities (schools, fire stations, City buildings, etc.).
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Conover Planning and Economic Development Department
Estimated Cost:	To be determined

Mitigation Action 6	Install generator transfer switch connections during the construction of new public facilities (schools, fire stations, City buildings, etc.).
Potential Funding Sources:	Local, State; Federal Hazard Mitigation Grant Program (HMGP)
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Hold informative work sessions for newly elected officials and new appointees to planning commissions and appeals/variance boards, to provide an overview of floodplain management, the importance of participating in the NFIP, and the implications of failing to enforce the requirements of the program or failing to properly handle variance requests. b) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, local library, website, etc. and inform people who they can call to learn more information.
----------------------------	---

Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Conover Planning and Economic Development Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	Staff time only
Implementation Schedule:	Within 1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	<p>Work with the local media to highlight mitigation practices for homeowners during wildfire and winter storm seasons through the development of Public Service Announcements (PSAs).</p>
----------------------------	--

Category:	Public Education and Awareness
Hazard(s) Addressed:	Wildfire; Winter Weather
Lead Agency/Department Responsible:	City of Conover Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: The City uses its website and social media to communicate with citizens about storm events.

Mitigation Action 9		Aggressively encourage tree trimming of large older trees near structures, power lines, and rights of way.
Category:	Property Protection; Public Education and Awareness	
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather	
Lead Agency/Department Responsible:	City of Conover Public Works Department; Duke Energy Corporation	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: Staff works with property owners and the North Carolina Department of Transportation (NCDOT) when situations arise, or dead or damaged trees are observed near the street rights of way.	

Mitigation Action 10		Ensure firefighters are properly trained in brush/wildland fire fighting techniques.
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	City of Conover Fire Department	
Estimated Cost:	\$1,200	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: Completed annually.	

Mitigation Action 11		Routinely inspect and maintain fire hydrants.
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	City of Conover Fire Department	
Estimated Cost:	Minimal staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	Deleted. Completed annually; however, this action was not selected to be carried over to the 2019 list of mitigation actions.	

Mitigation Action 12	Consider establishing a local reserve fund for public mitigation measures.
Category:	Prevention
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Conover Finance Department; City of Conover Public Works Department; City of Conover Planning and Economic Development Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress. The City funds staff positions which implement guidelines of the adopted hazard mitigation plan. Measurable progress is slow due to lack of funding and staff availability.

City of Hickory

Mitigation Action 1	Continue the enforcement of the City of Hickory 2007 Flood Damage Prevention Ordinance. This ordinance regulates construction and development activities within Special Flood Hazard Areas (SFHAs).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Development Services Department
Estimated Cost:	Budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Measurable progress is slow due to staff availability and lack of funding.

Mitigation Action 2	Monitor and enforce the provisions of the City of Hickory's NPDES Phase 2 Stormwater Control Ordinance and continue to provide community outreach on the importance of stormwater management.
Category:	Local Plans and Regulations; Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Public Services Department, Engineering Division
Estimated Cost:	Budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The City's stormwater engineering division continues to enforce and provide community outreach and education regarding its NPDES Phase 2 Program. Staff also continues to seek additional training to keep up-to-date on the latest legislation and engineering practices.

Mitigation Action 3	Coordinate with willing, voluntary owners of repetitive loss properties to apply for hazard mitigation funding to implement projects that reduce or eliminate the long-term risk of future flood damages. This may be accomplished through property buyouts, elevation, or retrofit projects that remove or alter insured, at-risk repetitive loss structures.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Development Services Department
Estimated Cost:	To be determined on a case-by-case basis

Mitigation Action 3	Coordinate with willing, voluntary owners of repetitive loss properties to apply for hazard mitigation funding to implement projects that reduce or eliminate the long-term risk of future flood damages. This may be accomplished through property buyouts, elevation, or retrofit projects that remove or alter insured, at-risk repetitive loss structures.
Potential Funding Sources:	Federal and State Hazard Mitigation Assistance Grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: Contact with willing participants was not achieved.

Mitigation Action 4	Remove obstructions from public drainage ways or where threats to public infrastructure have been identified. The removal of obstructions will lessen the risk of flooding and damage to roadway and bridges.
Category:	Natural Systems Protection; Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Public Services Department
Estimated Cost:	In progress and budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The City's Public Services Department works continually to maintain public infrastructure and to clear obstructions from drainage ways. Storms in 2013 demonstrated the need to continue this maintenance. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Purchase eleven (11) four-wheel drive vehicles with off-road capabilities. These vehicles will be utilized to reach citizens who become stranded or cut-off from services due to flooding, winter weather, or similar events.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Winter Weather
Lead Agency/Department Responsible:	City of Hickory Police and Fire Departments
Estimated Cost:	Budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	2014 - 2019
Priority (High, Moderate, Low):	High
2019 Status:	Purchase completed.

Mitigation Action 6	Realignment of Fire Department command structure to add an additional Incident Commander per shift. This position will allow for better management of simultaneous multiple incidents and provide scene safety for public safety personnel.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Fire Department
Estimated Cost:	Budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	2014 - 2019
Priority (High, Moderate, Low):	High
2019 Status:	Realignment completed and fully implemented.

Mitigation Action 7	Continue to provide educational outreach to civic groups, neighborhood groups, school children, and similar persons on the importance of fire safety and prevention.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	City of Hickory Fire Department, Fire Prevention Division
Estimated Cost:	Budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: The City's Fire and Life Safety Division continues to provide educational seminars and literature to school children, as well as to neighborhood and civic groups.

Mitigation Action 8	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High

Mitigation Action 8	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
----------------------------	---

2019 Status:	In progress: These efforts are somewhat continual. Measurable progress is slow due to staff availability and funding.
---------------------	--

Mitigation Action 9	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains. c) Sponsor a periodic NFIP workshop for local surveyors and builders. d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Develop handouts for permit applications on specific issues such as installation of manufactured homes in flood hazard areas according to HUD installation standards, or guidance on improving/repairing existing buildings to better withstand potential hazards.
----------------------------	--

Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Development Services Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: Measurable progress is slow due to staff availability and funding.

Mitigation Action 10	Contact owners of repetitive loss property #0102594 to inform them of the technical assistance and hazard mitigation grant funding assistance made available to owners of repetitively flooded properties through the North Carolina Division of Emergency Management (NCEM) and Federal Emergency Management Agency (FEMA). This includes information on the pre-disaster grant funding program provided by FEMA through its Hazard Mitigation Assistance (HMA) programs, and particularly the Repetitive Flood Claims (RFC) program that can provide up to 100% in federal funds for eligible hazard mitigation activities.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Development Services Department
Estimated Cost:	Minimal (staff time only)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deleted: Contact was not established with a willing participant. This specific action item will be broadened to include any repetitive loss structures identified with the city, as reflected in the 2019 Mitigation Action 3 above.

Mitigation Action 11	Continue to enforce the requirements of the City of Hickory's 2007 Flood Damage Prevention Ordinance. This ordinance regulates construction standards for development activities within Special Flood Hazard Areas (SFHAs).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Engineering Departments
Estimated Cost:	In progress and budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: City staff continues to enforce the City's Flood Damage Prevention Ordinance. Additionally, the City recently completed a Community Assistance Visit (CAV) with the North Carolina Division of Emergency Management which indicated the City maintains a good standing in the National Flood Insurance Program (NFIP) program.

Mitigation Action 12	Monitor and enforce the provisions of the City of Hickory’s NPDES Phase 2 Stormwater Control Ordinance and continue to provide community outreach to the general public as to the ordinance’s requirements and the importance of adequate stormwater control.
Category:	Prevention; Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Engineering Department
Estimated Cost:	In progress and budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund and Stormwater Utility Fee
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The City’s stormwater engineering division continues to enforce and provide community outreach and education regarding its NPDES Phase 2 Program. Staff also continues to seek additional training to keep up-to-date on the latest legislation and engineering practices.

Mitigation Action 13	Remove obstructions from drainage ways where located on public property or where a threat to a public improvement such as a road or drainage structure is identified.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Public Services Department
Estimated Cost:	On-going and budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The City’s Public Services Department works continually to maintain public infrastructure and to clear obstructions from drainage ways. Recent storms in 2013 demonstrated the need to continue this maintenance. Measurable progress is slow due to staff availability and funding.

Mitigation Action 14	Designate emergency thoroughfares and update to necessary standards. Work with North Carolina Department of Transportation (NCDOT) representatives to identify emergency thoroughfares and identify necessary improvements to enhance safety and improve functionality during emergency events.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Fire Department and NCDOT
Estimated Cost:	To be determined
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The City continues to work with NCDOT to identify and improve emergency routes. This helps to ensure emergency services and evacuations can be provided in the event of a hazard event. (Even though this coordination is ongoing, this action was not selected as one of the 2019 mitigation actions adopted above.)

Mitigation Action 15	Continue to routinely prune trees and clear tree limbs hanging over rights of way to enhance safety and improve function during an emergency. In addition, continue policy requiring underground utility lines in new development and redevelopment projects.
Category:	Prevention
Hazard(s) Addressed:	Hurricanes and Tropical Storms; Severe Thunderstorms and Tornadoes; Winter Storms
Lead Agency/Department Responsible:	Hickory Planning and Public Services Departments
Estimated Cost:	In progress and budgeted activity (staff time)
Potential Funding Sources:	City of Hickory General Fund and Private Developers
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The maintenance of the tree canopy along rights-of-way helps to ensure transportation routes are not blocked and that power and telephone service is minimally impacted in the event of severe weather. (Even though this coordination is ongoing, this action was not selected as one of the 2019 mitigation actions adopted above.)

Mitigation Action 16	Implement City of Hickory Police Department Radio Frequency Interoperability hardware, to prevent communication breakdowns due to compatibility issues between radio frequencies and telephone systems.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Police Department
Estimated Cost:	\$20,000
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	In place 2015
Priority (High, Moderate, Low):	High
2019 Status:	Complete. The implementation of the interoperability hardware has been completed as described above. The City continues to update the system as needed and provides training to other local government and emergency service groups as needed.

Mitigation Action 17	Implementation of Skytower by Hickory Police Department. Skytower is an elevated platform capable of supporting police personnel and/or surveillance equipment.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Police Department
Estimated Cost:	\$119,000
Potential Funding Sources:	JAG grant
Implementation Schedule:	In place by 2015
Priority (High, Moderate, Low):	Moderate
2019 Status:	Complete. The Skytower is an important part of the Police Department's ability to provide first hand management of severe events. The apparatus is used to monitor crowds during large events, and also provides a means to observe areas impacted by severe weather.

Mitigation Action 18	Implement second ladder company within the City of Hickory Fire Department. A second ladder company will provide the City with the ability to reduce the existing 43 square mile coverage area for the single ladder company into two 21.5 square mile coverage areas for the two companies.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Fire Department
Estimated Cost:	\$475,000
Potential Funding Sources:	Five- year federal grant followed by funding by City of Hickory General Fund
Implementation Schedule:	In place 2010, 2015
Priority (High, Moderate, Low):	High
2019 Status:	Complete. The City's second ladder company has been successfully deployed and continues to provide fire protection services to the City and beyond.

Mitigation Action 19	Takeover of duties of existing Hickory Rescue Light Rescue. The City of Hickory Fire Department will assume the responsibilities and response areas of the existing Hickory Rescue Light Rescue operated by Catawba County.
Category:	Emergency Services
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Hickory Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	In place as of 2010 and 2015
Priority (High, Moderate, Low):	Moderate
2019 Status:	Complete. The City has assumed these duties and continues to provide first responder and rescue services to the potentially affected populations.

Mitigation Action 20	Involve emergency preparedness staff in the development of all planning activities with hazard mitigation impacts.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Catawba County Emergency Services Department; Planning Department; Economic Development; City of Hickory
Estimated Cost:	Minimal (Staff Time only)
Potential Funding Sources:	Catawba County General Fund
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: City of Hickory will continue to involve staff in planning activities with hazard mitigation impacts. Measurable progress has been slow due lack of funding and staff availability.

City of Newton

Mitigation Action 1	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Maintain FEMA digital elevation certificates for all construction in the floodplain. b) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute).
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Planning and Zoning Department
Estimated Cost:	Staff time and travel
Potential Funding Sources:	General Fund
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Routinely inspect and clear debris from drainage system.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3		Routinely prune trees and clear tree limbs hanging in right of way.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 4		Maintain a comprehensive infrastructure mapping system to document locations and attributes of infrastructure systems.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 5		Evaluate existing utility network and create a list of infrastructure protection projects based on highest potential hazard impacts.
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.	

Mitigation Action 6	Train fire personnel in wildfire, brush, and forest fire firefighting techniques and practices.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	City of Newton Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	Increase dimensions of drainage culverts in troublesome areas.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 8	Work with local media to establish a public wildfire awareness program.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	City of Newton Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 9	Maintain a seasonal hazard awareness campaign.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	City of Newton Public Information Officer
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 10	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Newton; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 11	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Maintain FEMA digital elevation certificates for all construction in the floodplain. b) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. c) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains. d) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute).
-----------------------------	--

Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Planning and Zoning Department
Estimated Cost:	To be determined (staff and travel)
Potential Funding Sources:	To be determined
Implementation Schedule:	Immediate (1-2 years)
Priority (High, Moderate, Low):	High
2019 Status:	Completed. The Planning Department has continued to maintain digital elevation certificates for all construction in the floodplain, included ongoing development. A flood hazard focus during the City's annual zoning permit revisions included flood management in the development checklist and budgeted for floodplain training for proceeding five years. This resulted in the City's Floodplain Program receiving a clean audit by the State in 2013.

Mitigation Action 12	Routinely inspect and clear debris from drainage system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The City of Newton Public Works staff cleans and inspects the drainage system as needed, including problem areas before and after heavy rain events.

Mitigation Action 13		Routinely prune trees and clear tree limbs hanging in right of way.
Category:	Prevention	
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: The City of Newton has hired a tree trimming crew to keep trees and limbs clear of electric lines.	

Mitigation Action 14		Maintain a comprehensive infrastructure mapping system to document locations and attributes of infrastructure systems.
Category:	Prevention	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: The City has collected most of all known infrastructure and is working diligently to maintain this information.	

Mitigation Action 15		Evaluate existing utility network and create a list of infrastructure protection projects based on highest potential hazard impacts.
Category:	Prevention	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	High	
2019 Status:	In progress: The City has a Capital Improvement Plan that plans capital cost for a five-year period. Hazard mitigation is a category for ranking projects.	

Mitigation Action 16		Increase dimensions of drainage culverts in troublesome areas.
Category:	Structural Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	City of Newton Public Works Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: The City has undertaken several culvert projects over the last several years, which involved replacing undersized culverts with larger sized pipes.	

Mitigation Action 17		Train fire personnel in wildfire, brush, and forest fire firefighting techniques and practices.
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	City of Newton Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: The Fire Department trains each of its personnel in wildfire, brush, and forest fire techniques on an annual basis.	

Mitigation Action 18		Work with local media to establish a public wildfire awareness program.
Category:	Public Education and Awareness	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	City of Newton Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	In progress: Over the past 5 years, the Fire Department has worked with the City's PIO and local media to educate the public about wildfire hazards. The City's efforts to educate the public on wildfires includes adopting a proclamation for a Fire Safety Week each year. The City has also included relevant articles in its quarterly newsletter which goes out to all utility customers, as well as including information on the City's website, Facebook page, and Twitter. In addition, the Fire Department has a Fire Educator that speaks to groups of all ages about fire safety topics, which includes wildfire awareness. Specific groups visited by the Fire Educator include schools, childcare centers, and civic groups.	

Mitigation Action 19		Maintain a seasonal hazard awareness campaign.
Category:	Public Education and Awareness	
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide	
Lead Agency/Department Responsible:	City of Newton Public Information Officer	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1-5 years	
Priority (High, Moderate, Low):	Low	
2019 Status:	In progress: The City's PIO through the local media, newsletters, and social media worked to educate the public on seasonal hazards. The City has included articles about hazard awareness in its quarterly newsletter which is sent out to all utility customers, as well as including information on the City's website, Facebook page, and Twitter. Also, the PIO has prepared and obtained brochures to distribute as needed to educate the public on hazard awareness, focusing on flood; hurricane and tropical storm; thunderstorm, lightning, and hail; tornado; wildfire; drought; winter weather; and erosion.	

Town of Brookford

Mitigation Action 1	Develop a debris management plan.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Wildfire; Winter Weather
Lead Agency/Department Responsible:	Town of Brookford Administration Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Develop a post-disaster reconstruction plan to facilitate decision-making following a hazard event.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Brookford Administration Department; Town of Brookford Police Department; Town of Brookford Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Implement moderate to major repairs to stormwater drains.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Brookford Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Identify and strengthen facilities to function as public shelters.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Brookford Administration Department
Estimated Cost:	To be determined
Potential Funding Sources:	Grants; local staff time
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	Low
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Continue routinely pruning and clearing limbs on the Town's rights of way.
Category:	Prevention
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather
Lead Agency/Department Responsible:	Town of Brookford Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Brookford; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred to the next plan update. Measurable progress is slow due to staff availability and funding.

Mitigation Action 7		Maintain continued compliance with the National Flood Insurance Program (NFIP).
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Brookford Administration Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	2-4 years	
Priority (High, Moderate, Low):	High	
2019 Status:	To be continued: The Town adopted a Flood Damage Prevention Ordinance based on the model provided by the State of North Carolina. The Town Manager will plan to attend training regarding floodplain management. There are no inspectors within the Town, other than those that inspect through the County.	

Mitigation Action 8		Develop mutual aid agreement with other jurisdictions to augment local inspection personnel after major disasters.
Category:	Emergency Services	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Brookford Administration Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	2-4 years	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	Completed. The Town has signed a mutual aid agreement with the City of Hickory and works closely with Catawba County.	

Mitigation Action 9	Prepare a Local Evacuation Plan to ensure the safety of Town residents in advance of anticipated hazard events, particularly wildfires and flooding.
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire; Flood
Lead Agency/Department Responsible:	Town of Brookford Police Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. The Town of Brookford Police Department has worked closely with local municipalities, Catawba County, the Town's chemical plant, and Town residents to prepare an evacuation plan.

Mitigation Action 10	Enhance local citizens' disaster preparedness through continuous outreach and education efforts in coordination with Catawba County, the American Red Cross, and other support organizations.
Category:	Preparedness
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Brookford Administration Department; Town of Brookford Police Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed. Town citizens have been continuously updated on the evacuation plans and the use of the Community Building as a safe house in the case of extreme situations.

Mitigation Action 11		Continue routine inspections of the Town's storm drain system.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Brookford Public Works Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Continuous implementation (1-5 years)	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: The Town of Brookford Public Works Department does this as a regular preventative action.	

Mitigation Action 12		Continue routinely pruning and clearing limbs on the Town's rights of way.
Category:	Prevention	
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Winter Weather	
Lead Agency/Department Responsible:	Town of Brookford Public Works Department	
Estimated Cost:	Local staff time	
Potential Funding Sources:	Local staff time	
Implementation Schedule:	Continuous implementation (1-5 years)	
Priority (High, Moderate, Low):	Moderate	
2019 Status:	To be continued: The Town of Brookford Public Works Department does this as an ongoing preventative action.	

Town of Catawba

Mitigation Action 1	Evaluate Town policies to reduce greenhouse gases. These policies may include additional lighting retrofitting, “green” purchasing goals, and upgrading of equipment in buildings.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Designed to address climate change and its long-term potential to increase the frequency and severity of all natural hazards.
Lead Agency/Department Responsible:	Town of Catawba Planning, Administration, and Public Works Departments
Estimated Cost:	Staff time/low
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status	Deferred - From a planning capacity there is nothing in place. Work with parties responsible (Administration, Police, and Fire) to achieve action.

Mitigation Action 2	If the Town Public Works Department can do this, keep infrastructure database updated when repairs are made and new facilities are installed.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Severe Storms
Lead Agency/Department Responsible:	Town of Catawba Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Low
2019 Status	Deferred. Public Works has no records, as of yet. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Participate in local and regional public outreach programs regarding hazard potential in our area.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Catawba Planning, Administration, Police, Fire, and Public Works Departments
Estimated Cost:	Staff time/low
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate

Mitigation Action 3	Participate in local and regional public outreach programs regarding hazard potential in our area.
2019 Status	Deferred. The Town has participated in local outreach and will continue in the future.

Mitigation Action 4	Review Town of Catawba plans and ordinances for alignment and inclusivity regarding potential hazard mitigation measures.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; Severe Storms
Lead Agency/Department Responsible:	Town of Catawba Planning and Administration Departments
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status	In Progress. Some ordinances have been adopted/changed but changes are still needed Measurable progress is slow due to lack of funding and staff availability.

Mitigation Action 5	Review flood data and designate flood -prone area for greenways in plans, if possible.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Catawba Planning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status	In Progress. Town has been working to build a green way along Lyle Creek and the Catawba River.

Mitigation Action 6	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). b) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains (a model is available). c) Establish a goal to have each plan reviewer attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, local library, website, etc. and inform people who they can call to learn more information.
---------------------	--

Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Catawba Planning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	5 Years
Priority (High, Moderate, Low):	High
2019 Status	To be continued: The Town adopted a Flood Damage Prevention Ordinance based off the model provided by the State that provides “higher standards” particularly regarding freeboard. The Town Planner will continue to attend a training regarding floodplain management if possible. There are no inspectors within the Town, other than those that inspect through the County. The Town has FEMA/NFIP information in Town Hall for pick up. The Town’s website will add a link that directs people to FEMA and State program sites.

Mitigation Action 7		Develop a debris management plan.
Category:	Emergency Services	
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm, Severe Thunderstorm and Tornado; Wildfire; Winter Storm	
Lead Agency/Department Responsible:	Town of Catawba Administration Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	High	
2019 Status	In progress. Public works still has an informal plan currently in place. They turn debris into mulch and pile it on a lot where they provide it to the public for free. No formal plan has been drafted.	

Mitigation Action 8		Provide hazard susceptibility checklist for homeowners to conduct their own inspections.
Category:	Public Education and Awareness	
Hazard(s) Addressed:	All Hazards	
Lead Agency/Department Responsible:	Town of Catawba Administration Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, Citizen Corps. Many FEMA and American Red Cross publications are available at no cost.	
Implementation Schedule:	5 Years	
Priority (High, Moderate, Low):	Low	
2019 Status	To be continued: The Town has and will continue to provide materials to citizens via the sources listed above.	

Mitigation Action 9		Establish pre-disaster debris management contracts.
Category:	Emergency Services	
Hazard(s) Addressed:	Flood, Hurricane and Tropical Storm, Severe Thunderstorm; Tornado; Wildfire; Winter Storm	
Lead Agency/Department Responsible:	Town of Catawba Administration, Police, Fire, and Public Works Department	

Mitigation Action 9	Establish pre-disaster debris management contracts.
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	July 2025
Priority (High, Moderate, Low):	High
2019 Status:	In progress: The Town's Public Works Department removes debris, and, in the case of a disaster, can take it to a landfill. The Town currently provides free mulch, made from the debris.

Mitigation Action 10	Develop a post-disaster reconstruction plan to facilitate decision making following a hazard event.
Category:	Prevention
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Catawba Administration, Police, and Fire Departments
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.
Implementation Schedule:	July 2025
Priority (High, Moderate, Low):	High
2019 Status:	Deferred. None in existence to the best of planning staff knowledge. Parties responsible (Administration, Police, and Fire) do not seem to have time to complete this given their current work load.

Mitigation Action 11	Draft a new stormwater drain map.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Catawba Administration and Public Works Departments
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	July 2025
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Measurable progress is slow due to lack of funding and staff availability.

Mitigation Action 12		Routinely clean and repair stormwater drains.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Town of Catawba Public Works Department	
Estimated Cost:	Staff time	
Potential Funding Sources:	To be determined	
Implementation Schedule:	N/A	
Priority (High, Moderate, Low):	High	
2019 Status:	Completed. This activity has been completed as a mitigation action and now the Town Public Works Department does this as an ongoing preventative action.	

Mitigation Action 13		Routinely prune trees and clear tree limbs hanging in right of way.
Category:	Emergency Services	
Hazard(s) Addressed:	Hurricane and Tropical Storm; Severe Thunderstorm; Tornado; Winter Storm	
Lead Agency/Department Responsible:	Relies upon private company (Asplundh) through Duke Energy	
Estimated Cost:	Staff time	
Potential Funding Sources:	To be determined	
Implementation Schedule:	N/A	
Priority (High, Moderate, Low):	High	
2019 Status:	Completed. This action has not been implemented directly by the Town due to lack of tree pruning equipment/apparatus. Instead, the Town relies upon a private company (Asplundh) through Duke Energy for pruning. With this in place, this action does not need to be carried over as an ongoing mitigation action to the list of 2019 actions.	

Mitigation Action 14	Identify and strengthen facilities to function as public shelters.
Category:	Prevention
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Catawba Administration Department
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants (EMPG), Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program.
Implementation Schedule:	N/A
Priority (High, Moderate, Low):	Low
2019 Status:	Completed. The Town of Catawba Fire Department is a public shelter, and the Town of Catawba Rescue Building serves as a backup. (It has a generator on site.)

Town of Long View

Mitigation Action 1	Increase dimensions of drainage culverts in troublesome areas.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deferred: The Town of Long View has undertaken several culvert projects over the last several years, which involved replacing undersized culverts with larger sized pipes. Measurable progress is slow due to staff availability and funding.

Mitigation Action 2	Draft a new stormwater drain map.
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Planning Department; Town of Long View Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred due to a lack of funding and insufficient staff time.

Mitigation Action 3	Encourage residents to keep storm drains clear of debris before and after storms (to assist, not rely solely on Public Works).
Category:	Education and Awareness Programs
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Public Works Department; Town of Long View Planning Department
Estimated Cost:	Minimal staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred: Using social media, the town's website, and other public outreach the Town of Long View continues to inform residents that they are permitted to take this action.

Mitigation Action 3	Encourage residents to keep storm drains clear of debris before and after storms (to assist, not rely solely on Public Works).
	Measurable progress is slow due to staff availability and funding.

Mitigation Action 4	Coordinate with local power companies to develop publicly acceptable tree trimming policies. Include public education for property owners on the benefits of proper tree trimming around power lines and clearing of debris around homes.
----------------------------	--

Category:	Education and Awareness Programs
Hazard(s) Addressed:	Winter Weather; Thunderstorm
Lead Agency/Department Responsible:	Town of Long View Planning Department
Estimated Cost:	Minimal local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred: The town has coordinated with Duke Energy to periodically inform residents using social media, the town's website, and public outreach on the benefits of proper tree trimming around power lines and clearing of debris around homes. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Develop Vulnerability Assessment Plan.
----------------------------	---

Category:	Local Plans and Regulations
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Long View Planning Department; Town of Long View Public Works Department; Town of Long View Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local staff time
Implementation Schedule:	3-4 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred due to a lack of funding and insufficient staff time.

Mitigation Action 6	Require tree preservation and/or plantings for residential and non-residential development to reduce the impacts of storm water runoff.
----------------------------	--

Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood; Landslide
Lead Agency/Department Responsible:	Town of Long View Planning Department

Mitigation Action 6	Require tree preservation and/or plantings for residential and non-residential development to reduce the impacts of storm water runoff.
Estimated Cost:	Staff time only
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: Tree preservation and/or plantings for residential development is a part of the town's Subdivision Regulations. Non-residential development is yet to be determined.

Mitigation Action 7	Establish a "Hazard Awareness Month" to promote hazard awareness throughout the Town.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Long View Administration Department
Estimated Cost:	Cost of brochure
Potential Funding Sources:	To be determined
Implementation Schedule:	1 year
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. Hazard Awareness Month is the month of March.

Mitigation Action 8	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Long View; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Deleted. Catawba County Emergency Services Department Conducts outreach to the public regarding their Community Alert System.

Mitigation Action 9	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ol style="list-style-type: none"> a) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. c) Hold informative work sessions for newly elected officials and new appointees to planning commissions and appeals/variance boards to provide an overview of floodplain management, the importance of participating in the NFIP, and the implications of failing to properly handle variance requests. d) Conduct a review of other regulatory programs and planning tools, such as the comprehensive plan and zoning ordinance, and report on opportunities to improve consistency with the objectives of floodplain management. e) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, the local library, website, etc. and inform people who they can call to learn more information.
---------------------	--

Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Planning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	<p>To be continued:</p> <ol style="list-style-type: none"> a) Permit forms such as zoning and permits for signs require the applicant to state whether the project is in a floodplain zone. If it is, a floodplain development permit is required. Density and built-upon criteria as part of Long View's Watershed IV Protected Area also address this issue. b) The Long View Town Planner is taking classes but has not obtained CFM certification yet. c) Informative work sessions are held for newly elected officials and new appointees to the Planning Board (also serving as the Board of Adjustment) on an as-needed basis to provide an overview of floodplain management. d) The Planning Board conducted a review of Long View's Zoning Ordinance and Land Development Plan and found them both to be consistent with the objectives of floodplain development as described in Long View's Floodplain Development Ordinance. e) Copies of the latest Flood Insurance Rate Maps for Long View are available at Town Hall. Flyers titled "Flood Preparation and Safety" are also available at Town Hall and have been distributed throughout the community.

Mitigation Action 10	Routinely inspect and clear debris from drainage system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: The Town of Long View Public Works Department routinely inspects and clears debris from drainage system both prior to and shortly after wet weather events.

Mitigation Action 11	Routinely prune trees and clear tree limbs hanging in the right of way.
Category:	Prevention
Hazard(s) Addressed:	Thunderstorm; Winter Weather
Lead Agency/Department Responsible:	Town of Long View Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	To be continued: The Public Works Department in conjunction with Duke Energy Corporation works to remove tree limbs and other obstructions from rights of way to ensure utility lines are not damaged during storms or similar events.

Mitigation Action 12	Require the burial of electrical, telephone, and cable lines for new development.
Category:	Prevention
Hazard(s) Addressed:	Thunderstorm; Winter Weather
Lead Agency/Department Responsible:	Town of Long View Planning Department
Estimated Cost:	Minimal cost to the developer; no cost to the Town.
Potential Funding Sources:	Private sector
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High

Mitigation Action 12	Require the burial of electrical, telephone, and cable lines for new development.
2019 Status:	Deferred: Zoning Ordinance and Subdivision Ordinance require for all new utilities to be buried. Measurable progress is slow due to staff availability and funding.

Mitigation Action 13	Routinely inspect and maintain fire hydrants.
Category:	Emergency Services
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Town of Long View Fire Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	Immediate/in progress
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed: Hydrants are inspected twice a year. Maintenance is performed bi-annually, and the hydrants are flowed once per year. This action was not selected to be carried over to the list of 2019 mitigation actions.

Mitigation Action 14	Provide hazard susceptibility checklist for homeowners to conduct their own inspections.
Category:	Public Information and Awareness
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Long View Administration Department; Town of Long View Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	FEMA; American Red Cross
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred. Town staff has had insufficient time to implement this action. Some materials may already be available from FEMA and the American Red Cross. The Town could identify these materials and make them available at Town Hall and on the Town's website.

Mitigation Action 15	Explore the feasibility of municipal purchase or private donations of floodplain areas for use as greenways.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Long View Planning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	Moderate range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2019 Status:	Deferred. Action is deferred due to a lack of funding. Greenways have been proposed along one floodplain area.

Mitigation Action 16	Ensure firefighters are properly trained and equipped for brush/forest firefighting techniques.
Category:	Emergency Services
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Town of Long View Fire Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Yearly budgeted activity
Implementation Schedule:	Immediate/in progress
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed: The Fire Department obtained wildland gear through a grant in 2010. Training is conducted 2-3 times per year. This action was not selected to be carried over to the list of 2019 mitigation actions.

Town of Maiden

Mitigation Action 1	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ol style="list-style-type: none"> a) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains (a model is available). c) Establish a goal to have each plan reviewer attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Maintain a map of areas that flood frequently (e.g., areas where repetitive loss properties are located) and prioritize those areas for inspection immediately after the next flood. If outside FEMA Special Flood Hazard Areas, consider requiring existing NFIP regulatory standards (compliance with existing ordinance) through overlay zoning, etc. e) Conduct a review of other regulatory programs and planning tools, such as the comprehensive plan and zoning ordinance, and report on opportunities to improve consistency with the objectives of floodplain management.
----------------------------	--

Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Maiden Planning Department
Estimated Cost:	Staff time only
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress. Additionally, staff has periodically attended flood hazard training.

Mitigation Action 2	Continue to address the long-term maintenance and removal of the Maiden Water Supply dam structure with relevant state agencies.
----------------------------	---

Category:	Local Plans and Regulations
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	Town of Maiden Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High

Mitigation Action 2	Continue to address the long-term maintenance and removal of the Maiden Water Supply dam structure with relevant state agencies.
2019 Status:	In progress: Multi-phase plan still being implemented to resolve issues with dam. Measurable progress is slow due to staff availability and funding.

Mitigation Action 3	Continue with the installation of more effective risers to sewer manholes to reduce infiltration and inflow during heavy rains.
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Maiden Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	Completed: Risers have been installed.

Mitigation Action 4	Routinely prune trees and clear tree limbs hanging near electrical lines.
Category:	Other
Hazard(s) Addressed:	Hurricane and Tropical Storm; Thunderstorm; Hail; Lightning; Tornado; Winter Weather
Lead Agency/Department Responsible:	Town of Maiden Public Works Department, Electrical Division
Estimated Cost:	\$25,000 annually
Potential Funding Sources:	Local grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Maintenance required. Measurable progress is slow due to staff availability and funding.

Mitigation Action 5	Routinely inspect and clean debris from drainage system.
Category:	Other
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Maiden Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate

Mitigation Action 5	Routinely inspect and clean debris from drainage system.
2019 Status:	In progress: Maintenance required. Attempting to implement service order software to report debris Measurable progress is slow due to staff availability and funding.

Mitigation Action 6	Explore the feasibility of municipal purchase and/or private donation of floodplain areas for use as greenways.
Category:	Natural Systems Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Maiden Planning Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	In progress: None purchased at this time. Measurable progress is slow due to staff availability and funding.

Mitigation Action 7	Investigate backup power opportunities for critical facilities
Category:	Other
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Maiden
Estimated Cost:	To be determined
Potential Funding Sources:	Local, State and Federal Grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	New Action

Mitigation Action 8	Continue to ensure firefighters are properly trained and equipped for brush/wildland firefighting techniques.
Category:	Other
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Town of Maiden Fire Department
Estimated Cost:	\$1,000 per firefighter in staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate

Mitigation Action 8	Continue to ensure firefighters are properly trained and equipped for brush/wildland firefighting techniques.
2019 Status:	In progress: Training needed as new firefighters join and techniques are improved. Measurable progress is slow due to staff availability and funding.

Mitigation Action 9	Continue to encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works).
Category:	Other
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Town of Maiden Public Works Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Local staff time
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	To be continued: Included items in public awareness training. Measurable progress is slow due to staff availability and funding.

Mitigation Action 10	In coordination with the Catawba County Emergency Services Department, conduct outreach to the public regarding the County's Community Alert System to educate them about how to obtain information both pre- and post-event and about mitigation strategies.
Category:	Education and Awareness Programs
Hazard(s) Addressed:	All Hazards
Lead Agency/Department Responsible:	Town of Maiden; Catawba County Emergency Services Department
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Outreach efforts in coordination with those done by Catawba County; Also linked on website. Measurable progress is slow due to staff availability and funding.

Mitigation Action 11	Develop a dam failure study for the Maiden Reservoir Dam and continue to address the long-term maintenance or removal of the dam structure with relevant state agencies.
Category:	Prevention
Hazard(s) Addressed:	Dam Failure; Flood
Lead Agency/Department Responsible:	Town of Maiden Public Works Department
Estimated Cost:	To be determined
Potential Funding Sources:	Local; state; federal grants
Implementation Schedule:	1-5 years
Priority (High, Moderate, Low):	High
2019 Status:	In progress: Received a NC Department of Environmental Quality grant to improve the dam. A multiple phase plan has been developed to resolve this issue by FY 2019-2020. Measurable progress is slow due to staff availability and funding.

Mitigation Action 12	Construct a remote fire station to house at least two trucks and additional firefighting and life/safety equipment necessary for first responders during periods of emergency or disasters.
Category:	Emergency Services
Hazard(s) Addressed:	Flood; Hurricane and Tropical Storm; Thunderstorm, Lightning, and Hail; Tornado; Wildfire; Drought; Winter Weather; Erosion; Dam/Levee Failure; Earthquake; Sinkhole; Landslide
Lead Agency/Department Responsible:	Town of Maiden Fire Department; Town of Maiden Administration Department
Estimated Cost:	Local staff time
Potential Funding Sources:	Grants; taxes
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Moderate
2019 Status:	Completed. A fire station was built at the intersection of Elbow Road and Startown Road.

Section 8: Plan Maintenance Procedures

The *Plan Maintenance Procedures* section discusses how the *Mitigation Strategy* and *Mitigation Action Plans* will be implemented by participating jurisdictions and how the overall Regional Hazard Mitigation Plan will be evaluated and enhanced over time. This section also discusses how the public will continue to be involved in the hazard mitigation planning process. It consists of the following three subsections:

- 8.1 Implementation
- 8.2 Monitoring, Evaluation, and Enhancement
- 8.3 Continued Public Involvement

8.1 Implementation

Each jurisdiction participating in this Plan is responsible for implementing specific mitigation actions as prescribed in their locally adopted *Mitigation Action Plan* (Section 7). In each *Mitigation Action Plan*, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their own unique mitigation action list as needed without altering the broader focus of the regional Plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for the monitoring and implementation of actions belonging to other jurisdictions involved in the planning process.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date or window has been assigned to each mitigation action to help assess whether actions are being implemented in a timely fashion. The jurisdictions present within the Plan Area will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the *Mitigation Action Plan*.

It will be the responsibility of each participating jurisdiction to determine additional implementation procedures beyond those listed within their *Mitigation Action Plan*. This includes integrating the requirements of the Regional Hazard Mitigation Plan into other local planning documents, processes, or mechanisms such as comprehensive or capital improvement plans, when appropriate. The members of the Hazard Mitigation Planning Committee (HMPC) will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions or agencies are consistent with the goals and actions of the Regional Hazard Mitigation Plan and will not contribute to increased hazard vulnerability in the Plan Area. Opportunities to integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified through future meetings of the HMPC and through the five-year review process described herein. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Regional Hazard Mitigation Plan is deemed by the HMPC to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

The Plan Area Hazard Mitigation Plan will be highlighted whenever possible in Annual Reports prepared by each county and included in departmental or agency reports as deemed appropriate. In addition, each

of the municipal jurisdictions will seek to implement the goals and strategies of this plan by incorporating the recommendations into annual action plans adopted by their respective City or Town Councils. This plan will be incorporated by reference into other planning mechanisms whenever appropriate.

8.2 Monitoring, Evaluation, and Enhancement

The agency with the overall responsibility for monitoring this Plan is the Caldwell County Emergency Management Department. Priorities have not changed since the plan was previously approved. Periodic revisions and updates of the Unifour Regional Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, considering potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations. Periodic evaluation of the Plan will also ensure that specific mitigation actions are being reviewed and carried out according to each jurisdiction's individual Mitigation Action Plan.

The HMPC will continue to meet regularly, as determined by the Caldwell County Emergency Management Department. These regular meetings will take place in the fall of each year so that sufficient time is available to prepare public outreach messages and assess the status of any mitigation actions relevant to the upcoming severe seasonal spring weather and the start of hurricane season. Meetings will also be convened as necessary following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed by the participating jurisdictions.

County and local staff of each participating jurisdiction will also continue to attend training workshops sponsored by the North Carolina Division of Emergency Management or others as appropriate in order to keep up-to-date with any changing guidance or planning requirements and to communicate that information to other representatives of participating jurisdictions.

As part of this monitoring, evaluation, and enhancement process, each participating jurisdiction will be expected to provide an annual status update to Caldwell County for their respective Mitigation Action Plans in order to evaluate the Plan's implementation effectiveness. This will ensure that the Plan is continuously maintained and updated to reflect changing conditions and needs within the Region. If determined appropriate or as requested, an annual report on the Plan will be developed and presented to local governing bodies of participating jurisdictions in order to report progress on the actions identified in the Plan and to provide information on the latest legislative requirements and/or changes to those requirements.

Five (5) Year Plan Review

The Plan will be reviewed by the HMPC every five years to determine whether there have been any significant changes in the Plan Area that may, in turn, necessitate changes in the types of mitigation actions proposed. New development in identified hazard areas, an increased exposure to hazards, the increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the necessary content of the Plan.

The Plan will be reviewed by the HMPC every five years to determine whether there have been any significant changes in the Plan Area that may, in turn, necessitate changes in the types of mitigation

actions proposed. New development in identified hazard areas, an increased exposure to hazards, the increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the necessary content of the Plan.

The plan review provides community officials with an opportunity to evaluate those actions that have been successful and to explore the possibility of documenting potential losses avoided due to the implementation of specific mitigation measures. The plan review also provides the opportunity to address mitigation actions that may not have been successfully implemented as assigned. Lead agency will be responsible for reconvening the HMPC and conducting the five-year review.

During the five-year plan review process, the following questions will be considered as criteria for assessing the effectiveness and appropriateness of the Plan:

- Do the goals address current and expected conditions?
- Has the nature or magnitude of risks changed?
- Are the current resources appropriate for implementing the Plan?
- Are there implementation problems, such as technical, political, legal, or coordination issues with other agencies?
- Have the outcomes occurred as expected?
- Did the jurisdictions, agencies, and other partners participate in the plan implementation process as proposed?

Following the five-year review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures outlined herein. Upon completion of the review and update/amendment process, the Plan Area Hazard Mitigation Plan will be submitted to the State Hazard Mitigation Officer at the North Carolina Division of Emergency Management for final review and approval in coordination with the Federal Emergency Management Agency.

Disaster Declaration

Following a disaster declaration, the Plan will be revised as necessary to reflect lessons learned, or to address specific issues and circumstances arising from the event. It will be the responsibility of the Lead Agency to reconvene the HMPC and ensure the appropriate stakeholders are invited to participate in the plan revision and update process following declared disaster events.

Reporting Procedures

The results of the five-year review will be summarized by the HMPC in the relevant sections of the updated plan. This includes: a comprehensive description of the plan update process including an evaluation of plan effectiveness (Section 2); any updates to the planning area profile (Section 3); any notable revisions or updates to the risk assessment (Section 4) or capability assessment (Section 5); updated mitigation goals and consideration of mitigation action alternatives (Section 6); status updates on previously adopted mitigation action plans (including the identification of reasons for delays or obstacles to their implementation) as well as the identification of newly proposed mitigation actions (Section 7); and revisions or updates to plan maintenance procedures (Section 8).

Any necessary revisions or changes to the countywide Plan elements must follow the monitoring, evaluation, and enhancement procedures outlined herein. For changes and updates to the individual *Mitigation Action Plan* appropriate local designees will assign responsibility for the completion of the task.

8.3 Continued Public Involvement

Public participation is an integral component of the mitigation planning process and will continue to be essential as this Plan evolves and is updated over time.

The most appropriate and meaningful opportunities for the general public to be involved in the maintenance and implementation of the Unifour Regional Hazard Mitigation Plan is during the five-year plan review process as described earlier in this section. As demonstrated in Section 2: *Planning Process*, the Unifour Region and its participating jurisdictions have been extremely ambitious in gaining widespread public involvement during the five-year plan review process through multiple methods. While the five-year plan review process represents the greatest opportunity for such involvement, other efforts to involve the public in the maintenance, evaluation and revision process will continue to be made as necessary. These efforts may include:

- Advertising meetings of the Hazard Mitigation Planning Team in the local newspaper, public bulletin boards and/or City and County office buildings;
- Designating willing citizens and private sector representatives as official members of the Hazard Mitigation Planning Team;
- Utilizing local media to update the public of any maintenance and/or periodic review activities taking place;
- Utilizing City and County Web sites to advertise any maintenance and/or periodic review activities taking place; and
- Maintaining copies of the Plan in public libraries or other appropriate venues;
- Posting the Annual Progress Reports on the Plan to City, County and Town Web sites;
- Heavy publicity of the plan and potential ways for the public to be involved after each major event, tailored to the event that has just happened;
- Planned activities during Severe Weather Preparedness Week (or similar), such as sending brief press releases that tie recent hazard occurrences with information from the hazard mitigation plan;
- Keeping websites, social media outlets, etc. updated;
- Drafting articles for the local community newspapers/newsletters;
- Holding annual public meetings;
- Utilizing social media accounts (e.g. Twitter, Facebook).

Appendix A – Plan Adoption

Draft

BOARD OF COMMISSIONERS
REGULAR MEETING February 3, 2020

ALEXANDER COUNTY
STATE OF NORTH CAROLINA

PRESENT: Ryan Mayberry, Chairman
 Larry Yoder, Vice-Chairman
 Dr. Jeff Peal
 Marty Pennell
 Ronnie Reese

STAFF: Rick French, County Manager
 Jamie Starnes, Clerk to the Board

The Alexander County Board of Commissioners held a regular meeting on Monday, February 3, 2020 in Room 103 of the CVCC / Alexander Center in Taylorsville, North Carolina.

CALL TO ORDER

Chairman Mayberry called the meeting to order at 6:00 PM.

INVOCATION & PLEDGE OF ALLEGIANCE

Vice-Chairman Yoder gave the invocation and Commissioner Reese led the Pledge of Allegiance to the Flag.

COMMISSIONER'S REPORT

Vice-Chairman Yoder reported that, while attending a recent TAC Meeting at the WPCOG, he learned that repairs for Liledoun Road were still on schedule for this spring.

Commissioner Peal mentioned attending the January Library Board of Trustees Meeting as well as a recent Bethlehem Business Association Meeting where the group discussed pedestrian/bike paths along Highway 127. He also stated that members of the Veterans Committee were attempting to gather contact information for all veterans in Alexander County.

Commissioner Pennell, who pointed out the many veterans in the audience tonight, thanked them for their attendance and noted that these types of meetings would not be possible if not for their service.

Chairman Mayberry encouraged everyone to get their flu shot if they haven't already done so.

ADOPTION OF AGENDA

Vice-Chairman Yoder made a motion to adopt the agenda as presented. Commissioner Reese seconded the motion, which passed unanimously.

PUBLIC COMMENT

Craig McLeod discussed several issues along Ridley Ranch Road such as piles of household garbage that are attracting rodents, the blocking of right-of-way with abandoned vehicles and scrap parts, old tires, RV's, and outbuildings, as well as a stream littered with trash and dilapidated housing. He explained that after purchasing 110 acres on Ridley Ranch Road in 2017, he and his wife attempted to get these issues addressed with the help of their attorney; however, no progress has been made as neighbors are confrontational and unwilling to cooperate. After contacting County staff in September 2019 regarding ordinance violations, public health concerns, and lack of access by emergency vehicles, notices were sent to property owners ordering cleanup/removal of violations within 30 days and a second notice allowing an additional 15 was sent. Mr. McLeod stated that to date, no clean-up has occurred and no further action has been taken by the County. In addition, he reported that County staff had suggested he pursue private civil action because the case had "fallen through the cracks" and Alexander County had limited funding to enforce ordinances. Mr. McLeod questioned why he should continue spending his money when the County had a multitude of ordinances to address these types of issues.

After reading a portion of former President George Washington's farewell address related to political prosperity, religion, and morality, Bill Rocap stated that he was very appreciative to see "In God We Trust" on the back of law enforcement vehicles. He felt those words should also be on every school bus to help children learn the principals that America was founded on.

PUBLIC HEARING: REZONING CASE 20-1 – MORGAN

Jon Pilkenton, Director of Planning & Development, presented Rezoning Case 20-1 submitted by Darrell Morgan who requested rezoning of property located at 5195 NC Highway 16 South from RA-20 (Residential-Agricultural) to H-C (Highway Commercial) to allow for automobile sales. The size of the property tract is 1.12 acres. Zoning districts and land uses within 100 feet include RA-20 to the north and west along with H-C to the north, south, and east.

After reviewing staff comments related to the size of the tract, compatibility of the disputed zoning action with an existing comprehensive plan, benefits and detriments resulting from the zoning action for the petitioning property owner / neighbors / and surrounding community, and the relationship between the uses envisioned under the new zoning and the current uses of adjacent land, Mr. Pilkenton reported that the rezoning was consistent with the adopted goals and policies of the 2008 Comprehensive Plan which identifies this area as being designated for commercial

use. Long-term patterns also suggest that Highway 16 South will develop into a commercial corridor.

Letters were sent by first class mail to property owners within 100 feet of the parcel boundary, a sign was posted on the property, and a notice was placed in *The Taylorsville Times*.

In addition to staff's recommendation for approval, the Planning & Zoning Commission held a public hearing on January 2, 2020 to review the request and voted unanimously to recommend approval based on the following:

1. The rezoning request is consistent with the future land use map in the 2008 Comprehensive Plan and its adopted goals and policies.
2. The request will not negatively impact the surrounding properties with regards to commercial development.

Mr. Pilkenton advised that based on the information provided, the Board must determine whether the rezoning request meets the guidelines set forth and is reasonable in regards to public interest considering all uses within the requested zoning district, not merely the use that the applicant proposes.

After a motion by Vice-Chairman Yoder, second by Commissioner Pennell, and unanimous vote, Chairman Mayberry called the public hearing to order and requested any comments. There being none, Vice-Chairman Yoder made a motion to close the public hearing. Commissioner Peal seconded the motion, which passed unanimously.

Chairman Mayberry made a motion to approve Rezoning Case 20-1 based on recommendations from staff and the Planning & Zoning Commission that the rezoning request is consistent with the future land use map, adopted goals, and policies in the 2008 Comprehensive Plan and would not negatively affect the surrounding properties in regards to commercial development. Commissioner Reese seconded the motion, which passed unanimously.

CENSUS 2020 UPDATE

Harold Carrillo, U.S. Census Bureau Partnership Specialist, advised that the first census took place in 1790 and had occurred every 10 years since as mandated by the U.S. Constitution. Census results are used to determine the number of seats each state is allotted in the U.S. House of Representatives, redraw boundaries of congressional and state legislative districts, and distribute of more than \$675 billion in federal funds, grants, and support for schools, hospitals, roads, public works, etc. He reported that citizens would be able to do the 2020 census online instead of filling out the paper form.

U.S. Census representatives will attend a job fair on February 20th at the CVCC / Alexander Applied Technologies Center. Mr. Carrillo stated that 500 census workers would be needed in the Unifour area alone (paying \$20/hr. for approx. 6 months).

RESOLUTION TO PRESERVE & DEFEND THE CONSTITUTIONS OF THE UNITED STATES & NORTH CAROLINA / 2ND AMENDMENT SANCTUARY COUNTY PROCLAMATION

After reading, Chairman Mayberry made a motion to approve a Resolution to Preserve and Defend the Constitutions of the United States and North Carolina. Commissioner Peal seconded the motion, which passed unanimously.

Chairman Mayberry explained that the Board had considered several versions of this resolution but chose this particular one because it excluded the word “sanctuary” to avoid any association with sanctuary cities throughout the country.

Sheriff Chris Bowman also presented a 2nd Amendment Sanctuary County Proclamation, but refrained from using “sanctuary” while reading (staff later edited the proclamation to replace Sanctuary County with Protection County).

In an effort to show unity between the Board and law enforcement, Vice-Chairman Yoder made a motion to also approve Sheriff Bowman’s 2nd Amendment Protection County Proclamation. Commissioner Reese seconded the motion, which passed unanimously.

Vice-Chairman Yoder asked that both documents be sent to all NC counties as well as representatives in the NC House, Senate, and U.S. Congress. He also encouraged the public to pay attention to bills introduced as things can easily be hidden in the fine print.

Commissioner Reese thanked everyone for attending and showing support. He suggested also making calls and sending emails to our NC and U.S. representatives on this issue.

Commissioner Peal was happy to see the community united and standing against having their rights infringed upon.

Commissioner Pennell was disappointed that governmental entities had to pass resolutions and proclamations to show support for the upholding of constitutional rights. He stated that disarming of law-abiding citizens had never proven beneficial and felt our fore fathers had great insight into the right to bear arms when creating the U.S. Constitution.

Several citizens in the audience asked questions related to red flag laws, disarming of citizens involved in disputes and veterans with PTSD, which Sheriff Bowman answered. Due to several citizens wishing to speak on the subject, Chairman Mayberry suggested Sheriff Bowman hold a town hall type meeting to answer the public’s questions related to current and proposed gun laws.

ALEXANDER COUNTY SCHOOLS FACILITY REPAIRS & RENOVATIONS UPDATE

Dr. Jennifer Hefner, Superintendent, presented the Alexander County Schools Facility Repairs and Renovations Update, noting that as of June 30, 2020, an estimated \$5,253,000 would be available

in half-cent sales tax funds and \$3,858,868 in lottery monies (these funds can only be used for building construction, repairs, and renovations). The estimated costs for all projects totaled \$1,850,372.69 and included the following:

- ACHS - \$456,661 for entryway safety, fencing, modular unit removal, possible metal building with storage and classrooms, new practice field storage building, fieldhouse and ag building roof replacement, field house restroom renovation, baseball field and JV gym lighting, repaving of parking lot, gym HVAC, and CTE renovations at former Sugar Loaf Fire Department.
- Bethlehem Elementary - \$16,023.24 for bus pickup/drop off canopy and replacement of office area carpet with vinyl tile.
- East Alexander Middle - \$99,301.25 for bus parking security gates, fire alarm system, and replacement of foyer carpet and hallway linoleum with vinyl tile.
- Ellendale Elementary - \$20,295.20 for guttering to stop concrete erosion, cafeteria door replacement, BASC awning, and parking lot lighting.
- Hiddenite Elementary - \$125,800 for roof replacement and mobile unit door awnings.
- Stony Point Elementary - \$63,685 for repaving of back parking lot and concrete sidewalk for car riders/BASC.
- Sugar Loaf Elementary - \$34,500 for gym roof replacement and a small storage building. Staff has also met with an architect about the cafeteria/gym (renovation vs. new construction).
- Taylorsville Elementary - \$107,380 for gym roof replacement, cafeteria HVAC, new concrete awning for outside of cafeteria, and new bleacher seats.
- West Alexander Middle - \$12,800 for entry and modular unit canopies.
- Wittenburg Elementary - \$481,147 for roof replacement, parking lot resurfacing, and car rider canopy.
- Student Success Center - \$6,000 for security upgrades (electronic door and cameras).
- Board of Education Building - \$426,780 for building repairs/renovations and repaving of parking lot.

Dr. Hefner reported that the Board of Education approved a 5-Year Facilities Plan in November 2019 that is available for public viewing on the Alexander County Schools website. In addition, she provides a chart of projects (completed, scheduled/in progress, and not yet scheduled) at each monthly Board of Education Meeting.

In response to questions asked by Commissioner Peal regarding the roof at Wittenburg Elementary, Schools Maintenance Director Chris Campbell explained that the roof had been installed correctly according to specs at the time of construction; however, due to the length and slope, it continues to hold water and leak.

The Board thanked Dr. Hefner and the Board of Education for the update.

BUDGET ORDINANCE AMENDMENTS #34 - #37 & PROJECT BUDGET ORDINANCE #P-1

Rick French, County Manager, reviewed the purpose of Budget Amendments #34 - #37 and Project Budget Ordinance #P-1 as follows:

Budget Amendment #34 – To increase the Library budget for donations received and for State grant funding in excess of original estimates.

Budget Amendment #35 – To increase the Garage budget for expected revenue from vehicle repair services in excess of original estimates.

Budget Amendment #36 – To adjust project budget line items for the construction contract amount and to allocate expense line items between NCDEQ loan-funded items and items paid with local County funds.

Budget Amendment #37 – To budget for the local match required for the Paragon Films Building Reuse 2020 Grant Project.

Project Budget Ordinance #P-1 – To budget for the Paragon Films Building Reuse 2020 Grant Project.

Chairman Mayberry made a motion to approve Budget Amendments #34 - #37. Commissioner Pennell seconded the motion, which passed unanimously.

Vice-Chairman Yoder made a motion to approve Project Budget Ordinance #P-1. Chairman Mayberry seconded the motion, which passed unanimously.

BOARD APPOINTMENTS & REAPPOINTMENTS

Rick French, County Manager, requested the following reappointments:

Library Board of Trustees – Reappoint Miranda Burgin for 3 years.

Planning & Zoning Commission – Reappoint Don Harrington for two years.

Equalization & Review Board – Reappoint Doug Ramsey, David Odom, Linda Barnette, Bobby Norton, and Donovan Douglas for one year.

Commissioner Peal made a motion to approve the reappointments. Vice-Chairman Yoder seconded the motion, which passed unanimously.

OTHER BUSINESS

The following issues were discussed during Other Business:

- A. The Historic Preservation Committee will meet on Tuesday, February 4th in the EDC Conference Room.
- B. The monthly water meeting with McGill Associates, Buckeye Bridge, and the City of Hickory is scheduled for Thursday, February 6th at the Services Center.
- C. Several commissioners and County staff will participate in a tour of Piedmont Composites on Wednesday, February 5th at 11:00 AM.

CONSENT AGENDA

- A. Minutes from the December 16, 2019 Called Meeting and the January 6, 2020 Regular Meeting.
- B. Tax Release Requests (\$5,668.29) and Tax Refunds (\$26,210.37) for December 28, 2019 – January 23, 2020.
- C. Alexander County Hazard Mitigation Plan Resolution of Adoption.

Vice-Chairman Yoder made a motion to approve the Consent Agenda. Commissioner Peal seconded the motion, which passed unanimously.

CLOSED SESSION – N.C.G.S. 143-318.11(a)(4 & 6) ECONOMIC DEVELOPMENT & PERSONNEL

Chairman Mayberry made a motion to enter into Closed Session at 7:06 PM to discuss economic development and personnel issues pursuant to N.C.G.S. 143-318.11(a)(4 & 6). Vice-Chairman Yoder seconded the motion, which passed unanimously.

ADJOURNMENT

There being no further business, Commissioner Peal made a motion to adjourn at 7:33 PM. Vice-Chairman Yoder seconded the motion, which passed unanimously.

Ryan N. Mayberry, Chairman

Jamie M. Starnes, Clerk to the Board

**RESOLUTION OF ADOPTION
TOWN OF TAYLORSVILLE
ALEXANDER COUNTY HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within Alexander County and the Town of Taylorsville are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hazards including high winds, tornados, severe thunderstorms, flooding, severe winter weather, and hurricanes; and

WHEREAS, the Town of Taylorsville desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Taylorsville has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town of Taylorsville to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County / Town;

NOW, therefore, be it resolved that the Taylorsville Town Council:

1. Adopts the Alexander County Hazard Mitigation Plan; and
2. Vests Alexander County Emergency Services with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Alexander County Emergency Services to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Taylorsville Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day: 4th of February /2020

By: Taylorsville Town Council

Mayor: George Holleman

Signature: George Holleman

Certified by: Uganda J. Prince SEAL:

Date: 2/4/2020

**RESOLUTION OF ADOPTION
ALEXANDER COUNTY
HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within Alexander County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hazards including high winds, tornados, severe thunderstorms, flooding, severe winter weather, and hurricanes; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Alexander County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Alexander County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Alexander County Board of Commissioners:

1. Adopts the Alexander County Hazard Mitigation Plan; and
2. Vests Alexander County Emergency Services with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Alexander County Emergency Services to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Alexander County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day: 2/3/2020

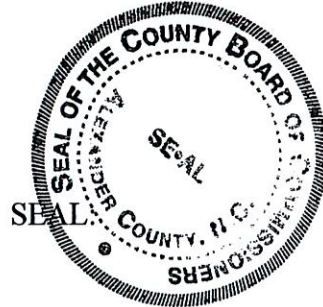
By: Alexander County Board of Commissioners

Chairman: Ryan Mayberry

Signature: _____



Certified by: _____



Date: _____

2/3/2020

**TOWN OF VALDESE
TOWN COUNCIL REGULAR MEETING
February 3, 2020**

The Town of Valdese Town Council met on Monday, January 6, 2020, at 6:00 p.m., in the Town Council Chambers at Town Hall, 102 Massel Avenue, SW, Valdese, North Carolina. The following were present: Mayor John F. "Chip" Black, Jr., Councilman Keith Ogle, Councilwoman Frances Hildebran, Councilwoman Susan Stevenson, Councilman J. Andrew Thompson, and Councilman Roy F. Sweezy. Also present were: Town Attorney Marc Mitchell, Town Manager Seth Eckard, Deputy Town Clerk Jessica Lail, and various department heads.

Absent: None.

A quorum was present.

Mayor Black called the meeting to order at 6:00 p.m. He offered the invocation and led in the Pledge of Allegiance to the Flag.

OPEN FORUM/PUBLIC COMMENT:

CODE ENFORCEMENT – WILL MUELLER, 610 DIXIE AVE., NW, VALDESE: Mr. Mueller informed Council concerns regarding dogs that are running loose in his neighborhood. Animal Control from the Town has set out traps, and someone turned the dogs loose. Several of the dogs have had puppies. Mr. Mueller also shared concerns with properties on Bass Street, Main Street, and the "kudzu hill" owned by Meridian and the lack of improvements that have not been made. Town Manager Seth Eckard gave an update on Code Enforcement. WPCOG informed the town that Mr. Rickles is no longer employed. The new Code Enforcement officer will be informed of all the problems that need to be addressed. Mr. Eckard reminded everyone that Council had approved abatement for the Bass property, and that did not happen. Mr. Muller asked what the process is for abatement. Planning Director Larry Johnson shared that the abatement money does come from town funds, and after a period of time, if they do not reimburse the town, then it would move to foreclosure. Mr. Johnson stated that it does take time to move forward with abatement.

CODE ENFORCEMENT – KAY DRAUGHN, 108 W END ST. SW, VALDESE: Ms. Draughn stated she noticed the absence of a Code Enforcement update on the agenda. Ms. Draughn provided Council with an update sharing pictures of the Deal property located on Main Street. Ms. Draughn stated that she knows there is a process and time frame, but she recommends condemnation and demolition to the Deal property. Ms. Draughn also informed Council of a non-profit entity named REASON that does spay and neuter for animals for low to moderate-income citizens. Debbie Hawkins is the President, and she would be delighted to give Council a presentation on REASON. Ms. Draughn thought it might be useful with the issue that Mr. Mueller shared with the dogs in his neighborhood. Ms. Draughn will connect Ms. Hawkins to Council.

100th ANNIVERSARY OF VALDESE INCORPORATION PROCLAMATION Mayor Black presented the following proclamation:

**100TH ANNIVERSARY INCORPORATION
TOWN OF VALDESE**

WHEREAS, the Town of Valdese was incorporated on February 17, 1920, by a vote of the people, and marks the 100th anniversary of its incorporation in 2020: and

WHEREAS, the Town of Valdese honors the hard work of its early citizens and volunteers who loved their thriving community and organized the successful campaign which resulted in incorporation in 1920: and

WHEREAS, the Town of Valdese marks its 100th anniversary by celebrating its citizens, volunteers, elected officials and staff who strive to preserve and enhance one community; and

WHEREAS, the Town of Valdese dedicates 2020 as a year of community-wide celebration to honor our past, celebrate our present and embrace our future.

NOW, THEREFORE, I, John F. Black, Jr., Mayor of the Town of Valdese, do hereby proclaim 2020 as a year of celebration of the Town of Valdese 100th Anniversary, and I urge all citizens to join in the celebration.

/s/ John F. "Chip" Black, Jr., Mayor

February 3, 2020, MB#31

Director of Community Affair Morrissa Angi shared with Council that a reception will be held at the Town Hall on Monday, February 17th, 2020, from 9:00 a.m. – 11:00 a.m. honoring the 100th Anniversary of Incorporation.

CONSENT AGENDA: (enacted by one motion)

APPROVED REGULAR MEETING MINUTES OF JANAURY 6, 2020

SET PUBLIC HEARING DATE FOR AMENDMENTS TO ZONING ORDINANCE: Staff received an application from Mark Morgan of MC Morgan & Associates INC, requesting the property located 251 PRALEY ST NW be rezoned from Residential District (R-12) to Residential District (R-12A). The proposed rezoning is for a potential 60 unit elderly/multi-family housing development for elderly 55 yrs. and older. A public hearing will be held on Monday, March 2, 2020 for Zoning Map Amendment 1-1-2020.

APPROVED REQUEST TO SELL WINE AT APRIL CRAFT MARKET: Waldensian Style Wines has been authorized to sell wine at the April Craft Market event on April 11, 2020 from 9:00 a.m. to 4:00 p.m. at Old Rock School.

APPROVED BUDGET AMENDMENTS:

Valdese Town Council Meeting Monday, February 3, 2020
 Budget Amendment # 14
 Subject: Public Works – Shop Heater Replacement
 (approved in FY 19-20 general fund CIP)

Proposed Action:
 BE IT ORDAINED by the Council of the Town of Valdese that, pursuant to Section 15 of Chapter 159 of the General Statutes of North Carolina, the following amendment is made to the annual budget ordinance for the fiscal year ending June 30, 2020:

Section I:
 The following revenues available to the Town will be increased:

Account	Description	Decrease/ Debit	Increase/ Credit
10.3970.302	Capital Projects		6,000
	Total	\$0	\$6,000

Amounts appropriated for expenditure are hereby amended as follows:

Account	Description	Increase/ Debit	Decrease/ Credit
10.4250.150	Maint & Repair Buildings	6,000	
	Total	\$6,000	\$0

Section II:
 Copies of this budget amendment shall be furnished to the Clerk to the Governing Board, to the Budget Officer and the Finance Officer for their direction.

Valdese Town Council Meeting Monday, February 3, 2020
 Budget Amendment # 15
 Subject: Paving at Wastewater Plant
 Description: Quote of \$44,050 approved 1/6/20 meeting. Project is identified in the Utility CIP. The paving is necessary to the upkeep and maintenance of the wastewater facility.

Proposed Action:
 BE IT ORDAINED by the Council of the Town of Valdese that, pursuant to Section 15 of Chapter 159 of the General Statutes of North Carolina, the following amendment is made to the annual budget ordinance for the fiscal year ending June 30, 2020:

Section I:
 The following revenues available to the Town will be increased:

Account	Description	Decrease/ Debit	Increase/ Credit
30.3990.000	Fund Balance Appropriated-Utility		44,050
	Total	\$0	\$44,050

Amounts appropriated for expenditure are hereby amended as follows:

Account	Description	Increase/ Debit	Decrease/ Credit
30.8120.740	Capital Outlay	44,050	
	Total	\$44,050	\$0

Section II:
 Copies of this budget amendment shall be furnished to the Clerk to the Governing Board, to the Budget Officer and the Finance Officer for their direction.

Valdese Town Council Meeting Monday, February 3, 2020
 Budget Amendment # 16
 Subject: Replacement of centrifuge control equipment at the Wastewater Plant
 Description: Quote of \$219,989 approved 1/6/20 meeting. Project is identified in the Utility CIP. The equipment is necessary to the continued operation and compliance of the wastewater plant.

Proposed Action:
 BE IT ORDAINED by the Council of the Town of Valdese that, pursuant to Section 15 of Chapter 159 of the General Statutes of North Carolina, the following amendment is made to the annual budget ordinance for the fiscal year ending June 30, 2020:

Section I:
 The following revenues available to the Town will be increased:

Account	Description	Decrease/ Debit	Increase/ Credit
30.3990.000	Fund Balance Appropriated-Utility		219,989
	Total	\$0	\$219,989

Amounts appropriated for expenditure are hereby amended as follows:

Account	Description	Increase/ Debit	Decrease/ Credit
30.8120.740	Capital Outlay	219,989	
	Total	\$219,989	\$0

Section II:
 Copies of this budget amendment shall be furnished to the Clerk to the Governing Board, to the Budget Officer and the Finance Officer for their direction.

Councilman Ogle made a motion to approve the aforementioned items on the Consent Agenda, seconded by Councilwoman Hildebran. The vote was unanimous.

End Consent Agenda

ITEMS REMOVED FROM CONSENT AGENDA:

SET PUBLIC HEARING DATE FOR AMENDMENTS TO GENERAL NUISANCE FOR WEAPONS-DANGEROUS MISSILES (URBAN ARCHERY): WPCOG Community and Regional Planner Hunter Nestor informed Council that the General Nuisance for Weapons-Dangerous Missiles Ordinance was removed from the Town's online Code of Ordinances when updating the last nuisance ordinance. Mr. Nestor reassured Council that the language is the same; it just needs to be placed back in the Book of Ordinances. A public hearing is not needed.

Councilman Sweezy made a motion to reinstate the amendment, seconded by Councilwoman Stevenson. The vote was unanimous.

#17 BUDGET AMENDMENT: Chief of Police Jack Moss presented a proposed budget amendment to purchase a patrol vehicle from the Burke County Sherriff's department that they had totaled out due to cosmetic damage. The structure of the vehicle is sound. Chief Moss explained that if we purchase the vehicle, the Town will save approximately \$10,500.00 on the purchase of the vehicle alone. Chief Moss drove the vehicle and found no problems. The vehicle has 38,000 miles and will give us eight to ten years of service. Chief Moss feels that this a good deal and is an opportunity that was not foreseen when doing the budget for the fiscal year. Councilman Thompson asked if this was something we have to have right now. Town Manager Seth Eckard explained to Council that if we purchase this vehicle now, it would be in lieu of buying a new vehicle in the future, and if we get it now, it would be significant savings. Councilman Thompson stated that sometimes insurance companies would not cover totaled vehicles. Chief Moss did contact our insurance company, and they will insure us. Burke County Sherriff's department could not put the totaled vehicle back on the road because they are self-insured. Councilwoman Hildebran asked Chief Moss to define cosmetic. Chief Moss explained that cosmetic is updating the panels of the frame. Councilwoman Hildebran also asked how many years do we keep a vehicle. Chief Moss stated usually around five-six years. Chief Moss called other police departments in the surrounding area, and they are driving salvaged vehicles. Councilman Thompson is concerned about the liability of letting officers drive a vehicle that has been totaled. Town Attorney Marc Mitchell explained that as long as the vehicle has been checked out and we have evidence that there shouldn't be a problem. The liability would be the same as if we bought a new patrol car. Chief Moss confirmed that the vehicle is certified. Councilman Ogle is concerned why the Burke County Sheriff's department is not driving the vehicle. Councilwoman Hildebran asked if the Town's Public Works department checked out the vehicle. Chief Moss is open to letting everyone check it out. Town Manager Seth Eckard asked Public Works Director Bryan Duckworth if the Public Works mechanic would be able to tell us what shape the vehicle is in and according to Duckworth that could be arranged. Mayor Black stated one thing for Council to keep in mind is we have \$4500 of equipment from a prior wrecked police vehicle that we will have to scrap unless we can find a vehicle to use it on. Councilman Sweezy feels that Chief Moss is very qualified to make a decision on purchasing this vehicle.

Valdese Town Council Meeting Monday, February 3, 2020

Budget Amendment # 01

Subject: Patrol Vehicle

Description: Normally new patrol vehicles are presented using the COP budget account. An opportunity has arisen for the Town to obtain a good condition used 2017 Pursuit Dodge Charger. This creates a savings over a new vehicle and will allow staff to utilize existing equipment that otherwise will not fit in the newer Chargers. The Town will save around \$12,000 after factoring in the cost difference of a new vehicle with new equipment. The savings realized will be incorporated into future years' COP. Buying this patrol vehicle to the fleet will enable the department to equip every eligible officer with a like new vehicle.

BE IT ORDERED by the Council of the Town of Valdese that, pursuant to Section 17 of Chapter 127 of the General Statutes of North Carolina, the following amendment is made to the annual budget adopted for the fiscal year ending June 30, 2020:

Section I
The following revenues available to the Town will be increased:

Account	Description	Decrease/Debit	Increase/Credit
01120-000	Investment Income		\$1,000
	Total	\$0	\$1,000

Amounts appropriated for expenditure are hereby amended as follows:

Account	Description	Decrease/Debit	Increase/Credit
01120-040	Capital Outlay	\$1,000	
	Total	\$1,000	\$0

Section II
Copies of this budget amendment shall be furnished to the Clerk to the Governing Board, to the Budget Officer and the Finance Officer for their attention.

Councilman Sweezy made a motion to approve the purchase with the contingency that it is checked out before the final purchase. There was no second; motion died.

ADOPTED RESOLUTION APPROVING ADMENDMENTS TO THE FIRE PREVENTION AND PROTECTION CODE; Fire Chief Greg Stafford presented a proposed amendment to the Fire Prevention & Protection Code as a recommendation from the North Carolina State's Chief Fire Code consultant. The fire consultant did flag Section E-1, Article B, as being not clear in its intent. The current wording needs to be strengthened.

RESOLUTION ADOPTING
AMENDMENTS TO THE TOWN OF VALDESE
FIRE PREVENTION AND PROTECTION CODE

WHEREAS, Section 3-2021(e)(1) of the Town of Valdese Fire Prevention and Protection Code reads as follows:

"(1) This Code shall require permits from the fire chief or his designated representative as set forth in Chapter 1, "Administration," the North Carolina Fire Code."; and

WHEREAS, the office of the State Fire Marshal has recommended that that sentence be amended to read as follows:

"(1) This Code shall require the issuance of all mandatory and optional permits from the fire chief or his designated representative as set forth in Chapter 1, "Administration," the North Carolina Fire Code."; and

WHEREAS, the town council agrees to make this suggested change; and

WHEREAS, on November 4, 2019, the town council amended the Town of Valdese Fire Prevention and Protection Code to provide that only Appendices B,C, and D of the North Carolina Fire Code would be incorporated into the town's fire code; and

WHEREAS, the town council delayed the effective date of that November 4, 2019 fire code amendment until the North Carolina Building Code Council approved that amendment; and

WHEREAS, the town council likewise does not intend this amendment to become effective until the North Carolina Building Code Council approves this amendment;

IT IS THEREFORE RESOLVED AS FOLLOWS:

1. Section 3-2021(e)(1) of the Fire Prevention and Protection Code of Valdese, North Carolina, is amended to read as follows:

"(1) This Code shall require the issuance of all mandatory and optional permits from the fire chief or his designated representative as set forth in Chapter 1, "Administration," the North Carolina Fire Code."

2. This amendment shall not take effect until the North Carolina Building Code Council approves this amendment.

Adopted the _____ day of February, 2020.

John F. Black, Jr., Mayor

ATTEST:

Frances Hildebran
Town Clerk
(corporate seal)

Councilwoman Hildebran made a motion to adopt the amendment, seconded by Councilman Ogle. The vote was unanimous.

ADOPTED RESOLUTION APPROVING UNIFOUR REGIONAL HAZARD MITIGATION PLAN: WPCOG Community and Regional Planner Hunter Nestor presented the following resolution:

ADOPTION BY THE LOCAL GOVERNING BODY
Town of Valdese

RESOLUTION OF ADOPTION

TOWN OF VALDESE
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Valdese are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the town are particularly vulnerable to such hazards as winter storms, wildfires, flooding, and high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Valdese has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Valdese Town Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Valdese Town Council hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the Chief of the Valdese Fire Department with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Chief of the Valdese Fire Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Valdese Town Council for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this 3rd day of February, 2020.

John F. Black, Jr., Mayor

Attest: Francis Hildebran
Town Clerk

(SEAL)

Councilman Ogle made a motion to approve the Hazard Mitigation Plan, seconded by Councilwoman Hildebran. The vote was unanimous.

SET PUBLIC HEARING DATE FOR AMENDMENTS TO GENERAL NUISANCE FOR NOISE: Mayor Black stated that a public hearing is not required for this Amendment. Chief of Police Jack Moss informed Council of a situation in Town where the police department had received approximately 21 calls and texts, of complaints regarding extremely loud music in a neighborhood at all times of the day. The noise is music and can be heard from the bottom of the homeowner's road. Chief Moss contacted a few other municipalities to see what they have in place for general nuisance ordinances, and most have civil penalties. Chief Moss explained that the proposed civil penalties that he will present at the next Council meeting will start at \$50.00 and increases to \$200.00 up to criminal violation if needed. Councilman Ogle questioned the dollar amount of the penalties and wondered if they should be higher. Chief Moss explained to Council that he does have a decibel code that they can go by, but it is not recommended. Chief Moss would prefer not to give a criminal penalty for this type of situation due to the amount of time staff would have to put into it. The noise ordinance amendment will be proposed at the next meeting for vote.

MANAGER'S REPORT: Town Manager Seth Eckard made the following announcements:

OCP Production of Tennessee William's: Cat on a Hot Tin Roof Show Dates are February 6-9, 2020. Visit www.oldcolonyplayers.com for more information and to purchase tickets.

Concerts at the Rock, Nu Blu with Merle Monroe, scheduled on Saturday, February 15, 2020 at 7:30 p.m.

100th Anniversary of Valdese Incorporation will be held at the Town Hall, scheduled on Monday, February 17, 2020 from 9:00 a.m. – 11:00 a.m.

At the next Council meeting we will have our first Pet of the Month from the Burke County Animal Shelter.

MAYOR AND COUNCIL COMMENTS: Councilman Ogle shared his concerns with the Bass Property, not improving much. The owner has now moved to Church Street and has brought over items that were in his yard. Councilman Ogle stated that the previous Code Enforcement Office, Mr. Rickles said the house could not be torn down because it is built with cinderblock. Town Manager Seth Eckard will talk with the new Code Enforcement Officer on all of our concerns.

Councilwoman Hildebran expressed her concerns with the Deal Property and the lack of progress that has been made. Councilman Hildebran congratulated Director of Community Affairs Morrissa Angi on the Tourism report she shared with Council and thanked her for the excellent job she and her staff are doing. Councilwoman Stevenson thanked Morrissa Angi as well.

Councilman Sweezy thanked the many department heads for the money they have saved and the efforts they put in their departments.

ADJOURNMENT: At 6:51 p.m., there being no further business to come before Council, Councilman Ogle made a motion to adjourn, seconded by Councilwoman Hildebran. The vote was unanimous.

The next meeting is a regularly scheduled meeting on Monday March 2, 2020, 6:00 p.m., Valdese Town Hall.



Town Clerk



Mayor

jl

EXTRACT OF MINUTES

BURKE COUNTY BOARD OF COMMISSIONERS REGULAR MEETING

The Burke County Board of Commissioners held a regular meeting on Tuesday, February 18, 2020 at 6:00 p.m. The meeting was held in the Commissioners' Meeting Room, Burke County Services Building, 110 N. Green Street, Entrance E in Morganton, North Carolina. Those present were:

COMMISSIONERS:

Johnnie W. Carswell, Chairman
Scott Mulwee, Vice Chairman
Wayne F. Abele, Sr.
Jeffrey C. Brittain
Maynard M. Taylor

STAFF:

Bryan Steen, County Manager
Margaret Pierce, Deputy Co. Manager/Finance Director
James R. Simpson, II, County Attorney
Kay Honeycutt Draughn, Clerk to the Board

CALL TO ORDER

Chairman Carswell called the meeting to order at 6:00 p.m.

* * * * *

CONSENT AGENDA

FM - HAZARD MITIGATION PLAN – RESOLUTION

While the threat from hazardous events may never be fully eliminated, there is much we can do to lessen their potential impact upon our community and our citizens. By minimizing the damaging effects of natural hazards upon our built environment, we can prevent such events from resulting in disasters. The concept and practice of reducing risks to people and property from known hazards is referred to hazard mitigation.

Every five (5) years the Hazard Mitigation Plan must be updated and sent to the State and Federal representatives for review and approval. The Unifour Hazard Mitigation Plan was last updated and approved in 2014. In October 2018 the Unifour Region, consisting of Burke, Alexander, Caldwell and Catawba Counties, was assigned a contractor through North Carolina Emergency Management to have the Regional Hazardous Mitigation Plan reviewed and updated. Caldwell County took the lead on this revision. Numerous meetings of each County's Emergency Management leadership along with their respective municipality's leadership met during 2019. Surveys were conducted within in the group along with public input solicited through multiple media outlets. The Regional Hazard Mitigation Plan was submitted to the State and Federal Representatives and was approved in January 2020. The plan is approved for a period of five years and will expire January 2025.

Motion: To adopt resolution No. 2020-02

RESULT:	ADOPTED [UNANIMOUS]
MOVER:	Wayne F. Abele, Sr., Commissioner
AYES:	Johnnie W. Carswell, Scott Mulwee, Jeffrey C. Brittain, Wayne F. Abele, Sr., and Maynard M. Taylor

Resolution No. 2020-02 reads as follows:

**BURKE COUNTY
RESOLUTION OF ADOPTION
UNIFOUR HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within Burke County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, tornadoes, high winds, snow storms, landslides, etc. and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Burke County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Burke County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Board of Commissioners of Burke County hereby:

1. Adopts the Unifour Hazard Mitigation Plan; and

2. Vests Burke County Emergency Management Office with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Burke County Emergency Management Office to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Burke County for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

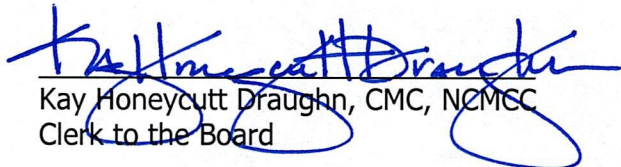
Adopted this 18th day of February 2020.

/s/: Johnnie W. Carswell
Johnnie W. Carswell, Chairman
Burke County Board of Commissioners

ATTEST:

/s/: Kay Honeycutt Draughn
Kay Honeycutt Draughn, CMC, NCMCC
Clerk to the Board

I, Kay Honeycutt Draughn, Clerk to the Board of Commissioners for the County of Burke, North Carolina, do hereby certify that the foregoing is a true copy of so much of the proceedings of a meeting of said Board on February 18, 2020 and will appear in Minute Book No. 46 of said Board.


Kay Honeycutt Draughn, CMC, NCMCC
Clerk to the Board

RESOLUTION OF ADAPTION
TOWN OF GLEN ALPINE – BURKE COUNTY
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the TOWN OF GLEN ALPINE, BURKE COUNTY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county particularly vulnerable to high winds, flooding, icing, snow and other acts of God; and

WHEREAS, the TOWN OF GLEN ALPINE desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-2014---Senate Bill 300 effective July 1, 2001) states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6 (a) after August 1, 2002 the eligibility entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a 5 year cycle; and

WHEREAS, the Unifour Region has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Alderman of the Town of Glen Alpine to fulfill this obligation in order that the Unifour Regional will be eligible for Federal and State assistance in the event a state of disaster is declared for a hazard event affecting the Unifour;

NOW, therefore, be it resolved that the Board of Alderman of the Town of Glen Alpine hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the Town Administrator with the responsibility, authority, and means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and Local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Alderman for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this 3rd day of March 2020



ROBERT BENFIELD, Mayor



MELISSA LALONDE, Town Administrator

**TOWN OF HILDEBRAN
RESOLUTION ADOPTING THE
UNIFOUR HAZARD MITIGATION PLAN**

Resolution # 01-27-2020

WHEREAS, the citizens and property within the Town of Hildebran are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the town are particularly vulnerable to winter storms, wildfires, floods and high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Hildebran has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Hildebran to fulfill this obligation in order that the Town of Hildebran will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the town;

NOW, therefore, be it resolved that the Town Council of the Town of Hildebran hereby:

1. Adopts the Unifour Hazard Mitigation Plan; and

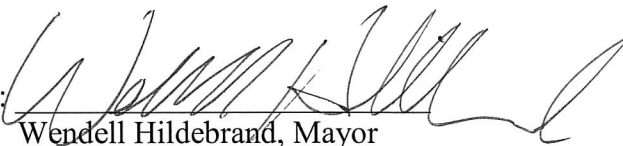
2. Vests the Mayor and Town Manager with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Mayor and Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of the Town of Hildebran for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this 27th day of January, 2020.

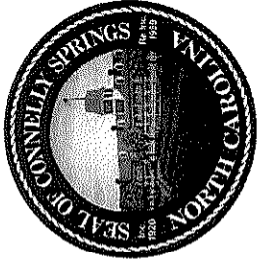
By: 
Wendell Hildebrand, Mayor

Certified by: Alice Sanders
Alice Sanders, Town Clerk

SEAL

Date: January 27th, 2020





TOWN OF CONNELLY SPRINGS

RESOLUTION OF ADOPTION

HAZARD MITIGATION PLAN

RESOLUTION NO. 2020-01

WHEREAS, the citizens and property within the Town of Connelly Springs are subject to the effects of natural and man-made hazards that pose threats to lives and cause damage to property within the Town limits; and

WHEREAS, Burke County and the Town of Connelly Springs desires to seek ways to mitigate the impact of unidentified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local government units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-215---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 stated that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Burke County Emergency Management Team has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Aldermen for the Town of Connelly Springs to fulfill this obligation in order that Burke County and the Town of Connelly Springs will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting both Burke County and the Town of Connelly Springs;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Aldermen for the Town of Connelly Springs hereby:

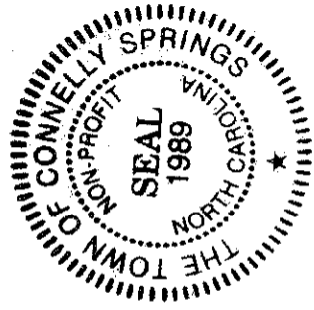
1. Adopts the Hazard Mitigation Plan; and
2. Vests the Town Administrator and Burke County Community Development with the responsibility, authority and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with

respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Burke County Emergency Management Team to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Hazard Mitigation Plan is in compliance with all State and Federal regulation and that any needed revisions or amendments to the Plan are developed and presented to the Board of Aldermen for the Town of Connelly Springs for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

ADOPTED ON THIS DAY, the 3rd of February, 2020.

(Seal)





Johnny E. Berry, Mayor

ATTEST:



Tamara Brooks, Town Administrator

Tamara Brooks, Town Administrator

**TOWN OF HILDEBRAN
COUNCIL'S CHAMBER
ALBERT PARKHURST
MUNICIPAL COMPLEX**

**JANUARY 27, 2020
7:00 PM**

**REGULAR MEETING
MINUTES**

CALL TO ORDER	Mayor Hildebrand called the regular meeting of the Town Council to order at 7:00 p.m.
INVOCATION	A moment of silence was observed.
PLEDGE OF ALLEGIANCE	Addyson Sanders led the Pledge of Allegiance to the United States Flag.
COUNCIL PRESENT	The following members of the Board were present: Mayor Wendell Hildebrand and Council Members Derek Cline, Ben Honeycutt, Mike Smith and Terry Weaver. Council Member Cole Herrell arrived at 7:05 p.m.
STAFF PRESENT	The following staff members were present: Attorney Redmond Dill, Town Manager Logan Shook, Town Clerk Alice Sanders, Finance Officer Fredrick Rankins and Town Planner Hunter Nestor.
CITIZENS & MEDIA PRESENT	See attached sheet.
APPROVAL OF AGENDA	Council Member Smith made a motion to approve the agenda with the amendment of moving the vote to consider the adoption of resolution of a NCDOT street name change (SR 2503 Neuville Ave) to New Business, section "h." All voted in favor.
APPROVAL OF MINUTES	Council Member Smith made a motion to approve the December 16, 2019 regular meeting minutes as presented. All voted in favor.
PUBLIC COMMENTS	Rick Barnes, President of East Burke Youth Athletic Organization, addressed the conditions of the gym and concession stand building and requested repairs and layout changes.
PUBLIC HEARINGS ZMA 2020-1	Mayor Hildebrand opened the public hearing at 7:11 p.m. to consider ZMA 2020-1. Planner Nestor reported that a proposed rezoning of the property located at 9080 Bridges Ave from Residential Low Density (R-20) to Neighborhood Business (N-B) is presented for consideration. The property owner plans to use the property as an event center/wedding venue.

The Town does not currently have a definition for “event center/venue.” This topic is being researched by staff and may be considered by Planning Board in the future. The Town does allow for “community centers and clubs and lodges” in the current zoning. Mr. Nestor stated that the property owner’s proposed use could also be considered one of these without a specific text amendment.

Mr. Nestor then reviewed the permitted and conditional uses allowed in N-B. He stated that a “Community Center” is permitted in N-B. He stated that the potential text amendment for “Event Center/Venue” would potentially make it a conditional use.

Mr. Nestor further stated that the proposed zoning map amendment (ZMA 2020-1) is consistent with the recommendations of the Comprehensive Plan. The current surrounding uses and zoning are consistent with the proposed zoning map amendment. He stated that staff recommends that the current ZMA 2020-1 (rezoning to N-B) be approved and that the Planning Board unanimously recommends approval of the rezoning.

There being no public comments, Mayor Hildebrand closed the public hearing at 7:14 p.m.

Council Member Honeycutt made a motion to approve Zoning Map Amendment 2020-1 concerning the rezoning of 9080 Bridges Ave and finds that the proposed map amendment is consistent with the Town of Hildebran Comprehensive Plan and other officially adopted plans and is reasonable and in the public interest and are consistent with surrounding uses and zoning. All voted in favor.

ZTA 2020-1

Mayor Hildebrand opened the public hearing at 7:14 p.m. to consider ZTA 2020-1. Planner Nestor reported that ZTA 2020-1 is to consider including restaurants (with drive thru, drive-in or walk up) as a Conditional Use in the Central Business District (CBD) zoning district. He stated that Chubby’s of Hildebran, located at 511 U.S Hwy 70 SW D, inquired about putting in a drive thru at their location, located in the CBD zoning district.

Mr. Nestor explained that a Conditional Use Permit is granted by the Hildebran Board of Adjustment after the Board holds a public hearing, which authorizes a use which would not generally be appropriate throughout a

particular zoning district, but which, if controlled as to number, size, location, or relation to the neighborhood, would promote the public health, safety, and general welfare. In granting such a permit, the Board of Adjustment may designate such conditions in connection therewith as will conform to the requirements and spirit of this Ordinance. The Board can also deny the permit if they believe it will negatively affect the above mentioned areas.

Mr. Nestor stated that staff and Planning Board recommend the approval of the proposed text amendment ZTA 2020-1.

There being no comments, Mayor Hildebrand closed the public hearing at 7:16 p.m.

Council Member Herrell made a motion that the Town Council adopt the proposed Zoning Text Amendment 2020-1 and find that the proposed text amendment is consistent with the recommendations of the Hildebran Comprehensive Plan and that the proposed text amendment is consistent with other officially adopted plans. All voted in favor.

NCDOT STREET NAME
CHANGE (SR 2503
NEUVILLE AVE)

Mayor Hildebrand opened the public hearing at 7:17 p.m. concerning a NCDOT road (SR 2503) name change from Neuville Ave to Synergy Way.

Dinah Cruse, MFX, spoke against the name change citing that it would be an inconvenience, increase costs and consume time unnecessarily for her company with no added value.

Jody York spoke against the name change due to the inconvenience to other businesses that reside on the road. She asked for compromise by putting up company signs but leaving the road name the same.

Elena Azzarita, from SynergyLabs, spoke in favor of the name change citing that there is value to their retail customers so that they can relate their company with the name of the road. She stated that SynergyLabs is willing to compensate the businesses on the road for any inconvenience

There being no other public comments, Mayor Hildebrand closed the public hearing at 7:25 p.m.

OLD BUSINESS: None.

NEW BUSINESS:
CONSIDER APPROVAL OF
RESOLUTION ADOPTING
THE UNIFOUR HAZARD
MITIGATION PLAN

Planner Nestor reported that a Unifour Hazard Mitigation Planning Committee was created, consisting of representatives from each of the 28 participating jurisdictions, to develop a plan. The counties and municipalities bound together to develop the plan because each county was required to have one by state and federal law. The plan was prepared in coordination with FEMA and the NC Division of Emergency Management and includes conformance with FEMA's latest Local Mitigation Planning Handbook and Local Mitigation Plan Review Guide. The federal government offers FEMA relief to municipalities who have FEMA-sanctioned hazard mitigation plans like this one. The plan will be active for five years.

Council Member Herrell made a motion to approve the resolution adopting the Unifour Hazard Mitigation Plan as presented. All voted in favor. A copy of the resolution is hereby incorporated by reference and made a part of these minutes (Attachment A).

CONSIDER APPROVAL OF
SERVICE AGREEMENTS
FOR STREET MOWING,
PARK MAINTENANCE
AND WEEKEND
CLEANING AT THE PARK

Town Manager Shook stated that the service contracts for street mowing, park maintenance and weekend cleaning at the park are currently held by Steve Young with The Grounds Keeper LLC. These contracts are currently two-year contracts that expire June 30, 2020. Mr. Shook has been working with Finance Officer Fredrick Rankins and Mr. Young and has provided information about the work involved in each contract as well as pricing for the three contracts up for consideration.

Mr. Young has agreed to enter into a three-year contract with the Town, keeping his pricing the same with the exception of the additional costs associated with 1st St SE and 4th St Pl, SW. These roads have kudzu issues and Mr. Shook has asked that Mr. Young cut these areas 6' – 8' from the road. One other cost increase involves additional mulching in the park for the two playground equipment pieces that have been installed since the original contract (swing sets and yellow dome). Mr. Shook stated that the new contracts include a cancellation clause at any point during the contract, from either side, provided there is at least a six-month notice.

Council Member Herrell asked about cost for rubber pieces instead of mulch at the park. Mr. Young stated that the cost would be about four times more expensive.

Council Member Herrell made a motion to approve the service contracts with The Grounds Keeper LLC for street right-of-way maintenance, park maintenance and weekend cleaning at the park, effective July 1, 2020 and ending June 30, 2023, as presented. All voted in favor. A copy of the first two (2) pages of each contract are hereby incorporated by reference and made a part of these minutes (Attachment B, C, D).

CONSIDER APPROVAL OF
CITIZEN ADVISORY
COMMITTEE POLICY

Mr. Shook presented a policy adopting a citizen advisory committee that was modeled after a UNC School of Government template. He highlighted key points of the policy. Council Member Herrell made a motion to approve the policy adopting a citizen advisory committee as presented. A copy of the policy is hereby incorporated by reference and made a part of these minutes (Attachment E).

CONSIDER APPROVAL OF
CONTRACT FOR AUDIT OF
FY 19-20

Mr. Rankins provided a brief summary of the audit contract of FY 19-20 for consideration. He stated that the minor changes from last year's contract reflect changes required by the Local Government Commission (LGC). The contract price increased slightly by 3.5%. He recommended approval of the contract.

Council Member Smith made a motion to approve the contract to audit accounts of FY 19-20 with S. Eric Bowman, PA as presented. All voted in favor.

CONSIDER APPROVAL OF
2020 TOWN EVENTS

Clerk Sanders provided a list of proposed Town events for 2020 to include the farmers market, two yard sales, a Christmas craft show and the Christmas parade. Council Member Smith made a motion to approve the Town events for 2020 as presented. All voted in favor. A copy of the events is hereby incorporated by reference and made a part of these minutes (Attachment F).

CONSIDER APPROVAL OF
ORDINANCES DECLARING
TEMPORARY ROAD
CLOSURES FOR THE 2020
CRUISE IN, FESTIVALS
AND PARADE

Clerk Sanders stated that the NCDOT had officially approved the temporary road closures necessary to hold the four cruise ins, the September festival and the Christmas parade. The next step is for Council to approve ordinances declaring the temporary road closures which will then be sent to NCDOT for its records. Council Member Smith made a motion to approve the ordinances

declaring temporary road closures for the 2020 cruise ins, the September festival and the Christmas parade as presented. All voted in favor. A copy of the ordinances are hereby incorporated by reference and made a part of the minutes (Attachment G, H, I, J, K, and L).

CONSIDER APPROVAL OF
WEEKLY ONE (1) HOUR
RENTAL IN AUDITORIUM

Mr. Shook stated that Pastor Keith Barrett from Bridge Worship requested to use the auditorium for one hour on the weekend for band practice. Currently, the church rents the auditorium 3 hours on Sunday mornings and 3 hours on Wednesday nights, each week. The current policy requires a 3-hour minimum each rental. Pastor Keith has asked that the 3-hour minimum be waived for this special rental since they already rent the auditorium 6 hours a week. Staff recommends that if the request is approved, that it should be conditional that any other 3-hour rental will take precedent. If Bridge has already paid for one evening, and another three-hour rental is booked at the same time, Bridge would be allowed to use the auditorium for that one hour another night during the same week, or staff will credit the fee for another week.

Council Member Herrell made a motion to approve the request from Bridge Worship to allow them to rent the auditorium for one hour on the weekends, waiving the three-hour minimum, with the condition that any other three-hour rental will take precedent. If another three-hour rental is booked during the time that Bridge Worship has scheduled, staff will reschedule Bridge Worship to another time during the same week or credit the hour to another week. All voted in favor.

CONSIDER ADOPTION OF
RESOLUTION OF A NCDOT
STREET NAME CHANGE
(SR 2503 NEUVILLE AVE)

Council heard comments from the public regarding the proposed street name change from Neuville Ave to Synergy Way at the beginning of the meeting. Council had no further discussions. Council Member Herrell made a motion to adopt the resolution regarding a NCDOT road name change in the Town of Hildebran (SR 2503) from Neuville Ave to Synergy Way. Council Members Cline, Herrell, Smith and Weaver voted in favor of the motion. Council Member Honeycutt was opposed. The motion carried. A copy of the resolution is hereby incorporated by reference and made a part of these minutes (Attachment M).

DECEMBER FACILITIES
REPORT

The report was presented for review.

DECEMBER DELINQUENT
TAX REPORT

Tax Collector Sanders provided the December tax report. A copy of the report is hereby incorporated by reference and made a part of these minutes (Attachment N).

DECEMBER DEPUTY
REPORT

The December Deputy report was provided for review.

COMMITTEE REPORTS

Transportation Advisory Committee (TAC) and Technical Coordinating Committee (TCC) – Mr. Shook reported on street issues that are being reviewed by DOT. Council Member Herrell reported that the Pedestrian Plan is at least 10 years old. DOT had drastic budgetary cuts which is why some projects are taking longer than planned.

WPCOG Policy Board – No report.

Burke Economic Development – Council Member Cline had emailed his report earlier this month. He stated the committee wanted to know more about what is going on in Town.

Recreation and Tourism Committee – No report.

Water Resource Committee – No report.

VEDIC – Council Member Weaver reported that VEDIC had helped create more than 100 jobs in our area this past year.

Library Board – No report.

OTHER BUSINESS

None.

ANNOUNCEMENTS

None.

CLOSED SESSION

Council Member Herrell made a motion at 7:57 p.m. to recess to closed session pursuant to NC General Statute 143-318.11(a)(6) to consider the qualifications, competence, performance, character, fitness, conditions of appointment, or conditions of initial employment of an individual public officer or employee or prospective public officer or employee; or to hear or investigate a complaint, charge, or grievance by or against an individual public officer or employee and/or 143-318.11. All voted in favor.

Council Member Smith made a motion to return to open session at 8:05 p.m. All voted in favor.

LEASE OF TWO VACANT OFFICES

Mr. Shook reported that staff had been approached today by a non-profit organization to lease the two vacant offices in the Albert Parkhurst Municipal Complex as well as renting the community center a couple of times each month. Staff asked that the organization put their requests, concerns and questions in a letter to be presented to Council at the March meeting.

SR 2503 SYNERGY WAY

Mr. Shook reported that the name change of SR 2503 Synergy Way will most likely take place April 1st. There was concern of the timing and Council Member Herrell asked that staff reach out to DOT and the businesses on the road about their needs and report back to staff.

STREET SIGN

Council Member Smith requested that the school crossing street sign near the intersection of Hwy 70 and S. Center St. be replaced.

ADJOURN

All business being concluded, Council Member Honeycutt made a motion at 8:15 p.m. to adjourn. All voted in favor.

I attest these are the approved minutes of the Board.

Alice Sanders
Alice Sanders, Town Clerk

Wendell Hildebrand
Wendell Hildebrand, Mayor



The regular meeting of the Board of Aldermen was held on Tuesday, February 4, 2020 at 6:00 pm in the Assembly Room of the Municipal Building.

The following members of the Governing Body were present:

Mayor: Danny Ritchie
Alderman: Terry Yount
Alderman: Dennis Anthony
Alderman: Matt Johnson
Alderman: Rick Cline

Others present:

Town Manager: Sherri Bradshaw
Town Clerk: Sherry Dula
Attorney: Rod Willcox

Mayor Ritchie opened the meeting and led the Pledge of Allegiance followed by a moment of silence.

Approval of Minutes: The Council voted unanimously to approve the January minutes by a motion from Alderman Yount, seconded by Alderman Johnson.

Petitions and Communications - Services for Benny Orders will be on Thursday, February 6, 2020 at Heritage Funeral Service with receiving from 2:30 until 3:30 pm and the funeral service at 3:30 pm. Mr. Orders served as Alderman for the Town for many years and was also with the Drexel Fire Department from 1965 until 1999 in different capacities but he spent the most of his fire department years as Fire Chief.

Service Animals – Mayor Ritchie asked Attorney Willcox to research what the Town could do to regulate animals being allowed in the building. Would like to get something on the books referencing this issue. Mayor Ritchie would like for only registered service animals to be allowed in the building.

NC ABC Commission Delegated Official – A resolution needs to be approved appointing the town manager as the delegated official to sign off on applications for businesses within the town limits to sale/serve alcoholic beverages. Manager Bradshaw stated that she would be willing to be the delegated officer since she is in the office all the time. Alderman Cline asked if the manager would then have a say as to whether the business request would be approved. Manager Bradshaw stated that she would be able to approve or deny the request within the town limits as the zoning ordinance permits. A motion was made by Alderman Anthony, seconded by Alderman Johnson to adopt the resolution appointing Manager Bradshaw as the delegated official to sign off on applications for businesses within town limits to sale/serve alcoholic beverages and the vote was unanimous. A copy of the resolution is attached as part of the minutes.

Partial Road Abandonment Request – Mark Benfield has purchased a portion of land located off Zion Road and Amherst Roads in the area of New Eastwood Circle. Mr. Benfield is requesting the closing of a portion of Kenmore Drive, located in Drexel's ETJ. This street was originally planned for a recorded subdivision that is no longer being developed. The land was originally going to be a continuation of Eastwood Circle by Roy Morris years ago. The street is now an overgrown wooded area. Manager Bradshaw explained to the Council that upon approval of the request, General Statute requires the adoption of a resolution for advertisement of the street closing and also all adjoining property owners will need to be notified of a public hearing. Alderman Johnson has

researched the property and has determined that all owners will have access to their property and he has no issue with granting the request. Mayor Ritchie states if the owner should decide to sell then it will be their responsibility to develop the right-of-way. A motion was made by Alderman Johnson, seconded by Alderman Anthony to call for a public hearing on March 3rd for the partial road abandonment request and the vote was unanimous.

Unifour Hazard Mitigation Plan – Manager Bradshaw presented the Unifour Hazard Mitigation Plan which must be reviewed and adopted every 5 years to assure that the Plan is in compliance with all State and Federal regulations. This plan is needed in order for the Town to be eligible to receive future FEMA funds in the event of a natural disaster. A motion was made by Alderman Yount, seconded by Alderman Cline to adopt the Unifour Hazard Mitigation Plan and the vote was unanimous. A copy of the resolution is attached as part of the minutes.

Drexel Properties Update – Manager Bradshaw stated that we haven't had any update from DEQ about the onsite burial of the debris. She states that DEQ is not willing to accept liability for burying the debris onsite as long as the site is an unpermitted landfill. She stated that they have pushed to get the representative to come visit the site but that has not been successful so far. Alderman Johnson asked if he really understands that right now the debris is left exposed to the public as opposed to burying it where it won't be exposed. Manager Bradshaw said that he has been told that we planned to bury, cap and fence the area and that portion would not be used for anything else. Alderman Cline and Alderman Johnson both asked if we should contact some of our federal representatives to help with this application and Manager Bradshaw suggested we wait until the awards are announced for the EPA grant so that we don't hinder that process in any way.

Manager Bradshaw also stated that Electricities is developing a site plan for the back acreage of the Drexel Properties with the funding received through the Smart Sites Grant we received last year. The plan they are developing will provide two rail spurs. Norfolk Southern has given their approval for the two rail spurs for this site. North Carolina Rail has funding to help with developing new rail spurs and Alliance Engineering is willing to talk to them in this matter.

ARC Grant Application for Rehab of Sewer on the property is in the 2nd stage now and Manager Bradshaw said that it looks positive. Erin Schotte with WPCOG is also drafting a letter to request some CDBG funds that are possibly available in the amount of \$500,000.

Departmental Reports – The Council reviewed the Financial and Tax reports for the month of January, 2020. A copy of each report is attached as part of the minutes.

Drexel Police Report – Chief Treadway was present to review the Police report for the month of January, 2020. Alderman Anthony thanked Chief Treadway for the detailed and very informative email he sent regarding the homeless in the Drexel area. A copy of the report is attached as part of the minutes.

Recreation Department Report – Manager Bradshaw updated the Council on recreation. Basketball is finishing up. Soccer signups are complete and they have 15 indoor soccer teams. Volleyball signups have started. AAU Football will be starting games April 1st. They will be paying rental fees for the use of the field. AAU will receive all gate fees and recreation department will receive concession monies.

Miscellaneous –

- Next meeting will be March 3, 2020 at 6 pm
- Budget Workshop will be March 17, 2020 at 10 am
- Manager Bradshaw updated the Council that the Reid St. maintenance project is still a work in progress and Roger has spoken with Marty Chapman about when he will be back to complete the job and he said that the rain has hindered his work and he is waiting until it dries up enough to finish.
- Alderman Anthony asked if estimates had been obtained for the R.O. Huffman Center bathroom renovations. Manager Bradshaw stated that she has not gotten estimates yet but was planning to include them with the new budget and present them at the budget workshop.
- Alderman Cline would like for the Town to do something in honor of Benny Orders. He suggested we change the name of the fire department to include Benny's name.

Adjournment – A motion was made by Alderman Anthony, seconded by Alderman Yount to adjourn the regular meeting at 6:42 p.m. and the vote was unanimous.

TOWN CLERK Sherry Dale

MAYOR Doug P. Hill

ALDERMAN Tim B. Yount

ALDERMAN Chad Brown

ALDERMAN Mr. Hill

ALDERMAN [Signature]

TOWN OF RUTHERFORD COLLEGE

Post Office Box 406 • 980 Malcolm Blvd. :
Rutherford College, NC 28671
Telephone: (828) 874-0333

MAYOR
Gary McClure

TOWN MANAGER
Kenneth B. Geathers, Jr.



RESOLUTION OF ADOPTION

Town of Rutherford College

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Rutherford College are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to thunderstorms, lighting, hail, tornados, hurricanes, and winter storms; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Burke County Emergency Management Team has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of Rutherford College to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of Rutherford College hereby:

1. Adopts the Hazard Mitigation Plan; and
2. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Burke County Emergency Management Team to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of Rutherford College for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, the 4th of February 2020.

By: Gary McClure Gary McClure, Mayor

Certified by: Jessica S. Bargerly SEAL

Date: Feb. 3, 2020



**BURKE COUNTY
RESOLUTION OF ADOPTION
UNIFOUR HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within Burke County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, tornadoes, high winds, snow storms, landslides, etc. and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

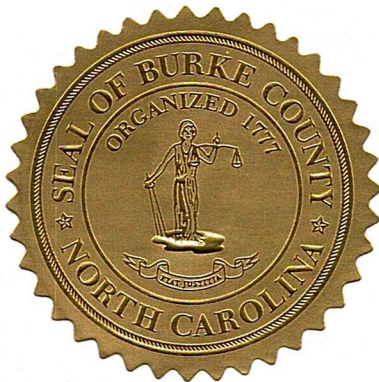
WHEREAS, Burke County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Burke County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

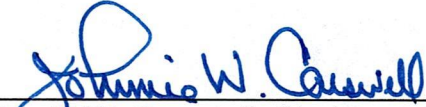
NOW, therefore, be it resolved that the Board of Commissioners of Burke County hereby:

1. Adopts the Unifour Hazard Mitigation Plan; and
2. Vests Burke County Emergency Management Office with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Burke County Emergency Management Office to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Burke County for consideration.
 4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.



Adopted this 18th day of February 2020.



Johnnie W. Carswell, Chairman
Burke County Board of Commissioners

ATTEST:


Kay Honeycutt Draughn, CMC, NCMCC
Clerk to the Board

TOWN OF RUTHERFORD COLLEGE

Post Office Box 406 * 980 Malcolm Blvd.
Rutherford College, NC 28671
Telephone: (828) 874-0333

MAYOR
Gary McClure

TOWN MANAGER
Kenneth Geathers, Jr.



February 3, 2020

6:30 PM- Agenda Review

7:00 PM- Regular Meeting

CALL TO ORDER: Mayor Gary McClure

Council Present: Council Smith, Berry, Annas, Stinson and Cagle

Council Absent: Council Huffman

PLEDGE OF ALLEGIANCE: Led by Council Wayne Annas

MOMENT OF SILENCE: Mayor McClure led the moment of silence and asked the audience to remember our men and women in service.

APPROVE/ AMEND AGENDA: Council Berry moved to approve the agenda with the following addition:
#4 under New Business- Digital Sign Repair/Upgrade. Vote was unanimous of Council present.

APPROVE/ AMEND MINUTES: Council Annas moved to approve the January 6, 2020 minutes as presented. Vote was unanimous of Council present.

MANAGER'S REPORT: Kenneth Geathers, Jr.

Mr. Geathers stated that Phase XII of the SIP plan is scheduled to begin in the Spring of 2020. This includes the lower portion of Adams, Childers, White, and Crump Streets. He further stated that the Town just finished a storm drain report project located at 560 Malcolm Blvd.

PUBLIC COMMENTS

Several Members of the Lejune Estates Community was present to express their concerns regarding a neighbor who is displaying erratic behavior and instilling fear among those who live near his property. Those who spoke were Johnny & Cheryl Davidson, Cathy Berry, and Robert Denner. The most notable comments included:

- Children cannot be alone outside
- Fear of retaliation
- Harassing others by displaying a handgun
- Displaying threatening behavior and antagonizing the neighborhood pets
- Using intimidation by bullying those in the neighborhood
- Setting up traps (on other's property) to catch and harm pets
- Using foul language and aggression when confronting others
- Revving engine to aggravate the neighborhood pets
- Pointing a handgun at one of the neighborhood dogs

Mr. Davidson did state that legal papers have been drawn up for "no trespassing" on his and Kathy Berry's property. Council Annas asked if the Sheriff had been notified. Several members of the audience spoke up and stated yes and that deputies had responded to their call's multiple times. The Sheriff's Department is aware of the situation. Mr. Denner stated that he would like to see more patrolling in that area but more than anything their community needs some form of resolution for this issue. The Mayor stated that he would be talking with the Sheriff about setting up a meeting to mediate

between the affected parties. Mr. Geathers stated that according to our gun regulations, you cannot discharge a weapon within 500 yards of a residence or public road, so this issue will be addressed by the Town's code enforcement program.

PRESENTATION: Quarterly Update: Jessica Bargsley, Finance Officer

Mrs. Bargsley gave a brief update on the finances for the first half of the fiscal year 19/20. The General Fund's revenue budget is at 55% while expenditures are at 47%. The Utility Fund's revenues are at 55% while the expenditures are at 51%. We have currently used 69% of the Powell Bill Funds which are subsidized by state funding and the Town's General Fund. In regards to the Business Fund, the Town has only expended approximately 30% of its budget. Some of the completed projects and/or new expenses for this time period include, Phase XI of the Street Improvement Project, a \$15,000 business loan to Jessica's Mediterranean Eatery, the rebuild of the pump at Azalea Pump Station, Childers' St. Stormwater Project, and the Pigmaster's BBQ Challenge event. Upcoming projects for the next six months include Phase XII of the Street Improvement Project, the Childers' St. Drain Modification, and 560 Malcolm Storm Drain repair.

NEW BUSINESS

1. **Resolution: Town Council Meeting Schedule:** Council Berry moved to approve the following resolution. Vote was unanimous of Council present.

WHEREAS, pursuant to Chapter IV, Section 4.3 of the Town Charter of Rutherford College, there shall be a regular meeting each month of the Town Council; and,

WHEREAS, regular town meetings are to be held on the first Monday of each month, at 7:00 p.m., unless another date or time shall be designated by the Town Council; and,

WHEREAS, all meetings are to be held in the Rutherford College Town Council Chambers located at 980 Malcolm Blvd., unless another place shall be designated by the Town Council; and,

WHEREAS, if holidays should fall on the date of a regular town meeting, the meeting shall be rescheduled for the following Monday; and,

WHEREAS, an allotted time will be designated before each regular town meeting in which the Town Council shall hold an agenda workshop; and,

NOW, THEREFORE, BE IT RESOLVED that the Town Council of Rutherford College adopts the following meeting schedule for 2020:

<i>January 6, 2020</i>	
<i>February 3, 2020</i>	
<i>March 2, 2020</i>	
<i>March 12, 2020</i>	<i>Annual Retreat (6:00 pm - 9:00 pm)</i>
<i>April 6, 2020</i>	
<i>April 20, 2020</i>	<i>Pre-Budget Workshop 6:00 pm</i>
<i>May 4, 2020</i>	
<i>May 18, 2020</i>	<i>Budget Workshop 6:00 pm</i>
<i>June 1, 2020</i>	
<i>July 6, 2020</i>	
<i>August 3 2020</i>	
<i>September 14, 2020</i>	<i>(Due to Labor Day Holiday)</i>
<i>October 5, 2020</i>	
<i>November 2, 2020</i>	
<i>December 7, 2020</i>	

2. **Resolution: Planning Board Meeting Schedule:** Council Berry moved to approve the following resolution. Vote was unanimous of Council present.

WHEREAS, pursuant to Article IV, Section 1 of the Planning Board By-Laws of Rutherford College, there shall be a regular meeting each month of the Planning Board; and,

WHEREAS, regular board meetings are to be held on the third (3rd) Monday of each month, at 7:00 p.m., unless another date or time shall be designated by the Town Council of Rutherford College; and,

WHEREAS, all meetings are to be held in the Rutherford College Town Council Chambers located at 980 Malcolm Blvd., unless another place shall be designated by the Planning Board; and,

WHEREAS, if holidays should fall on the date of a regular board meeting, the meeting shall be rescheduled for the following Monday; and,

NOW, THEREFORE, BE IT RESOLVED that the Town Council of Rutherford College adopts the following meeting schedule for 2020:

January 27, 2020	(Due to Martin Luther King, Jr. Day)
February 17, 2020	Canceled
March 16, 2020	
April 20, 2020	Planning Board Retreat (6:30- 8:30 pm)
May 18, 2020	
June 15, 2020	
July 20, 2020	
August 17, 2020	
September 21, 2020	
October 19, 2020	
November 16, 2020	
December 21, 2020	

3. **Resolution: Hazard Mitigation Plan:** The Clerk stated that adoption of this plan is needed to be eligible for any assistance during disasters as well as some grant benefits associated with FEMA. A copy of this resolution will be on file in the Burke County Emergency Management office. Council Smith moved to approve the following resolution. Vote was unanimous of Council present.

WHEREAS, the citizens and property within the Town of Rutherford College are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to thunderstorms, lightning, hail, tornados, hurricanes, and winter storms; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the **Burke County Emergency Management Team** has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the **Town Council of Rutherford College** to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the **Town Council of Rutherford College** hereby:

1. Adopts the **Hazard Mitigation Plan**; and
2. Vests the **Town Manager** with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the **Burke County Emergency Management Team** to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the **Town Council of Rutherford College** for consideration.
4. ~~Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.~~

4. **Digital Sign Repair/Upgrade**: The Clerk stated that the cost of a fully digital LED sign would be \$13,763 plus tax. This includes installation into the rock base we already have. There is a six week turn around for the completion of the sign. Mayor McClure stated that he would like to have the sign up and running prior to the BBQ event in April which means that the Council needs to take action immediately. Council Cagle moved to purchase the new sign from Action Sign Inc. and have it installed as soon as possible. Vote was unanimous of Council present.

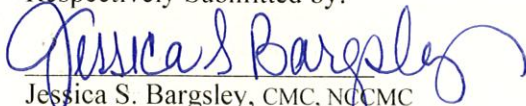
COUNCIL COMMENTS

No comments were made at this time.

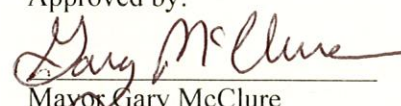
ADJOURN

Council Stinson moved to adjourn at 8:30 pm. Vote was unanimous.

Respectively Submitted by:


 Jessica S. Bargsley, CMC, NCCMC
 Town Clerk/ Finance Officer

Approved by:


 Mayor Gary McClure

Date: March 2, 2020



The Morganton City Council met in regular session on February 2, 2020, at 6:00 p.m. in the Council Chamber at City Hall. The Council considered and took action on the following:

Consideration of a Resolution Adopting the Unifour Regional Hazard Mitigation Plan

Mike Willis, Burke County Fire Marshal / Emergency Management Director, gave a brief presentation that summarized the Plan and Morganton's role in implementation over the next 5 years.

He stated that natural hazards, such as floods, tornadoes, and severe winter storms are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. He stated we must consider these hazards to be legitimate and significant threats to human life, safety, and property.

The Unifour Region, which is comprised of Alexander, Burke, Caldwell, and Catawba counties, is vulnerable to a wide range of natural hazards. These hazards threaten the life and safety of the Region's residents, and have the potential to damage or destroy both public and private property and disrupt the local economy and overall quality of life.

Willis stated the NC Legislature in Section 1 Part 166A of the North Carolina General Statutes require that for a state of disaster to be proclaimed pursuant to G.S. 166A-6(a), after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act.

He stated that over the past year, representatives from the various cities and counties within the Unifour Region have worked together with a private consultant to develop a Regional Hazard Mitigation Plan in compliance with State Law.

Upon motion by Councilwoman Cato, seconded by Councilman McSwain, and carried unanimously, the Council approved Resolution #20-04 adopting the Unifour Regional Hazard Mitigation Plan.

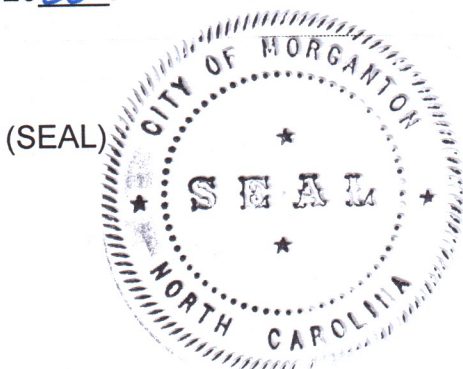
NORTH CAROLINA

CERTIFICATION

BURKE COUNTY

I hereby certify that the foregoing is a true and accurate copy of Minutes approved by the City Council of the City of Morganton at a duly convened and held Council meeting on March 32, 2020, at 6:00 p.m. in the Council Chambers in the City Hall of the City of Morganton.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the official corporate seal of the City to be affixed, this the 3rd day of March, 2020.



CITY OF MORGANTON

By: Mikela D Russell
Assistant City Clerk

NORTH CAROLINA

ACKNOWLEDGEMENT

BURKE COUNTY

I, Carolyn E. Richardson, being a Notary Public of Burke County, North Carolina, do hereby certify that Mikela D. Russell, Assistant City Clerk to the City of Morganton, appeared before me this day and acknowledged the due execution of the foregoing instrument.

IN WITNESS WHEREOF, I hereunto set my hand and notarial seal this the 3rd day of March, 2020.

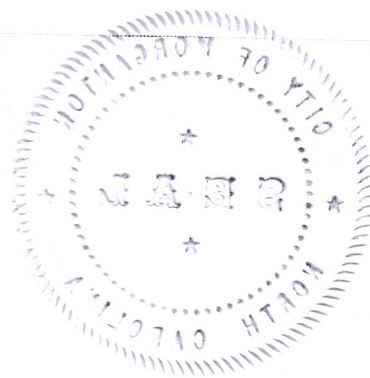
Carolyn E. Richardson
Notary Public

My Commission Expires: 8-27-2020



Handwritten text at the top of the page, possibly a date or address.

Handwritten text in the middle section of the page.



Handwritten text below the Burlington stamp.

Handwritten text in the lower middle section of the page.

Handwritten text at the bottom of the page.



**ADOPTION BY THE LOCAL GOVERNING BODY
Town of Valdese**

RESOLUTION OF ADOPTION

**TOWN OF VALDESE
HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within the Town of Valdese are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the town are particularly vulnerable to such hazards as winter storms, wildfires, flooding, and high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Valdese has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Valdese Town Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Valdese Town Council hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and

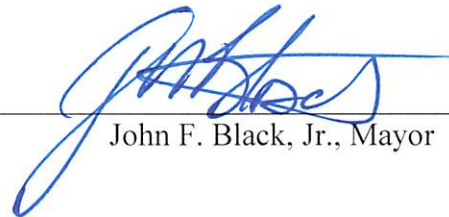
2. Vests the Chief of the Valdese Fire Department with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Chief of the Valdese Fire Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Valdese Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

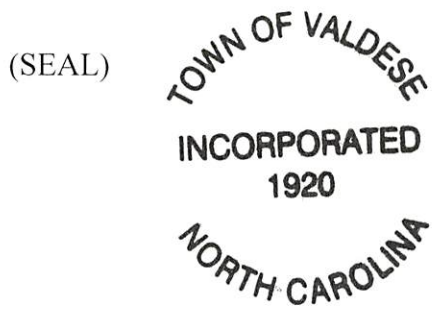
Adopted this 3rd day of February, 2020.



John F. Black, Jr., Mayor

Attest: Francis Hydebran
Town Clerk

Date: 2/3/20



BOARD OF ALDERMAN

February 03, 2020

The Board of Aldermen of the Town of Connelly Springs met at 7:00 pm at the Town Hall Board Room in Connelly Springs, North Carolina. The following board members were present: Mayor Johnny E. Berry, Alderman Terry Childers, Alderman Josh Phillips, Alderman Steve Smart, Alderman Carroll Turner, Alderman Ramona Duncan and Alderman Kimberly Sigmon. Also, in attendance were: Attorney Redmond Dill, Town Administrator Tamara Brooks, Deputy Brian Sigmon, and Planning Board members Joe Dempsey, Debbie Pelick, Bobby Tomlinson and Johnny Wright. The Board meeting was recorded in accordance with North Carolina General Statute 160A-72, 171.

CALL TO ORDER AND WELCOME: Mayor Berry called the meeting to order at 7:00 pm and welcomed all in attendance.

INVOCATION: The invocation was given previously during the Annual Water Meeting with Icard Township Water Corporation. Mayor Berry asked all those in attendance to stand and give the pledge of allegiance to the flag.

APPROVAL OF AGENDA: Alderman Turner made a motion to approve the agenda as presented. Alderman Phillips seconded the motion and the vote was unanimous.

APPROVAL OF BOARD MINUTES: Alderman Duncan made a motion to approve the minutes from the Board of Aldermen's regular meeting on January 6, 2019, as well as the minutes from the Annual Water Meeting from February 4, 2018, as presented. Alderman Turner seconded the motion and the vote was unanimous.

PUBLIC AND BOARD COMMENTS AND ANNOUNCEMENTS: None.

RESOLUTION 2020-01/ HAZARD MITIGATION PLAN: Administrator Brooks presented for approval the Resolution of Adoption, Hazard Mitigation Plan (Resolution 2020-01) for the Town of Connelly Springs, in conjunction with the Burke County Emergency Management Team which would allow the town and the county to be eligible to receive reimbursement from FEMA and other grant program funds in the event of a disaster. Alderman Smart made a motion to approve the resolution as presented. Alderman Phillips seconded the motion and the vote was unanimous.

ADMINISTRATOR'S REPORT: Administrator Brooks reviewed the calendar for February. She said she would be out of the office the week of February 10th through February 14th.

ATTORNEY'S REPORT: Attorney Dill said the deed for the Tomlinson property had been recorded by the county on January 6th. The purchase price given by the county is twenty thousand nine hundred seventy-four dollars and ninety-two cents. Alderman Smart made a motion to make an offer to the county to purchase the property for that price. Alderman Turner seconded the motion and the vote was unanimous. Attorney Dill was asked to move forward on behalf of the town with the purchase of the Tomlinson property.

Alderman Childers stated that the town needed to have a plan for the property after it is purchased. Administrator Brooks said she had been asked about the possibility of leasing it as a canine training facility. A brief discussion about clean up options followed but no other action was taken.

ANNEXATION OF PROPERTIES – SOPHIA AVENUE: Mayor Berry asked if Attorney Dill had an update on the annexation of the two properties on Sophia Avenue. He said there is no need for a bill to be presented through legislation and that the process will not take a year as previously suggested by Attorney Saunders. The two property owners will need to sign documentation stating that they voluntarily wish to be annexed into the town limits as part of the process. An update will be given at next month's meeting.

Alderman Smart asked if Attorney Dill had received any files or records from Attorney Saunders. He responded that he had not. Alderman Smart asked that he send a formal letter to Attorney Saunders requesting that she send all of the town's files to us.

MAYOR'S REPORT: Mayor Berry reported that he attended the WPCOG Executive Committee Meeting and the VEDIC Committee Meeting on January 23rd. He and Administrator Brooks attended the WPCOG Policy Board Meeting on January 28th which was hosted by the Town of Sawmills. He reminded everyone mark their calendars for Thursday, April 23rd for the WPCOG Annual Meeting.

FINANCE: Alderman Smart presented the financial statements for review and said the revenue income is at an increase of approximately one hundred twelve thousand dollars (\$112,000.00) for projected budget this year. He asked each chairperson to be thinking about their budget for next fiscal year. He said he plans to schedule the first budget workshop for mid-March.

GOVERNMENT SERVICES:

POLICE: Alderman Childers asked Deputy Sigmon to give his report for January

Breaking and Entering – 1

Assault – 1

Drugs – 1 Stabbing or Gun Shot -- 1

Warrant for Arrest – 3

Order for Arrest – 1

TOTAL CALLS FOR SERVICE: 113

WATER/SEWER: None.

PARKS AND RECREATION: Alderman Duncan reported that all of the bands had been secured for the summer concert series. She also said that Shady Grove would be available for food at the festival and Oak Ridge would be available for food at both the festival and the concert on May 9th.

PERSONNEL: None.

PROPERTY:

STAGE PROJECT: Alderman Smart and Alderman Phillips gave an update on the stage project. The concrete pad has been poured and the metal framework had been delivered.

TRANSPORTATION: Alderman Turner reported that the repairs to Berea Avenue and Berea Avenue Extension have been completed by Evans Construction and the final cost was six thousand one hundred dollars (\$6,100.00).

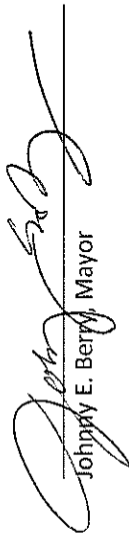
He also said that once the stage construction was complete the parking lot at town hall would need to be repaired or possible repaved.

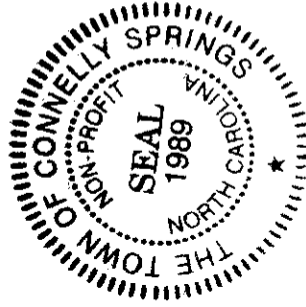
1170 TOMLINSON LOOP: Alderman Childers mentioned that Evans Construction was not interested in pursuing the project at 1170 Tomlinson Loop at this time. Alderman Childers and Alderman Phillips said they would request quotes from other contractors and present those at next month's meeting.

ADJOURNMENT: With no further business before the Board of Aldermen, Mayor Berry called for a motion to adjourn. Alderman Turner made a motion to adjourn with Alderman Duncan seconding the motion. The vote was unanimous.



Tamara Brooks, Town Administrator/Clerk


Johnny E. Berry, Mayor



RESOLUTION OF ADOPTION

TOWN OF DREXEL - BURKE COUNTY

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the TOWN OF DREXEL, BURKE COUNTY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to high winds, flooding, icing, snow and other acts of God; and

WHEREAS, the Town of Drexel desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

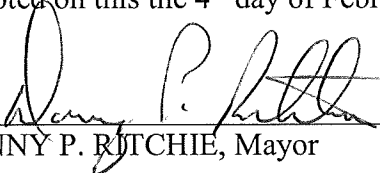
WHEREAS, the Unifour Region has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Aldermen of the Town of Drexel to fulfill this obligation in order that the Unifour Regionl will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Unifour;

NOW, therefore, be it resolved that the Board of Aldermen of the Town of Drexel hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Aldermen for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this the 4th day of February, 2020.



DANNY P. RITCHIE, Mayor

ATTEST:



SHERRY DULA, Town Clerk



**RESOLUTION TO ADOPT THE
UNIFOUR REGIONAL
HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within the City of Morganton and it's Extra-Territorial Jurisdiction are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the city are particularly vulnerable to flooding, high winds, severe storms, drought, and wildfire; and

WHEREAS, the City in conjunction with Burke County and other unifour governmental entities desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the City of Morganton has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Morganton City Council to fulfill this obligation in order that the City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City;

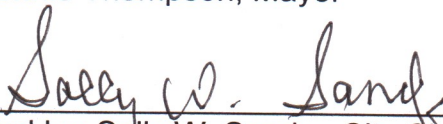
NOW, therefore, be it resolved that the City Council of the City of Morganton hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the City Manager or their designee the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the City Manager or their designee to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the City Council of the City of Morganton for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this 3rd day of February, 2020.



By: Ronnie Thompson, Mayor



Certified by: Sally W. Sandy, City Clerk

Date: 2/3/2020

SEAL:





5-11-2020

**REAFFIRMATION AND
RESOLUTION OF ADOPTION**

TOWN OF SAWMILLS

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Sawmills ("Town"), located in Caldwell County, North Carolina are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, hail, water damages, ice and intense snow accumulation; and

WHEREAS, the Town desires to seek ways to mitigate the impact of the identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Sawmills has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Sawmills to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Town Council of the Town of Sawmills hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and

2. Vests Town Manager or his designee with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Town Manager or his designee to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of the Town of Sawmills for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

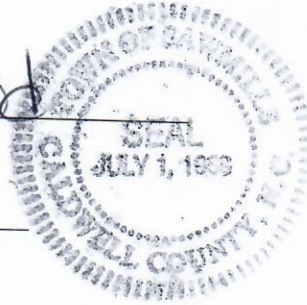
Adopted on this day, January 21, 2020

By: TOWN OF SAWMILLS

By: Johnnie Greene
Mayor

Certified by: Julie A. Good
Town Clerk

Date: 1-21-20



APPROVED AS TO FORM:
Terry M. Taylor
Terry M. Taylor, Town Attorney

This document presented and filed:
05/20/2020 11:30:54 AM

Fee \$0.00



Caldwell County North Carolina
Wayne L. Rash, Register of Deeds

RESOLUTION OF ADOPTION

✓✓ CALDWELL COUNTY

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to weather and/or manmade hazards; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, Caldwell County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued

by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Caldwell County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Caldwell County Board of Commissioners hereby:


1. Adopts the Caldwell County Hazard Mitigation Plan and
2. Vests Caldwell County with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the office of Caldwell County Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Caldwell County Board of Commissioners for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this the 13th day of April, 2020


Thomas Welch, Clerk to the Board

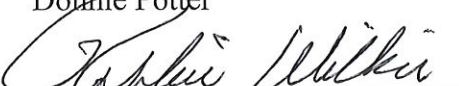


By: 
Randy T. Church, Chairman


Mike LaBrose, Vice-Chairman


Jeff Branch


Donnie Potter


Robbie Wilkie

**REAFFIRMATION AND
RESOLUTION OF ADOPTION**

TOWN OF SAWMILLS

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Sawmills ("Town"), located in Caldwell County, North Carolina are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, hail, water damages, ice and intense snow accumulation; and

WHEREAS, the Town desires to seek ways to mitigate the impact of the identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Sawmills has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Sawmills to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Town Council of the Town of Sawmills hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and

2. Vests Town Manager or his designee with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Town Manager or his designee to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of the Town of Sawmills for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

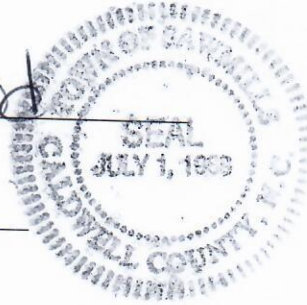
Adopted on this day, January 21, 2020

By: TOWN OF SAWMILLS

By: Johnnie Greene
Mayor

Certified by: Julie A. Good
Town Clerk

Date: 1-21-20



APPROVED AS TO FORM:
Terry M. Taylor
Terry M. Taylor, Town Attorney

Unifour Hazard Mitigation Plan

RESOLUTION OF ADOPTION

TOWN OF RHODHISS

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Rhodhiss are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to : flooding, high winds, fires, earthquakes, hurricanes, storm events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Rhodhiss has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of the Town of Rhodhiss to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Board of Commissioners of the Town of Rhodhiss hereby:

1. Adopts the Unifour Hazard Mitigation Plan; and
2. Vests the Town of Rhodhiss with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Caldwell/Burke Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Rhodhiss for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

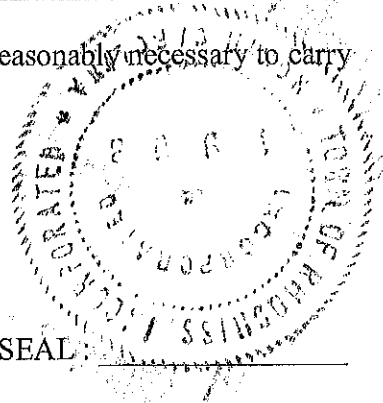
Adopted on this day, February 11, 2020

By: [Signatures of Governing Body]

Certified by: Rick Justice

SEAL

Date: February 11, 2020





**ADOPTION BY THE LOCAL GOVERNING BODY
(Town of Cajah's Mountain)**

Requirement § 201.6(c)(5) [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).



RESOLUTION OF ADOPTION

TOWN OF CAJAH'S MOUNTAIN

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Cajah's Mountain are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to flooding, tornados, high winds, winter storms, man-made hazards, seismic incidents and landslides.

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Cajah's Mountain has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town of Cajah's Mountain to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of Cajah's Mountain hereby:

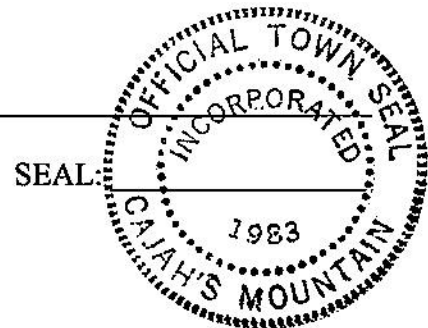
1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests Town of Cajah's Mountain Town Staff with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, and map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Staff of the Town of Cajah's Mountain to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of Cajah's Mountain for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the "Unifour Regional Hazard Mitigation Plan".

Adopted on this day, February 3, 2020

By: Signature of Mayor: _____

Certified by: _____

Date: 2-3-2020





CITY MANAGER
SCOTT E. HILDEBRAN

CITY OF LENOIR
NORTH CAROLINA

MAYOR
JOSEPH L. GIBBONS

CITY COUNCIL
J. T. BEAL
T. H. PERDUE
J. I. PERKINS
R. S. PRESTWOOD
D. F. STEVENS
C. D. THOMAS
B. K. WILLIS

CITY OF LENOIR

**RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION
PLAN UPDATE**

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the County desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the City of Lenoir actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;




NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Lenoir hereby:

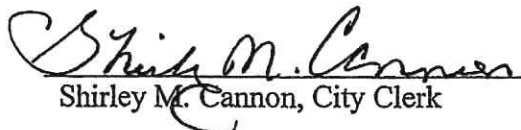
1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the City of Lenoir; and
3. Vests the City Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
4. Appoints the City Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2019 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 4th day of February, 2020.

SEAL


Joseph L. Gibbons, Mayor, City of Lenoir

ATTEST:


Shirley M. Cannon, City Clerk



TOWN OF

GRANITE FALLS

North Carolina

Barry Hayes Mayor • Dr. Caryl B. Burns Mayor Pro Tem • Jerry T. Church Town Manager
Council Members Larry Knight • Jim Mackie • Mike Mackie • Martin D. Townsend • Tracy Townsend

TOWN OF GRANITE FALLS

RESOLUTION ADOPTING THE UNIFOUR REGIONAL MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Unifour Region (Region) are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the Region desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the Town has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said Plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town Council of the Town of Granite Falls (Town) to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town; and

NOW, THEREFORE, be it resolved that the Town Council of the Town of Granite Falls hereby:

1. Adopts the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazard impacts.
3. Appoints the Town Manager to assure that, in cooperation with the Unifour Region, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments of the Plan are developed and presented to the Town Council of the Town of Granite Falls for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2020 Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 17th day of February, 2020.



ATTEST

Paula M. Kirby
Town Clerk (SEAL)

Barry Hayer
Mayor, Town of Granite Falls

**ADOPTION BY THE TOWN OF GAMEWELL, NC LOCATED IN
THE COUNTY OF CALDWELL**

Requirement § 201.6(c)(5) [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Mitigation Plan Update:

RESOLUTION OF ADOPTION

TOWN OF GAMEWELL, NC IN CALDWELL COUNTY

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within CALDWELL COUNTY, NORTH CAROLINA are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, tornados, flooding hazards; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the TOWN OF GAMEWELL IN CALDWELL COUNTY _has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the GAMEWELL TOWN COUNCIL TO ALLOW CALDWELL COUNTY,NC to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the GAMEWELL TOWN COUNCIL LOCATED IN CALDWELL COUNTY, NC hereby:

- 1. Adopts the Unifour and Caldwell County Hazard Mitigation Plan; and**
- 2. Vests Caldwell County Emergency Services with the responsibility, authority, and the means to:**
 - (a) Inform all concerned parties of this action.**
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.**
- 3. Appoints the Caldwell County Emergency Services to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Gamewell Town Council located in Caldwell County, NC for consideration.**
- 4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.**

Adopted on this day, February 10th, 2020

By: Mayor, Town of Gamewell, NC

Certified by: *Alvin M. Cray*

SEAL : _____

Date: 2/10/2020

RESOLUTION OF ADOPTION

Unifour

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within The Village of Cedar Rock are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hurricanes, tornadoes, and severe storms; and

WHEREAS, the Village of Cedar Rock desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County of Caldwell has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Village of Cedar Rock to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Village of Cedar Rock hereby:

1. Adopts the Unifour Hazard Mitigation Plan; and
2. Vests County of Caldwell with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the County of Caldwell to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Village of Cedar Rock Council for consideration.

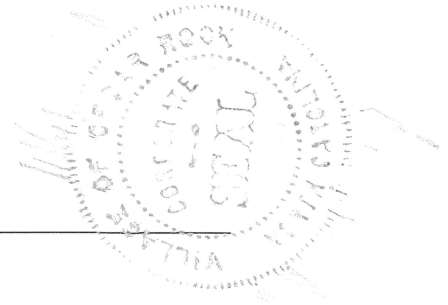
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, February 18, 2020

By: Robert E. Taylor, Mayor

Certified by: Pamela Mayberry

SEAL :



Date: February 18, 2020

**RESOLUTION OF ADOPTION
UNIFORM HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within **The Town of Hudson** are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to [_____ specify hazards (e.g., flooding, high winds)]; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act”; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the **Town of Hudson** has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the **Board of Commissioners of the Town of Hudson** to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the **Board of Commissioners of the Town of Hudson**

1. Adopts the Unifour Hazard Mitigation Plan; and
2. Vests Caldwell County Emergency Services_ with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Caldwell County Emergency Services to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Hudson for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

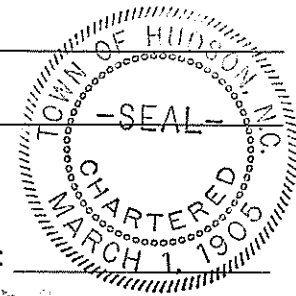
Adopted on this day 18th day of February, 2020 _____

By: Janet H. Winkler

Certified by: Tamra T. Swanson, Hudson Town Clerk

Tamra T. Swanson

SEAL :



Date: 2-18-2020

RESOLUTION NO. 2020-04

ADOPTION OF UNIFOUR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Catawba County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, tornadoes, winter storms, dam failures and geological hazards such as sink holes and earthquakes; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Catawba County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

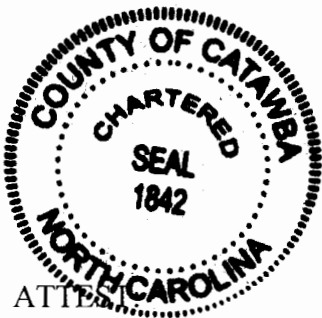
WHEREAS, it is the intent of the Board of Commissioners of Catawba County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, therefore, be it resolved that the Board of Commissioners of Catawba County hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the Planning and Parks Department with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.

- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Emergency Services Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Catawba County for consideration.
 4. Authorizes all county departments listed in the Mitigation Actions for Catawba County in Section 7 of the Unifour Regional Hazard Mitigation Plan to develop and implement the programs and procedures necessary to complete the listed actions.
 5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 17th day of Feb, 2020.



A handwritten signature in black ink, appearing to read 'C. Randall Isenhower', written over a horizontal line.

C. Randall Isenhower, Chair
Catawba County Board of Commissioners

A handwritten signature in black ink, appearing to read 'Barbara E. Morris', written over a horizontal line.

Barbara E. Morris, Clerk



SYNOPSIS

CATAWBA COUNTY BOARD OF COMMISSIONERS MEETING MONDAY, FEBRUARY 17, 2020, 7:00 P.M.

The Catawba County Board of Commissioners met at 7:00 p.m., on Monday, February 17, 2020, in the Board of Commissioners Meeting Room, 2nd Floor, Catawba County Justice Center, 100 Government Drive, Newton.

APPOINTMENTS

Upon the recommendation of Chair Isenhower, the Board reappointed Terry Holdsclaw, Nathaniel Poovey, and John McAuley for second terms, and Paul Beatty, Jr. for a fourth term on the Parks Advisory Committee. These terms will expire October 6, 2022. Upon the recommendation of Commissioner Butler, the Board appointed Chris Von Drehle and Rick Coffey for first terms on the K-64 Education Board. These terms will expire April 1, 2021.

CONSENT AGENDA

a. The Board approved the addition of two full-time grant funded school resource officers (SROs) to serve Catawba County Schools (CCS) elementary schools. CCS was awarded a grant through the Department of Public Instructions' Center for Safer Schools to fund two elementary school SROs. The grant is for \$66,666.00 per year for three years, with a required \$42,234 match that will be paid from the school system's "At-Risk" funds for a total of \$108,900 per year. These funds will pay for two school resource officers' salaries and benefits. The Sheriff's Office will incur the cost for the officer's equipment, vehicle, and benefit increases that may occur.

Each SRO will cover 4-5 elementary schools per week within the same high school feeder district. While on campus, SROs will monitor the school's safety by walking the interior and exterior of the school several times throughout the day. SROs will also coordinate with CCS to develop and deliver grade appropriate presentations throughout the year.

b. The Board adopted the 2020 Unifour Regional Hazard Mitigation Plan. Catawba County and each of the municipalities within the County, along with Alexander, Caldwell, and Burke Counties and their municipalities, participated in a regional multi-jurisdictional hazard mitigation planning effort that began in November 2018. This planning effort to update the 2015 multi-jurisdictional hazard mitigation plan was funded by the State of North Carolina using federal Department of Homeland Security Pre-Disaster Mitigation grant monies, with a 75/25 cost share. Caldwell County served as the lead jurisdiction for the Unifour planning effort. The entire county/city cost share was covered through staff time, in-kind services, and materials.

The Board of Commissioners is required to adopt the 2020 Unifour Regional Hazard Mitigation Plan per Section 322 of the Federal Disaster Mitigation Act of 2000. Under 44 CFR 201.6, every local jurisdiction must have a FEMA approved plan in order to apply for and receive money from specific federal and state assistance programs that address pre and post disaster mitigation projects, planning, flood assistance, and repetitive loss buy-outs.

Hazard mitigation actions are taken to reduce or eliminate the long-term risk to life and property from a variety of hazards. Mitigation can occur before, during, and after a disaster but it has been shown that mitigation is most effective when based on a comprehensive, long-term plan that is developed before a disaster occurs.

The 2020 Unifour Regional Hazard Mitigation Plan contains evidence of each jurisdiction's participation in the planning process, identifies risks for the regional planning area, identifies specific risks in each jurisdiction and jurisdiction specific mitigation actions. The plan, which was completed in November 2019 and approved by North Carolina Emergency Management on January 21, 2020, will help prevent the loss of lives, homes, and businesses from being damaged by a disaster and help our citizens and communities to return to normal after the chaos of a disaster.

c. The Board approved the use of additional foster care funding in the current year's budget to support addressing

critical challenges involving Foster Care services. Catawba County is committed to supporting children and families experiencing the emotional and financial consequences of foster care. To this end, the Board of Commissioners allocated an additional \$400,000 for FY 19/20 to support and enhance services for this vulnerable population. While the initial allocation was loosely ear-marked as a financial stipend for kinship providers, an assessment of our population, trends, and needs does not support this as the highest and best utilization of those dollars.

Catawba County has worked tirelessly to support kinship families in becoming licensed, leading the entire state in establishing licensed kinship providers. (In FY19, Catawba County facilitated nearly 25% of all kinship family licensure approvals statewide.) After a careful and thorough analysis of multiple factors, what was initially thought to be an incentive to enhance kinship placements could very likely turn out to be a financial disincentive to both the Kinship placement as well as the County. Both kinship and non-kinship licensed foster care providers receive a monthly State-established stipend ranging from \$475 to \$634. Providing additional stipend to kinship families temporarily while they work towards full licensure could ultimately discourage these placements from successfully completing the licensure process, which would in turn cause the County to lose federal funding, with estimated revenue loss based on current population in the \$300,000 range. Furthermore, the kinship families become ineligible for alternative federal/state assistance through Work First, Child Support, Day Care, etc. Ultimately, the original idea would have increased county funding at the expense of previously leveraged Federal/State dollars.

Since July 2019, Catawba County has 141 more children experiencing foster care than in July 2014 (nearly 60% increase), yet the overall level of funding to care for these additional children has not increased. While the Department has managed to creatively and responsibly utilize funds to ensure adequate staffing and resources to support such a significant increase in children experiencing foster care, this is not sustainable.

A review of critical indicators related to length of stay in foster care indicates the County's average length of stay in foster care is 25.2 months, 3.3 months longer than the national average and trending upwards. Due to a shortage of foster families within Catawba County, as of October 2019, 23% of Catawba County's foster children were placed out-of-County or in group home placements while eligible for in-County placements. Social Services recently administered a survey of kinship and non-kinship families, which revealed these families' beliefs that improving communication would be the best way to support foster families. In addition, staff retention and turnover has become more of a critical issue, with heavy workloads causing staff burnout, turnover, and less time to accomplish tasks that move children to permanency.

These factors, when taken together, have led to an alternative approach other than the financial stipend to kinship families: creation of five Social Worker II positions to form a Visitation Team responsible for overseeing all mandated parent / child / sibling visitations, coach the family, and provide parent training; (\$166,206); addition of one Social Worker III position to focus on licensure and to achieve compliance with the state-mandated ratio of one Licensure Social Worker per 32 families (\$51,268); support for foster family recruitment and training in the form of "Caring for our Own" kinship training, formation of a recruitment work group, and social media marketing (\$12,000); and development of a Visitation Center by upfitting and maintaining an existing closed group home (\$37,650 initial; \$7,650 ongoing).

This approach has been discussed at length with the Social Services Board Chair and subsequently, the full Board, which indicated strong support for this path forward. This investment is highly aligned with the Board's Strategic Plan goals in the realm of *Healthy, Safe Community* in that it aims to protect the well-being of our citizens, and relates directly to several key social determinants of health.

d. The Board approved a request from the County Tax Administrator to approve thirty-one (31) releases totaling \$6,359.11, two (2) refund requests totaling \$774.64, and eighty (80) Motor Vehicles Bill adjustments / refunds totaling \$4,723.25 requested during the month of January.

North Carolina General Statute 105-381(b) states upon receipt of a taxpayer's written request for release or refund, the taxing unit's governing body has 90 days to determine whether the taxpayer's request is valid and to either approve the release or refund of the incorrect portion or to notify the taxpayer in writing that no release or refund will be made.

During the month of January, Tax Office staff has checked records and verified the legitimacy of thirty-one (31) release requests totaling \$6,359.11, two (2) refund request totaling \$774.64, and eighty (80) Motor Vehicle Bill adjustments / refunds totaling \$4,723.25.

Common reasons for release of tax bill amounts include changes in exemption status, change in situs, businesses closing / being sold, and material changes in property structures. The refund requests are driven by adjustments to exemption status and property being sold. The motor vehicle bill adjustments are largely due to pro-ration of tax bill amounts to account for mid-year transfers of ownership.

Consistent with current practice, the Tax Collector will continue to present any material refunds or releases of significant dollar amounts individually, rather than bundled together with other minor transactions on consent agenda.

DEPARTMENTAL REPORT **UTILITIES AND ENGINEERING**

The Board accepted the Southeastern Catawba County (SECC) Water and Sewer Master Plan. In November 2016, the County advertised a Request for Qualifications (RFQ) to select a firm that could undertake a study of the Southeastern Catawba County water and sewer service area and guide the County through a comprehensive process, including alignment with the Strategic Plan. McKim & Creed was selected for recommendation from the firms that responded, and at the August 7, 2017, Board of Commissioners meeting, the Board awarded an engineering agreement for the SECC Area Utility Study and Master Plan (Master Plan) to McKim & Creed. As part of the Master Plan, McKim and Creed performed an analysis of the following aspects of the SECC water and sewer operations and future expansion: hydraulic modeling of both the water and sewer systems; population growth, present and future water and sewer demand; financial sufficiency; capacity expansion planning; county policies and ordinances; and water and sewer system governance structures.

As part of the financial sufficiency analysis, a Revenue Sufficiency Model was developed in order to forecast whether the Water and Sewer Fund could conceivably become independent of the current General Fund property tax subsidies, and to enable the County to remain in compliance with the North Carolina General Statutes by calculating the County's System Development Fees (SDF) in accordance with NCGS 162A. To gain valuable input, meetings were held with three different groups of local stakeholders in February 2018. Those stakeholder groups included Developers/Homebuilders, Landowners, and Business Representatives.

In order to gain insight on how best to attract large scale developers to Catawba County, the Board initiated two separate site visits that included meetings with large scale developers in North Carolina who are known for creating high quality of life amenity and sense of place developments. Specifically, those visits were to Pittsboro (Chatham Park Development) and Chapel Hill (Briar Chapel Development) on October 18, 2017, and to Charlotte, meeting with Newland Communities, on November 16, 2017. To update the Board of Commissioners on the development of the Master Plan and to solicit feedback and direction, in-depth presentations were given to the Board on August 13, 2018, February 22, 2019, and again on November 11, 2019. Since receiving the Board's input at the November 11, 2019 retreat, staff has worked with McKim and Creed to finalize the Master Plan document.

OTHER ITEMS OF BUSINESS

The Board received a summary of activities arranged during a recent visit from government officials from Kenya and presented Darwin and Myra Smith with commendations for hosting this visit.

TOWN OF BROOKFORD
MINUTES OF THE BOARD OF ALDERMAN
MARCH 16, 2020
5:30 p.m.

MEMBERS PRESENT

Thomas Schronce, Mayor
Sue Noblitt, Alderwoman
James Weaver, Alderman
Bill McGregor, Alderman
Charles Bargsley, Alderman

OTHERS PRESENT

Marshall Eckard, Town Admin
Redmond Dill, Attorney

CALL TO ORDER, MAYOR: Mayor, Thomas Schronce called the meeting to order at 5:30 p.m. in the Conference Room of the Brookford Community Building.

APPROVAL OF MINUTES:

MOTION: Approval of February 17, 2020 Board of Alderman Meeting min.
BY: Alderman James Weaver
SECONDED: Alderman Charles Bargsley
CARRIED: All in Favor

APPROVAL OF UNIFOUR REGIONAL HAZARD MITIGATION PLAN:

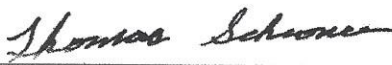
MOTION: Approval of Unifour Regional Hazard Mitigation Plan as presented
BY: Alderman Bill McGregor
SECONDED: Alderman Charles Bargsley
CARRIED: All in Favor

*Potential Sale of Town Property Discussed

ADJOURNMENT:

MOTION: With no further business to discuss, the meeting was adjourned at 6:15 p.m.
BY: Alderwoman Sue Noblitt
SECONDED: Alderman Charles Bargsley
CARRIED: All in Favor

SUBMITTED BY



Thomas Schronce, Mayor



Marshall J. Eckard, Town Clerk

**TOWN OF CATAWBA
REGULAR COUNCIL MEETING
MINUTES
MARCH 2, 2020
7:00 P.M.**

CALL TO ORDER

The Regular Meeting of the Town Council was held in the Council Room at 7:00 PM on March 2, 2020. Mayor Robinson called the meeting to order and welcomed those present. Present were Council Members Donnie Allen, Jeff Hendren, Patrick Laney and Carroll Yount. Also present were Town Manager Brad Moody, Town Attorney Susan Matthews and Town Clerk Kathy Johnson.

INVOCATION – Council Member Jeff Hendren gave the invocation

PLEDGE OF ALLEGIANCE

APPROVAL OF REGULAR COUNCIL MINUTES FROM FEBRUARY 3, 2020

Mayor Robinson asked if there were any corrections, additions or deletions to the minutes of Regular Council Meeting Minutes of February 3, 2020. Hearing none, the Regular Council Meeting Minutes of February 3, 2020 stood approved as presented.

APPROVAL OF AGENDA

Mayor Robinson stated that he would like to add Item #2 under New Business and add Closed Session Pursuant to NCGS 143-318.11 (a) (6) Personnel after Department Heads reports. **Council Member Hendren** made a motion to approve the agenda with the mentioned additions. The motion was put to roll call which resulted in all members voting in the affirmative. The motion passed

PUBLIC COMMENT PERIOD -NONE

OLD BUSINESS

1. Update of Tractor Trailer Traffic on Rosenwald School Street

Town Manager Moody stated that he had not received a call back from NCDOT since the February council meeting, however, based on the previous information from a NCDOT representative prior to February's Council meeting, DOT doesn't like to limit vehicle traffic on state roads.

Council Member Hendren voiced his concerns with jake brakes continuing to be used.

2. Update of Changing West Central Ave to a One-Way-Street

It was found that if the Town were to change this street to a one-way street, the handicap parking would be lost. Consensus of the council was to leave the street as it is.

NEW BUSINESS

1. Resolution 2020-4 – Adoption of Unifour Regional Hazard Mitigation Plan
Council Member Laney made a motion to adopt Resolution 2020-4 – Adoption of Unifour Regional Hazard Mitigation Plan. The motion was put to roll call which resulted in all members voting in the affirmative. The motion passed.

2. Ordinance 2020-3 –An Ordinance Amending the Fiscal Year 2019-2020 Budget
 (Downtown Activity Committee)
Council Member Yount made a motion to adopt Ordinance 2020-3 – An Ordinance Amending the Fiscal Year 2019-2020 Budget. (Downtown Activity Committee) The motion was put to roll call which resulted in all members voting in the affirmative. The motion passed.

MANAGERS REPORT (copy in minute book)

Town Manager Moody reviewed his managers' report. Along with review Mr. Moody noted re-allocations.

- Re-allocations

MAYORS REPORT

Mayor Robinson stated that he had attended several meetings in February on behalf of the Town.

COUNCIL MEMBERS REPORTS/UPDATES

DEPARTMENT HEADS

Police Department – copy of report in minute book

Public Works

Mayor Robinson recognized two Boy Scouts from Troop #327, Mt Pleasant United Methodist Church: Boedi Kirkland and Kiril Yakovenko


Council Member Hendren made a motion to enter into Closed Session Pursuant to NCGS 143-318.11 (a) (6) Personnel. The motion was put to roll call which resulted in all members voting in the affirmative. The motion passed.

CLOSED SESSION PURSUANT TO NCGS 143-318.11 (A) (6) PERSONNEL

(**Council Member Yount** made a motion to adjourn Closed Session)

Council Member Yount made a motion to pursue COPS Grant, due to change in circumstances and new information provided by Town Manager Moody. The motion was put to roll call which resulted in all members voting in the affirmative. The motion passed.

Mayor Robinson adjourned the meeting at approximately 8:25 PM, until April 6, 2020 at 7:00PM.


Donald R. Robinson, Mayor


Kathy W. Johnson, Town Clerk

RESOLUTION NO. 20-07

**RESOLUTION OF ADOPTION
2020 UNIFOUR REGIONAL HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within the City of Hickory are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the city are particularly vulnerable to flooding, high winds, and severe thunderstorms; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Hickory has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Hickory City Council to fulfill this obligation in order that the City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City;

NOW, therefore, be it resolved that the Hickory City Council hereby:

1. Adopts the 2020 Unifour Regional Hazard Mitigation Plan; and

2. Vests the Office or Business Development with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Office of Business Development to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Hickory City Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

SECTION 3. This Resolution shall become effective immediately upon adoption.

ORDAINED by the City Council of Hickory, North Carolina, this, the 18th day of February, 2020.

(SEAL)



Attest:

Debbie D. Miller
Debbie D. Miller, City Clerk

THE CITY OF HICKORY, a
North Carolina Municipal Corporation

By:

Hank Guess, Mayor

Approved as to form this 11th day of February, 2020.

Amelia M. Dula
Attorney for the City of Hickory

Minutes of the March 2, 2020 Conover City Council Meeting

The regular meeting of the Conover City Council was held on March 2, 2020 at Conover City Hall.

PRESENT: Mayor Lee E. Moritz, Jr., Mayor Pro Tem Kyle J. Hayman, Council Members Don A. Beal, Joie D. Fulbright, Bruce R. Eckard and Mark R. Canrobert

STAFF: City Manager Donald E. Duncan, Jr., City Clerk Courtney Kennedy, Deputy City Clerk Joy L. Heller, City Attorney Monroe Pannell, Finance Director Vickie K. Schlichting, Planning Director Alan M. Glines, Police Major Robert Houston, Fire Chief J. Mark Hinson, Information Technology Director Christopher M. Niver, Senior Public Works Director Jimmy A. Clark, Assistant Public Works Director Terry R. Jones and Assistant Public Utilities Director Keith Lynch.

GUESTS: WPCOG Community and Economic Development Administrator Laurie Powell
Catawba County Director of Emergency Management Karyn Yaussy

Mayor Lee E. Moritz, Jr. called the meeting to order at 7:00 p.m.

ITEM 1: Invocation - Reverend Anton Lagoutine – St. John’s Lutheran Church

ITEM 2: Pledge of Allegiance - Mayor Lee E. Moritz, Jr.

ITEM 3: Approval of Minutes

Mayor Lee E. Moritz, Jr. presented the special and regular meetings of February 3, 2020 and asked if there were any additions or corrections.

Upon motion duly made by Council Member Beal, seconded by Council Member Fulbright, it was unanimously RESOLVED:

That the minutes of the special and regular meetings of February 3, 2020 be – APPROVED.

ITEM 4: Comments from Visitors and Guests

No one appeared.

ITEM 5: Resolution 7-20 Approval of Unifour Regional Hazard Mitigation Plan

Catawba County Director of Emergency Management Karyn Yaussy and Catawba County Assistant Planning Director Chris Timberlake introduced Kelly Keefe and Brent Edwards, Hazard Mitigation Planners from AECOM who presented a slideshow, reviewed the plan and stated that this plan will seek ways to mitigate the impact of identified hazard risks within Catawba County. City Manager Donald E. Duncan, Jr. stated that Resolution 7-20 would adopt the Hazard Mitigation Plan and he will be appointed to assure that the Plan is reviewed annually, and every five years as specified in the Plan. This will assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Conover City Council for consideration.

Upon motion duly made by Council Member Hayman, seconded by Council Member Fulbright, it was unanimously RESOLVED:

That Resolution 7-20 – Approval of Unifour Regional Hazard Mitigation Plan be – ADOPTED

(Resolution 7-20 contained in Exhibit File under Resolutions)

**CITY OF CONOVER
RESOLUTION 7-20
RESOLUTION OF ADOPTION
HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within the City of Conover are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge

Minutes of the March 2, 2020 Conover City Council Meeting

and experience that certain areas of the county are particularly vulnerable to such hazards as winter storms, wildfires, flooding, and high winds; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the City of Conover has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Conover City Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED by the Conover City Council that the City of Conover hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests Conover City Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Conover City Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Conover City Council for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this 2nd day of March, 2020.

**ITEM 6: CDBG Neighborhood Revitalization Scattered Site Housing Project
Grant Number 18-C-3059 City of Conover Assistance Policy**

WPCOG Community & Economic Development Administrator Laurie Powell presented the City of Conover Assistance Policy for the CDBG Neighborhood Revitalization Scattered Site Housing Project. Ms. Powell reviewed the guidelines for eligibility, income limits, what types of work can be completed and the required steps an applicant must take to apply for the program. Ms. Powell stated that they have had several applicants and are still taking applications.

Minutes of the March 2, 2020 Conover City Council Meeting

Upon motion duly made by Council Member Beal, seconded by Council Member Eckard, it was unanimously RESOLVED:

That the City of Conover Assistance Policy for the CDBG Neighborhood Revitalization Scattered-site Housing Project be – ADOPTED AND APPROVED.

ITEM 7: Approval of Recombination/Subdivision Plat for City-owned Property located at 408 Conover Boulevard East and 361 Fifth Avenue Southeast

Planning Director Alan M. Glines presented a slide for approval of the Recombination/Subdivision plat for City-owned property located at 408 Conover Boulevard East and 361 Fifth Avenue Southeast and reviewed the details of the property to be approved.

Planning Intern Bryce M. Carter presented a slideshow to explain the divisions of the plat/property, existing spaces, possible façade plot and reviewed the park addition.

Upon motion duly made by Council Member Hayman, seconded by Council Member Canrobert, it was unanimously RESOLVED:

That Recombination/Subdivision Plat for City-owned Property located at 408 Conover Boulevard East and 361 Fifth Avenue Southeast be - APPROVED.

ITEM 8: Public Hearing – Regarding Conveyance of an Interest in Real Property N.C.G.S. 158-7.1(d) for Tract B located at 408 Conover Boulevard East, containing 1.795 acres

Mayor Lee E. Moritz, Jr. opened the Public Hearing.

City Manager Donald E. Duncan, Jr. stated the City of Conover proposes to convey land located at 408 Conover Boulevard East-Tract B for an economic development project pursuant to NC General Statute 158-7.1(d) to Ingram Walters and reviewed the property details. There was a discussion concerning the property acreage.

Mayor Lee E. Moritz, Jr. asked if there was anyone present that wished to speak for or against this item.

No one appeared.

Upon motion duly made by Council Member Beal, seconded by Council Member Canrobert, it was unanimously RESOLVED:

That the Public Hearing be – CLOSED.

ITEM 9: Resolution 8-20 – Authorizing Sale of Real Property for Economic Development to Ingram Walters or Assigns for Tract B located at 408 Conover Boulevard East, containing 1.795 acres

City Manager Donald E. Duncan, Jr. presented Resolution 8-20 – Authorizing Sale of Real Property for Economic Development to Ingram Walters or Assigns for Tract B located at 408 Conover Boulevard East, containing 1.795 acres.

Van Southard, president of Heritage Ventures, Inc. was present and spoke about how pleased they were with the Conover area and the MSC facility and thanked the City for the opportunity that was offered to them.

City Attorney Monroe Pannell reviewed the map of the property and details of the purchase of the property located at 408 Conover Boulevard East.

Upon motion duly made by Council Member Eckard, seconded by Council Members Beal and Fulbright, it was unanimously RESOLVED:

That Resolution 8-20 – Authorizing Sale of Real Property for Economic Development to Ingram Walters or Assigns for Tract B located at 408 Conover Boulevard East, containing 1.795 acres be – ADOPTED.

Minutes of the March 2, 2020 Conover City Council Meeting

(Resolution 8-20 contained in Exhibit File under Resolutions.)

CITY OF CONOVER RESOLUTION 8-20 RESOLUTION AUTHORIZING SALE OF REAL PROPERTY FOR ECONOMIC DEVELOPMENT

WHEREAS, North Carolina General Statute 158-7.1 authorizes a city to undertake an economic development project by conveying city property in order to cause businesses to locate or expand operations within the city; and

WHEREAS, the City of Conover is the owner and developer of certain property described as Tract B containing 1.795 acres (the “Property”), all as shown on certain map entitled “Lot Boundary Adjustment Map of Existing Parcels for: City of Conover [D.B. 1398-410 - Plat Book reference; 21 Page 273 (Lots 15 and 15A), Newton Township, Catawba County, North Carolina”, by Darrin L. Reid Professional Land Surveyor, same being dated January 31, 2020. The Property includes what is commonly known as the Alberto building at 408 Conover Boulevard East; and

WHEREAS, City of Conover and Ingram Walters have engaged in private negotiations for the conveyance of the Property to the end that Ingram Walters or his assigns, may rehabilitate what is now known as the old Alberto manufacturing building for the purposes of a restaurant, brewery, venue, or light manufacturing; and

WHEREAS, the City Council has held a public hearing to consider whether to approve conveyance of the Property to Ingram Walters or his assigns;

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Conover, North Carolina:

1. The Mayor of the City of Conover is authorized to execute the necessary documents to convey to Ingram Walters, or his assigns, the Property and to enter into the Agreement For Purchase and Sale of Real Property, same being an exhibit before this meeting wherein Ingram Walters or his assigns are identified as the Buyer and the City of Conover is identified as the Seller, for a total cash consideration of \$166,100.

2. The conveyance of the Property to Ingram Walters or assigns will stimulate the local economy, provoke business and result in the creation of jobs in the City that pay wages in excess of \$10.00 per hour.

3. The fair market value of the Property is not greater than \$166,100. The determination of fair market value is based on the following:

a. In September of 2019 for a total purchase price of \$311,000, the City acquired the Alberto building along with 4.1 acres of land which adjoined the current Conover City Park and other property Conover has held for development for many years.

b. At the time of acquisition in September 2019, the Alberto building was valued by the Catawba County Tax Office at \$53,500. Specifically the Alberto building is a 21,000 square foot 66 year old manufacturing facility that does not have in any sense modern electrical, plumbing or heating and air conditioning systems; it is not compliant with the Americans With Disabilities Act; has no paved parking; the exterior has multiple areas with holes in the brick and rusting and /or rusting or peeling metal siding; the roof has multiple leaks; and is not suitable at all for rehabilitation by the City at the City’s expense.

c. The City attributes a fair market value to the Alberto building the tax value at the time of acquisition, \$53,500. The City paid \$1.44 per square foot for the land acquired in September 2019. The Property to be sold to Ingram Walters or his assigns contains 1.795 acres or 78,180 square feet, and at the price of \$1.44 per square foot, equals a value of \$112,600. The fair market value of the building of \$53,500 plus the fair market value of the land of \$112,600 equals a fair market value of the property of \$166,100.

4. As further consideration for the conveyance of the Property Ingram Walters or his assigns has proposed to rehabilitate the former Alberto building at a cost of at least \$150,000 which will add to the tax base of the City.

Adopted this the 2nd day of March 2020.

Minutes of the March 2, 2020 Conover City Council Meeting

ITEM 10: Approval of Agreement for Purchase and Sale of Real Property with Ingram Walters or Assigns for Tract B located at 408 Conover Boulevard East, containing 1.795 acres

City Manager Donald E. Duncan, Jr. stated this agreement is for approval of the purchase and sale of property with Ingram Walters or Assigns for Tract B located at 408 Conover Blvd. E with a closing date of July 1. City Attorney Monroe Pannell made a request that the City Manager be authorized to administer the contract until the closing date of July 1, including the ability to extend the closing date and examination period.

Upon motion duly made by Council Member Canrobert, seconded by Council Member Hayman, it was unanimously RESOLVED:

That Agreement for Purchase and Sale of Real Property with Ingram Walters or Assigns for Tract B located at 408 Conover Boulevard East, containing 1.795 acres and authorize the Conover City Manager to administer the contract up until the closing, including the ability to extend the closing date and examination period, be – APPROVED

ITEM 11: Memorandum of Understanding Between Ingram Walters or Assigns and the City of Conover for Development of Manufacturing Solutions Center Phase II and Business Incubator

City Manager Donald E. Duncan, Jr. presented slides of the MSC Phase II and Business Incubator and reviewed general terms and conditions for conveyance of the property to permit construction and completion. The building will be placed with access from 5th Avenue SE which will include a private structure and a connecting structure which will have space for MSC Phase II for future growth.

Upon motion duly made by Council Member Hayman, seconded by Council Member Beal, it was unanimously RESOLVED:

That Memorandum of Understanding Between Ingram Walters or Assigns and the City of Conover for Development of Manufacturing Solutions Center Phase II and Business Incubator be – APPROVED.

ITEM 12: Public Hearing – To Consider Conditional Zoning Ordinance Amendment for Webb Properties of Conover, LLC property located at 305 Comfort Drive NE, PIN# 3751-0527-4815

Mayor Lee E. Moritz, Jr. opened the Public Hearing.

Planning Director Alan M. Glines presented a slideshow of the property and stated the proposal for Interstate Foam is to expand their operations with a design for a 150,000+ sq. ft. facility. The new building will be accessed from Comfort Drive and will be completed in two phases. The rezoning, if approved, will include the entire project. The site will have sufficient parking, loading docks and utilities to service the proposed development. Mr. Glines stated that if approved, the zoning classification will be M-1 CD (General Manufacturing Conditional District) and the site plan will be a part of the approval documents. Mr. Brian Roberts, Matthews Construction project manager, was present and reviewed details of the work his company will be completing on this project. Mr. Mark Webb, owner of Interstate Foam, was also present and thanked the City for their assistance with this project.

Mayor Lee E. Moritz, Jr. asked if there was anyone present that wished to speak for or against this item.

Catawba County EDC President Scott Millar was present and spoke in favor of this item.

Upon motion duly made by Council Member Beal, seconded by Council Member Eckard, it was unanimously RESOLVED:

That the Public Hearing be – CLOSED.

Minutes of the March 2, 2020 Conover City Council Meeting

ITEM 13: Ordinance 7-20 - Conditional Zoning Ordinance Amendment for Webb Properties of Conover, LLC property located at 305 Comfort Drive NE, PIN# 3751-0527-4815

Planning Director Alan M. Glines presented Ordinance 7-20, reviewed the details and recommended approval to City Council.

Upon motion duly made by Mayor Moritz, seconded by Council Members Beal and Fulbright, it was unanimously RESOLVED:

That Ordinance 7-20 amending the Conditional Zoning Ordinance for Webb Properties of Conover, LLC property located at 305 Comfort Drive NE, PIN# 3751-0527-4815 be - APPROVED and that the City Council finds this map amendment to be consistent with the 2003 Land Development Plan (LDP) as it identifies the area as an area suitable for industrial and manufacturing uses and recommends new investment and growth in the manufacturing sector. The Council finds the rezoning request to be reasonable and in the public interest because: 1. An existing company in our community will be able to expand; and 2. The proposal will bring new investment and jobs to an undeveloped site in the city in support of the tax base be – ADOPTED.

(Ordinance 8-20 contained in Ordinance Book 9, Pages 19-27.)

**CITY OF CONOVER
ORDINANCE 7-20
CONDITIONAL ZONING ORDINANCE AMENDMENT**

WHEREAS, the property of Webb Properties of Conover, LLC located at 305 Comfort Drive NE is under consideration for rezoning from City of Conover M-1 (General Manufacturing) to City of Conover M-1 CD (General Manufacturing Conditional District) by the City of Conover; and

WHEREAS, a public hearing on the question of said rezoning was held by the Conover City Council, after due notice and advertisement thereof, at a Regular Meeting on March 2, 2020; and

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Conover, North Carolina, as follows:

Section 1. That the following described area be and the same is hereby rezoned from City of Conover M-1 (General Manufacturing) to City of Conover M-1 CD (General Manufacturing Conditional District) by the City of Conover.

305 Comfort Drive NE – PIN 3751-0527-4815.

Property of Webb Properties of Conover, LLC

Being all of that tract or parcel of land situated, lying and being in Catawba County, North Carolina, and being more particularly described as follows:

TRACT ONE:

BEGIN at a stone, the northeast corner of Lot 8, Plat Book 23 at Page 56, Catawba County Registry, said Point of Beginning being also the northwest corner of Grantee herein (see Deed Book 2021 at Page 661), **AND RUNNING THENCE FROM SAID BEGINNING POINT** with the line of the Grantee North 68° 27' 59" East 235.07 feet to a point; thence continuing with the Grantee North 68° 27' 59" East 97.39 feet to a point, corner of Grantee, where the western right of way line of Comfort Drive intersects with the southern right of way line of Evans Street; thence several calls with the southern right of way line of Evans Street as follows: first with the curve of a circle having a chord bearing of South 79° 29' 13" West, a radius of 1030 feet, a length of 238.65 feet, and a chord distance of 238.12 feet; thence with the curve of a circle having a chord bearing of South 87° 25' 21" West, a radius of 1030 feet, a length of 46.65 feet, and a chord distance of 46.65 feet; again with the curve of a circle having a chord bearing of South 89° 20' 37" West, a radius of 1030 feet, a length of 22.42 feet, and a chord

Minutes of the March 2, 2020 Conover City Council Meeting

distance of 22.42 feet; thence a new line South 02° 59' West approximately 79 feet to the POINT OF BEGINNING.

The above description is taken from two plats. One recorded in Plat Book 42 at Page 177, entitled "City of Conover Street Right of Way and Easement Plat, Interstate Foam Project," and the second plat recorded in Plat Book 23 at Page 56, entitled "Revised Map Showing New Location Brian Drive Across Tracts 8 and 9." For reference to title see Deed Book 2330 at Page 462.

TRACT TWO:

BEGIN at a cap and nail corner in the pavement of U.S. Highway 70, said Point of Beginning being the southeast corner of the F. E. Thornburg Property, Lot #3 as shown on Plat Book 17 at Page 260, Catawba County Registry; THENCE RUNNING FROM SAID POINT OF BEGINNING with the line of Thornburg North 32° 33' 13" East 31.73 feet to an iron pin just north of or on the northern right of way line of U.S. Highway 70; thence continuing with Thornburg and later with the line of A TO Z Cotton Trimming Corp., North 32° 33' 13" East 418.42 feet to an old stone on the line of A TO Z, Lot #4, Plat Book 17 at Page 260; thence with the line of A TO Z, L & S Properties, and ELI Associates North 02° 59' East 1484.5 feet to an old stone, northeast corner of ELI Associates on the line of Dallas L. Evans (see Plat Book 23 at Page 57); thence with Evans' southern line North 68° 27' 18" East 332.45 feet to an old stone, northwest corner of other property of Ma-Lew, LLC (see deed recorded in Book 2016 at Page 1714, CCR, formerly the property of Helen S. Hunicke); thence with the other property of Ma-Lew, LLC, South 02° 59' 18" West 1623.06 feet to an old stone on the line of Ma-Lew; thence continuing with Ma-Lew South 04° 10' 03" West 342.70 feet to an iron pin just at the northern right of way line or on the northern right of way line of U.S. Highway 70; thence running within the Highway South 04° 10' 03" West 30 feet to a cap and nail corner within the pavement of U.S. Highway 70; thence within the pavement of U.S. Highway 70, North 89° 25' 04" West 264.2 feet to a point within the pavement, corner of Clyde Cloninger; thence running in part with Cloninger and with the pavement North 88° 42' 03" West 252.72 feet to the POINT OF BEGINNING, and containing 14.36 acres, more or less, all according to a survey entitled "Plat of Clare S. Miller & Bernard Smith Property, Clines Tshp, Catawba County, N.C.," by Sam Rowe, Jr., Registered Surveyor, dated June 4, 1993, and reference being made to said survey for a more complete and detailed description. The above described property is subject to the right of way of U.S. Highway 70.

For reference to title see Estate of Bernice W. Smith, Estate File 89-E-61, and the Will of Noah Huitt, Will Book 4 at Page 249, Office of the Clerk of Court of Catawba County, and Deed Book 1052 at Page 562, Deed Book 1031 at Page 470, Deed Book 468 at Page 229, Deed Book 328 at Page 9, Deed Book 486 at Page 262, and Deed Book 242 at Page 282, Catawba County Registry. For reference to title see Deed Book 2021 at Page 661.

TRACT THREE:

BEGIN at a point in the southern right of way line of Evans Street N.E. at or near its intersection with the western right of way line of Comfort Drive N.E., same being at or near an iron pipe, northeast corner of property conveyed to MA-LEW, LLC by deed recorded in Deed Book 2021 at Page 661, Catawba County Registry and running thence from said POINT OF BEGINNING with a line designated as line L59 on Plat Book 42 Page 177, same having a course and distance of South 60° 27' 00" East 51.25 feet to a point in the western right of way line of Comfort Drive N.E.; thence several calls with the western right of way line of Comfort Drive N.E. as follows: South 01° 31' 04" East 50.65 feet; South 0° 31' 04" East 1144.90 feet; South 0° 31' 04" East 9.19 feet; South 01° 31' 04" East 34.96 feet; South 01° 31' 04" East 116.79 feet; South 01° 31' 04" East 48.81 feet; South 01° 31' 04" East 211.12 feet; South 88° 28' 56" West 5 feet; South 01° 31' 04" East 322.86 feet to a point in the northern right of way line of US Highway 70; thence with the northern right of way line of US Highway 70 North 88° 56' 36" West approx. 198 feet to an old iron pin in the northern right of way line of US Highway 70 and on the eastern line of the aforementioned property described in Deed Book 2021 at Page 661; thence with the eastern line of the Deed Book 2021 at Page 661 property two calls as follows: North 4° 45' East 342.74 feet to an old stone; thence North 3° 33' 20" East 1623.06 feet to the POINT OF BEGINNING.

The above description of TRACT THREE is intended to describe that portion of the property of MA-LEW, LLC conveyed to it by deed recorded in Book 2021 at Page 663 which is west of the western right of way line of Comfort Drive N.E., north of the northern right of way line

Minutes of the March 2, 2020 Conover City Council Meeting

of US Highway 70 and south of Evans Street N.E. The above description taken in part from Plat Book 42 Page 177 and 178 [City of Conover street right of way and easement plat] and survey by Sam Rowe, Jr. dated December 31, 1996 entitled “Plat of Helen S. Hunicke Pro now Ma/Lew, a North Carolina General Partnership”.

Also subject to the conditions set out in Exhibits “A”, “B”, “C”, “D” and “E” attached hereto and made a part hereof.

Section 2. That the City Planner be and he is directed to make the change on the Official Map of the City of Conover to show the rezoning thereon as herein provided for.

Section 3. That all ordinances or parts of ordinances in conflict with this ordinance are hereby repealed to the extent of such conflict.

Section 4. Consistency Statement.

The City Council finds this map amendment to be consistent with the 2003 Land Development Plan (LDP) as it identifies the area as an area suitable for industrial and manufacturing uses and recommends new investment and growth in the manufacturing sector. The Council finds the rezoning request to be reasonable and in the public interest because: 1. An existing company in our community will be able to expand; and 2. The proposal will bring new investment and jobs to an undeveloped site in the city in support of the tax base;

Section 5. That this ordinance shall be effective from its passage.

Adopted this 2nd day of March, 2020.

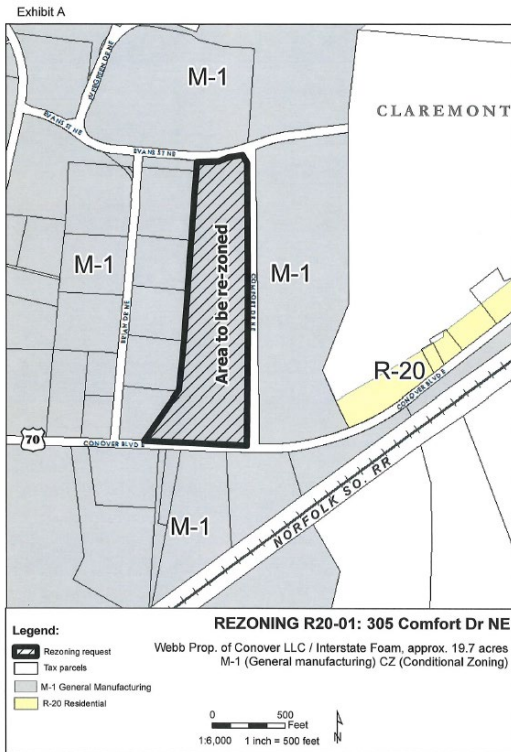


Exhibit B

CONDITIONAL DEVELOPMENT NOTES

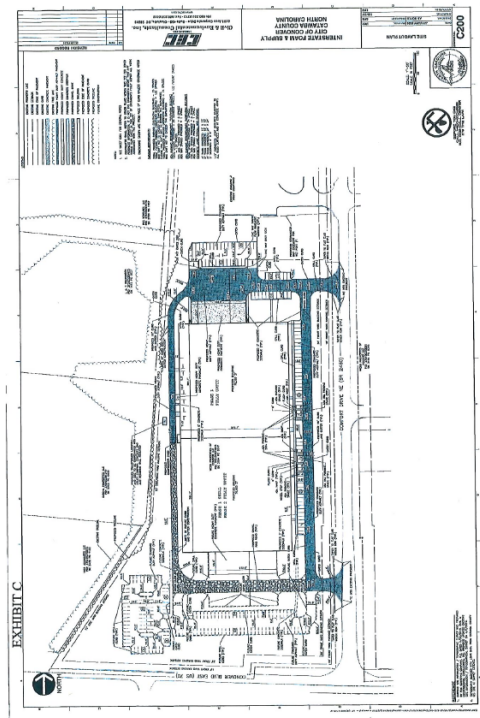
1. THE ZONING FOR THE PARCEL WILL BE M-1 CZ GENERAL MANUFACTURING CONDITIONAL ZONING DISTRICT
2. THE DEVELOPMENT ON THE SITE WILL INCLUDE A MANUFACTURING BUILDING TOTALING 152,000 SQUARE FEET AND ASSOCIATED IMPROVEMENTS INCLUDING DRIVEWAY ACCESS, PARKING, TRUCK BAYS AND STORMWATER FEATURES.
3. THE NORTHERN PORTION OF THE PARCEL CONTAINS AN EXISTING MANUFACTURING BUILDING TOTALING APPROXIMATELY 76,000 SQUARE FEET ALONG WITH PARKING AND ACCESS AREAS. THIS PORTION OF THE PARCEL WILL NOT BE SUBJECT TO THE SAME CONDITIONS FOR THE DEVELOPMENT. CUSTOMARY ADJUSTMENTS TO THE BUILDING OR EXPANSIONS CONSISTENT WITH THE PROVISIONS OF THE ZONING ORDINANCE WILL BE PERMITTED WITHOUT THE REQUIREMENT TO AMEND THE CONDITIONAL ZONING PLAN AND CONDITIONS.
4. DEVELOPMENT ON THE SITE WILL SUBSTANTIALLY CONFORM TO THE LAYOUT AND LOCATION PROVIDED ON THE PLAN. DEVIATIONS FROM THIS APPROVED PLAN MAY REQUIRE SUBSEQUENT APPROVAL BY THE CITY COUNCIL.
5. THE ELEVATION OF THE BUILDING WILL SUBSTANTIALLY CONFORM TO THE ELEVATIONS PROVIDED WITH THE APPLICATION AND THE COLOR OF THE BUILDING WILL BE COORDINATED TO COMPLEMENT THE OTHER BUILDINGS IN THE SAME MANUFACTURING CAMPUS WHICH PROVIDE CONTEXT AND REFERENCE.
6. THE BUILDING WILL BE CONSTRUCTED IN A SINGLE SHELL BUT WILL BE FINISHED AS TWO SEPARATE FACILITIES OVER TWO PHASES. FEATURES SUCH AS PARKING AND LANDSCAPING ASSOCIATED WITH THE SECOND FACILITY WILL BE COMPLETED ALONG WITH THE SECOND PHASE.
7. FINAL PLANS WILL BE REVIEWED AND APPROVED BY THE CONOVER SITE PLAN REVIEW COMMITTEE AFTER COORDINATION WITH THE CONDITIONS OF THE APPROVAL BY CITY COUNCIL.
8. THE FINAL PLAN WILL INCLUDE AN ENGINEERED STORMWATER FEATURE(S) THAT SHALL MEET STATE AND CITY REQUIREMENTS AND SHALL FOLLOW THE PROCESS PROVIDED BY THE CITY OF CONOVER STORMWATER ORDINANCE FOR APPROVAL, CONSTRUCTION AND MAINTENANCE AND SUCH OTHER EASEMENTS AND AGREEMENTS AS REQUIRED BY THE ORDINANCE. STORMWATER FEATURES SHALL INSURE THAT ADJACENT PROPERTIES ARE NOT ADVERSELY IMPACTED BY INCREASED RUN-OFF CAUSED BY THE DEVELOPMENT.
9. PROJECT LANDSCAPING WILL SUBSTANTIALLY CONFORM TO THE PROPOSED PLANTINGS SHOWN ON THE LANDSCAPE PLAN.
10. THE FIRE DEPARTMENT WILL REQUIRE TRUCK ACCESS AROUND THE BUILDING AND TO ALL AREAS OF THE SITE DURING CONSTRUCTION AND POST CONSTRUCTION.

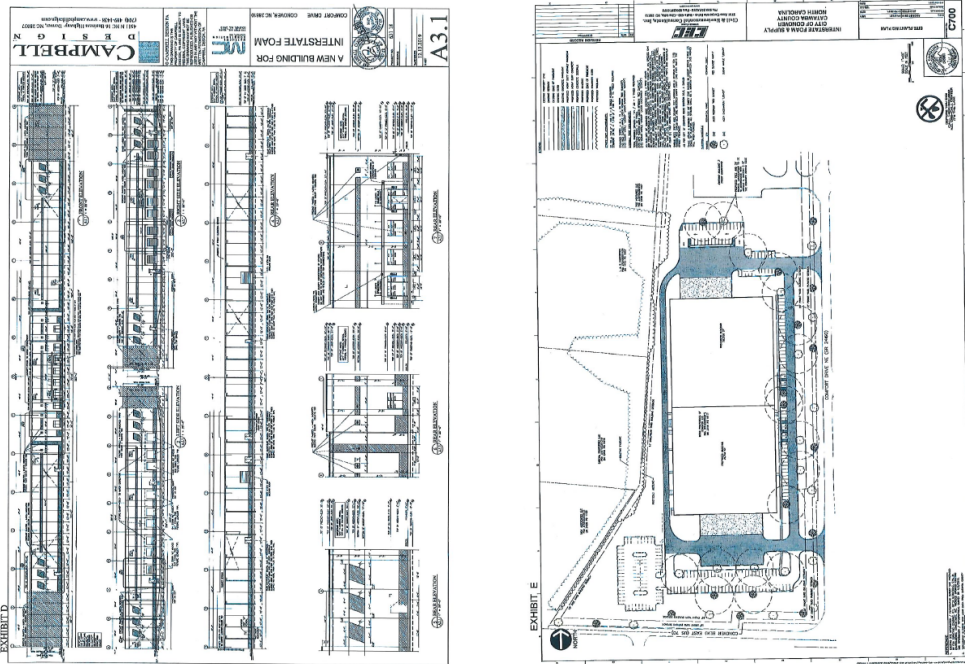
11. THE FIRE DEPARTMENT WILL REQUIRE FIRE COMMUNICATION WITHIN THE BUILDING BE DESIGNED TO ENSURE EMERGENCY COMMUNICATION SYSTEMS MEET FIRE CODE REGULATIONS.
12. FIRE HYDRANTS SHALL BE PROVIDED ON THE SITE AS REQUIRED FOR FIRE SAFETY AND WILL BE PRIVATELY MAINTAINED WITH PLACEMENT SUBJECT TO APPROVAL OF THE CONOVER FIRE DEPARTMENT.
13. THE COST OF THE EXTENSION OF NEW WATER INFRASTRUCTURE TO THE BUILDING WILL BE THE RESPONSIBILITY OF THE OWNER. FINAL PLANS FOR WATER EXTENSIONS AND CONNECTIONS, MATERIALS, LINE LOCATIONS AND RECORDED EASEMENTS (WHERE NEEDED) SHALL MEET CITY OF CONOVER STANDARDS AND WILL BE APPROVED BY THE CITY PUBLIC WORKS DEPARTMENT.
14. THE CITY OF CONOVER WILL EXTEND THE SEWER LINE ALONG THE WEST SIDE OF THE PROPERTY TO THE MIDWAY POINT TO THE NEW BUILDING. WEBB PROPERTIES OF CONOVER, LLC WILL PROVIDE AN EASEMENT FOR SAID EXTENSION.
15. NO METER BOXES, VALVES, VALVE ACCESS BOXES, ETC. SHALL BE PLACED ON A HARDSCAPE AREA, DRIVEWAY, OR CURB LINE.
16. UPON COMPLETION OF THE FIRST BUILDING PHASE AND ALL WATER, SEWER AND STORMWATER FEATURES A FINAL AS-BUILT PLAT SHALL BE PREPARED AND SUBMITTED FOR APPROVAL. UPON COMPLETION OF THE SECOND BUILDING UPFIT AND ASSOCIATED SITE IMPROVEMENTS SUCH AS PARKING AREAS, ETC. A FINAL PLAT SHALL BE PREPARED AND SUBMITTED FOR APPROVAL.
17. AT THE TIME THAT THE CERTIFICATE OF OCCUPANCY IS ISSUED FOR THE FIRST BUILDING PHASE, STREET TREES WILL BE ADDED ALONG CONOVER BOULEVARD EAST AND COMFORT DRIVE (APPROXIMATELY 9 TREES) NEAR THE CORNER AS SHOWN ON EXHIBIT E, INCLUDED HERewith.

Webb Properties, LLC consents to the terms of the Conditional Development Notes and the other exhibits referenced in Ordinance 7-20.

Webb Properties, LLC

By: *Mark A. Webb*
Mark Webb, Member/Manager





ITEM 14: Ordinance 8-20 – Amending the 2019-2020 Budget Ordinance

Finance Director Vickie K. Schlichting stated this ordinance amends the 2019-2020 Budget Ordinance by appropriating \$59,047 Water/Sewer Retained Earnings and transfers these funds to the Water/Sewer Capital Project Fund for the purpose of providing a sewer line extension for Interstate Foam.

Upon motion duly made by Council Member Hayman, seconded by Council Members Beal and Fulbright, it was unanimously RESOLVED:

That Ordinance 8-20 amending the 2019-2020 Budget Ordinance
be – ADOPTED.

(Ordinance 8-20 contained in Ordinance Book 9, Pages 28-29.)

**CITY OF CONOVER
ORDINANCE 8-20**

**AN ORDINANCE AMENDING THE 2019-2020 BUDGET ORDINANCE
AMENDMENT TO OPERATING BUDGET**

The City Council of the City of Conover, North Carolina does ordain and enact as follows:

1. That the 2019-2020 Budget Ordinance of the City of Conover, adopted pursuant to the provisions of Chapter 159 of the General Statutes of North Carolina, the Local Government Budget and Fiscal Control Act, be amended as follows:

Water/Sewer Fund Revenue		Increase (Decrease)
30-399-0000	Water/Sewer Retained Earnings Appropriation	\$ 59,047.00
	TOTAL REVENUE	\$ 59,047.00
Expenditure		Increase (Decrease)
30-660-9132	Transfer to Water/Sewer Capital Project Fund	\$ 59,047.00
	TOTAL EXPENDITURE	\$ 59,047.00

Minutes of the March 2, 2020 Conover City Council Meeting

Water/Sewer Capital Project Fund Revenue

	Increase	(Decrease)
32-397-9110	Transfer from Water/Sewer Fund	\$ 59,047.00
	TOTAL REVENUE	\$ 59,047.00

Expenditure

	Increase	(Decrease)
32-810-7200	Contracted Construction- Sewer	\$ 59,047.00
	TOTAL EXPENDITURE	\$ 59,047.00

1. That all ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance are hereby repealed.
2. That the City Council hereby declares that should any section, paragraph, sentence or word of this ordinance be declared for any reason invalid, it is the intent of the City Council that it would have passed all other portions of this ordinance independent of elimination of any such portion that may be declared invalid.
3. That this ordinance shall take effect and be in force from and after the date of its adoption.

Adopted this the 2nd day of March, 2020.

ITEM 15: Resolution 9-20 Approval of Park/Facility Use and Special Event Policy

Senior Public Works Director Jimmy A. Clark presented Resolution 9-20 and reviewed the Park/Facility Use and Special Event Policy and Special Event Permit application. Mr. Clark shared that this policy and application assist with establishing rules, regulations and general responsibilities regarding the use of City Parks, Greenways, City Streets, Conover Station Community Room and other City owned areas suitable for accommodating a special event. Mr. Clark stated that the policy can be amended at any time if needed and recommended approval to City Council.

Upon motion duly made by Council Member Hayman, seconded by Council Members Canrobert and Beal, it was unanimously RESOLVED:

That Resolution 9-20 Approval of Park/Facility Use and Special Event Policy be – ADOPTED.

(Resolution 9-20 contained in Exhibit File under Resolutions.)

CITY OF CONOVER RESOLUTION 9-20

ADOPTION OF CITY OF CONOVER PARK/FACILITY USE AND SPECIAL EVENT POLICY AND SPECIAL EVENT PERMIT APPLICATION

WHEREAS, the City of Conover is fortunate to be able to host more and more public events that will bring together citizens, local businesses, and civic organizations to promote community awareness and improve quality of life; and

WHEREAS, a policy that would regulate special events and an accompanying permit application form have been presented for the City Council's consideration; and

Minutes of the March 2, 2020 Conover City Council Meeting

WHEREAS, the proposed policy would assist the City in coordinating the scheduling of special events and would enable the City to ensure that safety, equitable use availability of resources, and equal utilization to residents and members of the public at large are taken into consideration during the planning process; and

NOW, THEREFORE, BE IT RESOLVED the Conover City Council hereby approves and adopts the City of Conover Park/Facility Use and Special Event Policy and Special Event Permit Application, as presented. City staff is authorized to amend this policy and application from time to time as it determines what will enable the City to better coordinate special events and provide for the safety of the public.

Adopted this the 2nd day of March, 2020.

ITEM 16: Ordinance 9-20 – Amending the 2019-2020 Budget Ordinance

Finance Director Vickie K. Schlichting stated this ordinance amends the 2019-2020 budget ordinance by appropriating \$5,500.00 General Fund Balance to provide for annual groundwater testing of monitoring well 1R as required by the Brownfield Agreement and closure/abandonment of monitoring wells 2 and 3 at Conover Station.

Upon motion duly made by Council Member Beal, seconded by Council Member Fulbright, it was unanimously RESOLVED:

That Ordinance 9-20 amending the 2019-2020 Budget Ordinance be – ADOPTED.

(Ordinance 9-20 contained in Ordinance Book 9, Pages 30-31.)

CITY OF CONOVER ORDINANCE 9-20

AN ORDINANCE AMENDING THE 2019-2020 BUDGET ORDINANCE AMENDMENT TO OPERATING BUDGET

The City Council of the City of Conover, North Carolina does ordain and enact as follows:

1. That the 2019-2020 Budget Ordinance of the City of Conover, adopted pursuant to the provisions of Chapter 159 of the General Statutes of North Carolina, the Local Government Budget and Fiscal Control Act, be amended as follows:

General Fund		
<u>Revenue</u>		
		Increase (Decrease)
10-399-0000	General Fund Balance Appropriation	<u>\$5,500.00</u>
	TOTAL REVENUE	<u>\$5,500.00</u>
<u>Expenditure</u>		
		Increase (Decrease)
10-505-0400	Professional Services	<u>\$5,500.00</u>
	TOTAL EXPENDITURE	<u>\$5,500.00</u>

2. That all ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance are hereby repealed.
3. That the City Council hereby declares that should any section, paragraph, sentence or word of this ordinance be declared, for any reason invalid, it is the intent of the City Council that it would have passed all other portions of this ordinance independent of elimination of any such portion that may be declared invalid.

Minutes of the March 2, 2020 Conover City Council Meeting

4. That this ordinance shall take effect and be in force from and after the date of its adoption.

Adopted this the 2nd day of March, 2020.

ITEM 17: Ordinance 10-20 – Amending the 2019-2020 Budget Ordinance

Finance Director Vickie K. Schlichting stated this ordinance amends the 2019-2020 Budget Ordinance to receive the insurance reimbursement for damages to the Conover City Park shelter in the amount of \$28,307 and increases the budget for Maintenance & Repairs-Streets, which is the account from which the repairs will be made.

Upon motion duly made by Council Member Eckard, seconded by Council Member Hayman, it was unanimously RESOLVED:

That Ordinance 10-20 amending the 2019-2020 Budget Ordinance be – ADOPTED.

(Ordinance 10-20 contained in Ordinance Book 9, Pages 32-33.)

CITY OF CONOVER ORDINANCE 10-20

AN ORDINANCE AMENDING THE 2019-2020 BUDGET ORDINANCE AMENDMENT TO OPERATING BUDGET

The City Council of the City of Conover, North Carolina does ordain and enact as follows:

1. That the 2019-2020 Budget Ordinance of the City of Conover, adopted pursuant to the provisions of Chapter 159 of the General Statutes of North Carolina, the Local Government Budget and Fiscal Control Act, be amended as follows:

General Fund Revenue

		Increase (Decrease)
10-349-5608	Reimbursement from Insurance	<u>\$28,307.00</u>
	TOTAL REVENUE	<u>\$28,307.00</u>

Expenditure

		Increase (Decrease)
10-560-1800	Maintenance & Repairs- Streets	<u>\$28,307.00</u>
	TOTAL EXPENDITURE	<u>\$28,307.00</u>

2. That all ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance are hereby repealed.
3. That the City Council hereby declares that should any section, paragraph, sentence or word of this ordinance be declared for any reason invalid, it is the intent of the City Council that it would have passed all other portions of this ordinance independent of elimination of any such portion that may be declared invalid.
4. That this ordinance shall take effect and be in force from and after the date of its adoption.

Adopted this the 2nd day of March, 2020.

ITEM 18: Ordinance 11-20 – Amending the 2019-2020 Budget Ordinance

Finance Director Vickie K. Schlichting stated this ordinance amends the 2019-2020 Budget Ordinance by appropriating \$2,500 general fund balance for the purpose of establishing an endowed scholarship at Catawba Valley Community College in memory of Mark Story.

Minutes of the March 2, 2020 Conover City Council Meeting

Upon motion duly made by Council Member Hayman, seconded by Council Members Eckard and Canrobert, it was unanimously RESOLVED:

That Ordinance 11-20 amending the 2019-2020 Budget Ordinance be – ADOPTED.

(Ordinance 11-20 contained in Ordinance Book 9, Pages 34-35.)

CITY OF CONOVER ORDINANCE 11-20

AN ORDINANCE AMENDING THE 2019-2020 BUDGET ORDINANCE AMENDMENT TO OPERATING BUDGET

The City Council of the City of Conover, North Carolina does ordain and enact as follows:

1. That the 2019-2020 Budget Ordinance of the City of Conover, adopted pursuant to the provisions of Chapter 159 of the General Statutes of North Carolina, the Local Government Budget and Fiscal Control Act, be amended as follows:

General Fund Revenue

		Increase (Decrease)
10-399-0000	General Fund Balance Appropriation	<u>\$2,500.00</u>
	TOTAL REVENUE	<u>\$2,500.00</u>

Expenditure

		Increase (Decrease)
10-410-5700	Miscellaneous	<u>\$2,500.00</u>
	TOTAL EXPENDITURE	<u>\$2,500.00</u>

2. That all ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance are hereby repealed.
3. That the City Council hereby declares that should any section, paragraph, sentence or word of this ordinance be declared, for any reason invalid, it is the intent of the City Council that it would have passed all other portions of this ordinance independent of elimination of any such portion that may be declared invalid.
4. That this ordinance shall take effect and be in force from and after the date of its adoption.

Adopted this the 2nd day of March, 2020.

ITEM 19: Ordinance 12-20 – Amending the 2019-2020 Budget Ordinance

Finance Director Vickie K. Schlichting stated this ordinance amends the 2019-2020 Budget Ordinance to recognize the sale of capital assets on GovDeals in the amount of \$35,654 in the General Capital Reserve fund which will be transferred to the general fund to purchase a 2020 F150 4x4 Crew Cab truck for the Fire Department.

Upon motion duly made by Council Member Eckard, seconded by Council Member Beal, it was unanimously RESOLVED:

That Ordinance 12-20 amending the 2019-2020 Budget Ordinance be – ADOPTED.

(Ordinance 12-20 contained in Ordinance Book 9, Pages 36-37.)

Minutes of the March 2, 2020 Conover City Council Meeting

CITY OF CONOVER
ORDINANCE 12-20

AN ORDINANCE AMENDING THE 2019-2020 BUDGET ORDINANCE
AMENDMENT TO OPERATING BUDGET

The City Council of the City of Conover, North Carolina does ordain and enact as follows:

1. That the 2019-2020 Budget Ordinance of the City of Conover, adopted pursuant to the provisions of Chapter 159 of the General Statutes of North Carolina, the Local Government Budget and Fiscal Control Act, be amended as follows:

General Capital Reserve Fund

Revenue

		Increase (Decrease)
52-383-0000	Sale of Capital Assets	<u>\$ 35,654.00</u>
	TOTAL REVENUE	<u>\$ 35,654.00</u>

Expenditure

		Increase (Decrease)
52-660-9110	Transfer to General Fund	<u>\$ 35,654.00</u>
	TOTAL EXPENDITURE	<u>\$ 35,654.00</u>

General Fund

Revenue

		Increase (Decrease)
10-397-9152	Transfer from General Capital Reserve Fund	<u>\$ 35,654.00</u>
	TOTAL REVENUE	<u>\$ 35,654.00</u>

Expenditure

		Increase (Decrease)
10-530-7400	Capital Outlay - Fire	<u>\$ 35,654.00</u>
	TOTAL EXPENDITURE	<u>\$ 35,654.00</u>

2. That all ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance are hereby repealed.
3. That the City Council hereby declares that should any section, paragraph, sentence or word of this ordinance be declared for any reason invalid, it is the intent of the City Council that it would have passed all other portions of this ordinance independent of elimination of any such portion that may be declared invalid.
4. That this ordinance shall take effect and be in force from and after the date of its adoption.

Adopted this the 2nd day of March, 2020.

ITEM 20: Ratification of Resolution 6-20 - Certificate of Appreciation - Carl F. Pickel

Mayor Lee E. Moritz, Jr. presented Resolution 6-20 to be ratified. The resolution was presented to Mr. Pickel on February 28, 2020.

Minutes of the March 2, 2020 Conover City Council Meeting

Upon motion duly made by Mayor Moritz, seconded by Council Member Fulbright, it was unanimously RESOLVED:

That Resolution 6-20 Certificate of Appreciation for Carl F. Pickel be – RATIFIED.

(Resolution 6-20 contained in Exhibit File under Resolutions.)

**CITY OF CONOVER
RESOLUTION 6-20
CERTIFICATE OF APPRECIATION
CARL F. PICKEL
43 YEARS OF SERVICE**

WHEREAS, CARL F. PICKEL HAS SERVED THE CITY OF CONOVER FIRE DEPARTMENT FOR THE PAST FORTY-THREE (43) YEARS, STARTING AS A VOLUNTEER FIREFIGHTER AND THEN BEING PROMOTED TO A FULL-TIME FIRE ENGINEER IN MARCH 1990; AND

WHEREAS, HE HAS DONE AN EXCELLENT JOB MEETING THE NEEDS OF THE PUBLIC BY COMMITTING YEARS OF SERVICE TO PROTECTING THE CITIZENS OF CONOVER; AND

WHEREAS, THESE YEARS OF SERVICE HAVE BEEN MARKED BY EXEMPLARY PARTICIPATION VITAL FOR THE ACCOMPLISHMENTS OF THE CITY AND CONOVER FIRE DEPARTMENT; AND

WHEREAS, HIS YEARS OF SERVICE HAVE BEEN CHARACTERIZED BY A ZEALOUS COMMITMENT TO IMPROVE THE COMMUNITY AND THE PUBLIC HE HAS SERVED, RECEIVING EXTENSIVE TRAINING IN MANY AREAS OF FIREFIGHTING, HAZARDOUS MATERIALS AND APPARATUS OPERATIONS; AND

WHEREAS, HE HAS SERVED AS A MENTOR BY TRAINING AND EDUCATING HIS PEERS TO THE EARLIER HISTORY OF DEPARTMENTAL OPERATIONS; AND

WHEREAS, HE IS AN EXTREMELY GIVING INDIVIDUAL AND THOSE AROUND HIM HAVE BENEFITED FROM HIS COMMITMENT AND SELFLESS SERVICE, BOTH PROFESSIONALLY AND PERSONALLY; AND

WHEREAS, HIS SERVICE AND DEVOTION TO THE CITY OF CONOVER AND CONOVER FIRE DEPARTMENT THROUGH FIRE OPERATIONS HAVE PROVEN TO BE AN ENORMOUS BENEFIT TO THE CITY AND ITS RESIDENTS IN NUMEROUS WAYS, ALL OF WHICH HAVE CONTRIBUTED TO CITY OF CONOVER HAVING THE FINEST FIRE DEPARTMENT IN THE AREA; AND

NOW, THEREFORE, BE IT RESOLVED THAT THE CONOVER CITY COUNCIL, ON BEHALF OF THE CITIZENS OF CONOVER, PUBLICLY COMMENDS **CARL F. PICKEL FOR HIS FORTY-THREE (43) YEARS OF OUTSTANDING SERVICE TO THE CITY OF CONOVER AND THE CONOVER FIRE DEPARTMENT.**

ADOPTED THIS THE 2ND DAY OF MARCH, 2020.

ITEM 21: Proclamation – Arbor Day – March 20, 2020

Mayor Lee E. Moritz, Jr. proclaimed March 20, 2020 as Arbor Day.

Upon motion duly made by Mayor Moritz, seconded by Council Member Beal, it was unanimously RESOLVED:

That Proclamation – Arbor Day – March 20, 2020 be – ADOPTED.

(Proclamation contained in Exhibit File under Proclamations.)

Minutes of the March 2, 2020 Conover City Council Meeting

PROCLAMATION *ARBOR DAY* *MARCH 20, 2020*

WHEREAS, in 1872 J. Sterling Morton proposed to the Nebraska Board of Agriculture that a special day be set aside for the planting of trees; and

WHEREAS, this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska; and

WHEREAS, Arbor Day is now observed throughout the nation and the world; and

WHEREAS, trees can reduce the erosion of our precious topsoil by wind and water, cut heating and cooling costs, moderate the temperature, clean the air, produce oxygen and provide habitat for wildlife; and

WHEREAS, trees are a renewable resource giving us paper, wood for our homes, fuel for our fires and countless other wood products; and

WHEREAS, trees in our city increase property values, enhance the economic vitality of business areas, and beautify our community; and

WHEREAS, trees, wherever they are planted, are a source of joy and spiritual renewal.

NOW, THEREFORE, I, Lee E. Moritz, Jr., Mayor of the City of Conover, do hereby proclaim March 20, 2020 as
“ARBOR DAY”

in the City of Conover, and I urge all citizens to celebrate Arbor Day and to support efforts to protect our trees and woodlands, and

FURTHER, I urge all citizens to plant trees to gladden the heart and promote the well-being of this and future generations.

IN WITNESS THEREOF, I have hereunto set my hand and caused the official seal of the City of Conover to be affixed this the 2nd day of March, 2020.

ITEM 22: Ratification of Proclamation of a Local State of Emergency

Mayor Lee E. Moritz, Jr. presented the Proclamation for the Local State of Emergency declared on February 6, 2020 and lifted on February 7, 2020.

Upon motion duly made by Mayor Moritz, seconded by Council Members Beal and Hayman, it was unanimously RESOLVED:

That Proclamation for Local State of Emergency from February 6, 2020
be – RATIFIED.

(Proclamation contained in Exhibit File under Proclamations.)

CITY OF CONOVER PROCLAMATION OF A LOCAL STATE OF EMERGENCY

Section I:

Pursuant to the City of Conover Ordinance 12-83 titled *"An Ordinance amending Chapter 12 by Addition Section 12-26 to the Conover City Code of Ordinances Under the Provisions of General Statutes 14-288.12"* enacted on August 1, 1983 and in accordance with Chapter 166A of the General Statutes and Article 36A, Chapter 14 of the General Statutes and adopted by the City of Conover.

Section II:

I therefore proclaim the existence of a State of Emergency in the City of Conover.

Section III:

Minutes of the March 2, 2020 Conover City Council Meeting

I hereby order all personnel subject to my control to cooperate in the enforcement and implementation of the provisions of this local State of Emergency and of the City Ordinances and General Statutes.

Section IV:

I have determined that, in the best interest of public safety and protection, it is necessary to respond with all municipal services available.

Section V: No Liability

No person acting under the authority of this local State of Emergency shall be held liable for damages to any person, firm, corporation or public or private entity that may arise from any action or inaction.

Section V: Execution of the Emergency Plan

All civilians and all emergency personnel are hereby ordered to comply with the emergency plan and are further ordered to comply with other restrictions that may be imposed by this State of Emergency.

This proclamation of a local State of Emergency shall exist from the date below, until such time it is determined by me to no longer be necessary.

ITEM 23: Committee Reports

Mayor Moritz stated that the City has received a request from Colby Dagenhart to assist with the pollinator gardens at Conover City Park and a summer internship was suggested for his request. Mayor Moritz also reported that Council Member Beal's recent surgery had went well.

Council Member Hayman congratulated Police Chief Eric Loftin on his daughter's success in the Newton-Conover High School basketball championship games.

Catawba County EDC President Scott Millar was present and reported that a Grand Opening for Project Grow will be held on Thursday, March 19.

ITEM 24: City Manager's Report

1. BUILDING PERMITS:

The City issued eleven (11) building permits during the month of February, 2020, totaling \$341,111. Included were five (5) residential, two (2) commercial, one (1) industrial, and three (3) institutional.

2. NATIONAL LEAGUE OF CITIES 2020 ANNUAL CONGRESSIONAL CITY CONFERENCE:

The 2020 Annual Congressional City Conference will be held on March 8-11, 2020 in Washington, DC.

3. COUNCIL/PLANNING BOARD JOINT RETREAT:

The Council/Planning Board Joint Retreat will be held on Thursday, March 12th at 5:30 p.m. in the upstairs training room at Conover Fire Station #3.

There being no further business, the meeting was adjourned at 8:41 p.m.

Mayor Lee E. Moritz, Jr.

City Clerk Courtney M. Kennedy

RESOLUTION 1-2020
UNIFOUR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the City of Newton are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable flooding, winter storms, hurricanes and tropical storms, severe thunderstorms and tornadoes, earthquake and wildfire; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Newton has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.


WHEREAS, it is the intent of the Newton City Council to fulfill this obligation in order that the City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

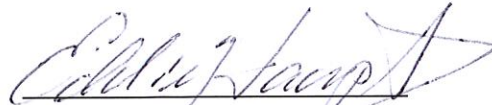
NOW, therefore, be it resolved that the City Council of Newton North Carolina hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the City Manager or his designee with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.

- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
- 3. Appoints the City Manager or his designee to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the City Council of Newton North Carolina for consideration.
- 4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this the 3rd day of March, 2020


Amy S. Falowski, City Clerk


Eddie Haupt, Mayor



RESOLUTION 2020-1

ADOPTION OF UNIFOUR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Brookford are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to natural hazards such as flooding, tornadoes, winter storms, dam failures and geological hazards such as sink holes and earthquakes; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the Town of Brookford has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Brookfod Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Brookford Town Council hereby:

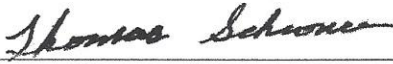
1. Adopts the Unifour Regional Hazard Mitigation Plan; and

2. Vests the Brookford Town Administrator with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Brookford Town Administrator to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Brookford Town Council for consideration.

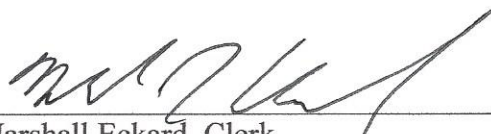
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 16 day of March 2020.



Thomas Schronce, Mayor
Brookford Town Council

ATTEST:



Marshall Eckard, Clerk

A Regular Meeting of the City Council of the City of Hickory was held in the Council Chamber of the Municipal Building on Tuesday, February 18, 2020 at 7:00 p.m., with the following members present:

Tony Wood	Hank Guess	David L. Williams
Charlotte C. Williams	Aldermen	David P. Zagaroli
Danny Seaver		Jill Patton

A quorum was present.

Also present were: City Manager Warren Wood, Assistant City Manager Rodney Miller, Assistant City Manager Rick Beasley, Deputy City Attorney Arnita Dula, City Attorney John W. Crone, III, Deputy City Clerk Crystal B. Mundy and City Clerk Debbie D. Miller

- I. Mayor Guess called the meeting to order. All Council members were present. Mayor Guess welcomed the visitors and guest present. He welcomed visiting Councilmember Bruce Eckard from Conover.
- II. Invocation by Reverend Sandi Hood, Peace United Church of Christ Carolina Caring
- III. Pledge of Allegiance
- IV. Special Presentations
 - A. Presentation by External Agencies Requesting Appropriations from the City Council during the Next Fiscal Year Beginning July 1, 2020.

DRAFT

The Council will not take action tonight. Action will be taken when the Council considers the City's annual budget in May or June. These presentations are made so Council Members can ask questions or make comments about the requests. Presenters will be allotted no more than five (5) minutes to make their presentations to Council.

Organization	Presentation By	Amount Requested
Catawba County Council on Aging	Vicki Blevins	\$10,000
Catawba County Economic Development Corporation	Scott Millar	\$171,449
Catawba Valley Community College Foundation	Dr. Garrett D. Hinshaw	\$121,530
Greater Hickory International Council	Hani Nassar	\$13,200
Habitat for Humanity of Catawba Valley	Mitzi Gellman	\$25,319
Hickory Aviation Museum	Don Baldwin	\$22,000
Hickory Downtown Development Association	Amy Ogle and Brandon Hedrick	\$65,000
Hickory Metro Convention & Visitors Bureau	Mandy Pitts Hildebrand	\$25,000
SALT Block Foundation	Michael Thomas or Frank Young	\$100,000
United Arts Council of Catawba County	Jamie Treadaway	\$40,925
Western Piedmont Sister Cities Association	Hani Nassar	\$610

Catawba County Council on Aging, Executive Director Vicki Blevins advised the Council on Aging was a private, nonprofit, 501-C3 organization that had been serving senior citizens for over 40 years. They operate at the West Hickory Senior Center. Their mission was to provide a focal point for aging resources, as well as opportunities designed to extend independent living and enrich the quality of life for older adults. Over 25 percent of their senior citizens live alone and were vulnerable to social isolation. Nine percent live below the poverty level. Through the Senior Center the Council on Aging provides access to vital services, such as Medicare counseling, tax counseling, legal assistance and advanced directives. They provide health promotion programs such as flu shot clinics, mammogram screenings, exercise classes, evidence based health programs such as a matter of balance fall prevention, living healthy with chronic conditions, and a food pantry. These services were offered free of charge. Research showed that social interaction was critical to healthy aging, both physically and mentally. The Senior Center offers many opportunities for senior citizens to interact with others. They offer weekly activities as well as special events throughout the year. Educational classes such as computer and smartphone classes were offered to help seniors continue to learn as they age. They have arts and crafts classes, trips, and a senior chorus, which performs throughout the community. They served over 5,400 participants last year, and that number was increasing annually as the older population was growing. They had not requested funding from the City of Hickory in the past. They were asking now because Catawba County funding, which they had received since the beginning of the organization, was eliminated this year. Their goal was to continue Senior Center programming without interruption and with no additional costs to participants. Council's consideration of their request was appreciated. She asked if Council had any questions.

Catawba County Economic Development Corporation, President Scott Millar commented that it was a pleasure to come before Council and talk about economic development and

what was going on in the City of Hickory. Helping the City to try and accomplish their goals was what they were all about. Certainly Council's goals of population growth and tax base improvement was paramount on their mind as well. He advised they were asking for a 3.3 percent increase in their budget, and that amounted to approximately about \$5,400 additional dollars. One of the things that he had not explained in recent years, the way that their budget was determined was the amount that was determined to be funded by the private sector, fifty-one and a half percent of that was picked up by the County. The other forty-eight and a half percent of those funds were split up by the municipalities. It was a fairly convoluted mechanism in order to determine those. It basically breaks up the municipality portion by population relative to the other municipalities in Catawba County, total tax base and then industrial tax base. For example, if a town gets a huge investment opportunity that was spread out over five years and it's balanced, so that the increases that are as a result of successful economic development are charged to that entity over time. If the City has a phenomenal year, sometime over those next five years, their percentage would go up because their tax base and hopefully the population had gone up as well. That was the way that they had funded this for many years. And that was how all the municipalities were requested for funding. That was the way that it was broken down. He mentioned the One North Center Project that was going up. He also mentioned the Trivium Corporate Center and the investments that had gone there in recent years as evidence of phenomenal economic development. As the Secretary of Commerce said at the recent Cataler announcement, he said, "good luck comes to those that are prepared", and certainly the City of Hickory had been investing and preparing for good economic development. He asked Council for any questions.

Catawba Valley Community College Foundation, Dr. Garrett D. Hinshaw advised the Catawba Valley Community College (CVCC) Foundation was created to enhance the things that they do at CVCC. Without that Foundation, they would not be able to accomplish many of the things that you read about in the paper every day. As part of that, the Foundation was looking to help them enhance the campus that was built in the 1960s. As Council had visited the Workforce Solutions Complex on their campus it was an iconic facility. The main part of the campus, the oldest part of the campus, had not been enhanced at all. When you walk into that area, it was not an inspiring space. They do not have a revenue source that would fund the type of thing that they proposed to Council that they had in their packets. The gateway concept was really matching what the City of Hickory had done and the citizens of Hickory had done in this community to enhance the environments from the Riverwalk all the way back through all the improvements that were happening all around the City. They wanted to make sure that Council was proud of them and they want to make sure that they have an opportunity to also give the citizens that environment to be in every day. They have 5,000 to 8,000 people on their campus five days a week. That was probably the largest concentration of population of anywhere in the City of Hickory. They have over 100,000 visitors that come through their facilities. What they were looking to do was to create that inspiring space so that their students can learn and the community could continue to prosper. He thanked Council for the opportunity to come before them and he asked if they had any questions.

Greater Hickory International Council, Hani Nassar presented a PowerPoint presentation. He thanked Council for allowing him the opportunity to present their budget and their request for the coming year. After 17 years of being part of the City of Hickory as a Board and Commission and the first full year of being a nonprofit organization they appreciated all the City had done in the past and hopefully what they would be doing for them in the future. Traditionally he had provided some information about what they do, because even though they had been around for 19 years, not everybody knows what the Hickory International Council does and now the new name, the Greater Hickory International Council. He referred to the PowerPoint and shared with Council what they do. They have quite a few members on the council, at least volunteers from different countries, and they represent the council. They have the opportunity to continue with the Lenoir-Rhyne University's collaboration on March 10th and 11th with the Pangea Model United Nations, where the students solve problems for a couple of days. Additionally, they were participating with the International Education Day on March 27th with Lenoir-Rhyne University, another collaboration with Lenoir-Rhyne, so they hope that first year would be a good one. The next opportunity was the Children's International Film Festival, and they had done it for seven years with the school systems, Catawba, Newton-Conover, Hickory City Schools, private schools, even the Montessori's and the homeschoolers. And after seven years, they had come to the point where after discussions with the school systems, they would like to move to the next level, which was to make it an actual annual festival. Just like Foot Candle Film Society has a festival in the fall, they were going to collaborate with Foot Candle and do a spring children's film festival on the weekend. This year they would start with one day on the weekend. If it goes very well, they would continue next year with a two day event. He discussed the Folkmoot 35th Annual event not here in Hickory, but in North Carolina. They are coming to them on July 19th with four different groups from four different countries. He mentioned that those who had attended Folkmoot would appreciate what they go through to bring these individuals from overseas through visas right now. They house them for ten days in Western North Carolina, and they come to Hickory for one day. They were also participating with the Foot Candle Film Society to present quarterly

international movie night. Three or four times a year they will bring international movies that are dubbed or that are in a foreign language. He discussed the Great Decisions discussions, for the 6th or 7th straight year they had a full house for the Great Decisions discussions. It was a Foreign Policy Association event, where they have eight topics that they discuss with a group of people, just like a book read. There are 30 individuals in the community who talk about the foreign policy of the United States and the world. That was happening again in September/October. They increased their grants to \$2,000 this year. Three or four different grants that they work with the Community Relations Council on to hopefully find individuals and organizations who have projects that are supportive of the goals, purposes, and mission of the Greater Hickory International Council. They finish the year with International Christmas Concert. Just like with Folkmoot, the International Christmas Concert was standing room only, and those who had attended that appreciated what they had done. This past December was the 10th annual that they had had a great event and they would continue with that progress over the years.

Mr. Nassar discussed the budget. He referred to the PowerPoint and advised it was a total of actually, \$18,700. They do sell tickets to Folkmoot, which was the only event they sell tickets to and they get business partnerships from around Hickory. The net budget was \$13,200, which was what Council had done for them in the past. He hoped that Council would continue to support them as an organization, as a non-profit, and he looked forward to improving their presence not only in Hickory but also in Catawba County. He thanked Council.

Habitat for Humanity of Catawba Valley, Mitzi Gellman presented a PowerPoint presentation. She commented it was great to be here and it marked her 22nd, maybe, straight year of being here. She advised she had brought a little video just to bring Council up to date with where they were. Their request had actually increased this year. She explained as the video played. She advised the photos were of their North Stone neighborhood. They just started their last house in North Stone. It was going to be under roof within the next couple of weeks they hoped. After that, they move to another area. She referred to the video which showed a little tally of their hours and the way they get things done and about things that they had been able to earn in North Stone. All of the homes there were zero energy ready, which means the power bills for their families were extremely reduced around \$30 a month or so. That neighborhood, as far as they know, was the first mixed income neighborhood in Catawba County. A lot of benefits to that were increased earnings, increased educational attainment by children who grow up in mixed income communities. She referred to the video which was a nice flyover of the neighborhood. She would put that neighborhood up against any neighborhood. She explained what they were planning on doing next. They were going to Ridgeview. The area that they were working on was behind Safe Harbor, and would be referred to as The Cottages at Ridgeview. She referred to a photo and advised that it was with help from the Fire Department. They were actually doing a lot of engineering work so they can make sure they can control the runoff and the flooding in the areas. While they are there as well as doing new construction, they were going to be intentional about doing their repairs program in the immediate area as well, hoping to leverage their volunteers and their staff to be in one area where they can do both the new construction and repairs that they had had such great success with over the past few years. She referred to the PowerPoint and advised it was to give Council detail of the site plan. One of the things in their request this year which was why it had actually increased was, because in North Stone the taps were already installed so they were only requesting capacity fees. The amount that they were requesting was about doubled for what they had asked for, in the past five years that they had been in North Stone. All in all there would be five new houses and then one across the street. The house that was right in the middle, they were still trying to buy that. They would have to see how that was going to work out. As of yet, they had not had a lot of success trying to buy that. If they do acquire that they were going to renovate it. They were also looking at other houses around the immediate area to renovate as well, too. They were going to follow the same look of the houses that they had in North Stone. She referred to the photo and advised it was one of the two bedroom houses that they built. Most of the houses that they would build in Ridgeview would be three bedroom, two bath. The photo was a special house for a family that actually relocated here that was sold on open market. They were using the same architectural firm from Raleigh called Tightlines. They seem to have a really good knack for creating a good looking product of really small scale and it was completely affordable to build as well. She mentioned that they were going to be naming one of their houses in honor of Bob and Karen Vollinger. She referred to a summary of some of the things that Mr. Vollinger had done over 20 years. Some of the numbers were almost over a million and a half aluminum cans that he had collected on then the dollar amount. She advised she should say aluminum cans at 27,000 and then scrap metal and aluminum cans again at 77,000 for a total one of \$105,074. They wanted to find time to thank Mr. Vollinger for all of his contributions and to thank Mrs. Vollinger as well for her patience. She asked Council for any questions.

Alderman Williams asked with the Ridgeview projects, what the estimated start date, end date and the average costs of the homes were there.

Ms. Gellman advised their goal was to be over there by July, she hoped, breaking ground. They started two houses on "F" Avenue that were going to be Habitat homes and then they had another house that they were going to start on the corner of 3rd and 3rd, right around Christ Lutheran Church. That would be a house that they would try and sell as a market rate house, which means it would be sold on the open market outside of a Habitat family. Once they get that house underway, then they were going to move over to Ridgeview. She knew that right now they had got almost all the engineering work completed on that site to get the grading, the slope and everything right, which was something they hadn't really done that well in advance before. There was no hindrance on that part of it. It was just a matter of raising some money and getting over there and start doing the grading. Ideally, they would like to have most of those foundations ready to go around July or so. She would say, they would probably see wood going up, some 2 x 4s going up by August/September. She advised she should say it was dependent as well upon one of their funding sources that she really didn't want to discuss out loud right now, but there was a timeline on the funding source as well and they didn't want to get too far ahead of that. She knew that funding would be available around August or September.

City Manager Warren Wood asked about the average costs.

Ms. Gellman advised they have their houses appraised. In North Stone, most recently a three bedroom, two bath, 1,200 square foot house, had appraised for like \$166,000. The price to a Habitat family would be what they could actually afford. Typically, the first mortgage would be set for the Habitat family around \$100,000 to \$110,000 and a second mortgage to hold the balance to take it up to the \$166,000, so you have full coverage. For a house sold on the open market their goal would hopefully be around that \$150,000 to \$160,000 price point as well. They think that would be really successful over there and would bring some new energy into the area that had been vacant for so long. Again, a mixed income model that they were going to try and use. All the houses would also still be energy efficient the way all of their houses had been built for like the past 10 or 15 years as well.

Alderman Williams thanked Ms. Gellman for all the hard work that she was doing providing these opportunities for families. He really appreciated that.

Ms. Gellman commented it was exciting. She mentioned that Mayor Guess was at the dedication they had on Saturday. Just a chance to see the family, as well as Alderwoman Williams who was their Board President this year. She commented she had to say that in full disclosure. It was a good time. You really get to see how people really appreciate it and they have an opportunity to change their lives. She thanked Council.

Hickory Aviation Museum, Don Baldwin commented that Hickory Aviation Museum had been around here for 16 or so years. They had over 85,000 visitors in that time and last year alone almost 15,000. This includes school groups, scouting groups, ROTC, junior ROTC groups, and Trip Advisor had named it one of the three best destinations in Western North Carolina. They continue to try to build on that, which was why he was here. Two of the aircraft they have, an F4 Phantom, an early model that actually participated in the blockade in the Cuban missile crisis. They have an XF-15C called the Stringaree, the only one in the world. They were asking money to restore both of those and an audio visual setup to put in the meeting room at the Terminal Building, which would also be able to be used by other groups. He had brought photos for Council's review, the F 105, and the F4-Phantom. They had just begun to strip that one but still had a long way to go. He referred to a photo of the XF-15C, the only one in the world. He advised that the XF-15C and a helicopter out there also, that had come from the museum in Quonset Point, Rhode Island. They had storms and weather and had a collapse. They were asking for \$22,000 on this. They had the opportunity from that museum to get an A6 Intruder. The A6 Intruder carried more ordnance than any other aircraft other than the B 52. It was an all-weather, night/day, totally blind attack bomber. A wonderful aircraft. They have one and could get that one, and on the way back they could pick up a T-28 Trojan which was used as a trainer in the 50s, and then in Vietnam it was used as a mass trainer. He advised they were asking for \$22,000, he didn't know if it was the right time or place to add another \$10,000 to get those two aircrafts. He referred back to the photos, and displayed before and after pictures. He asked Mr. Jeff Wofford to the podium

Mr. Jeff Wofford, President and CEO of the Aviation Museum, commented one of the things they were real proud of was they partnered with the Science Center recently and the Museum continues to attract more and more attention and one of the things this grant would do for them would allow them to quickly restore these two airplanes. The F105 that he mentioned took them about seven years and about three times the cost, because they were getting behind because of the weather. This was really important for them, and they were trying to do something to help the community. He thought that these additional aircrafts would make great assets to the City of Hickory and they can continue to grow the museum the way they have been. He asked Council for any questions.

Hickory Downtown Development Association (HDDA), Executive Director Amy Ogle advised she was joined by the President of their Board Brandon Hedrick, on behalf of the downtown community, and the members of the Hickory Downtown Development Association they were respectfully requesting \$65,000 for the fiscal 2020/2021 year. Since 1995 the Hickory Downtown Development Association had worked to improve downtown Hickory on behalf of businesses and the community. While times have changed, they still strive to gather ideas bring together resources and create new initiatives to make downtown Hickory better for everyone. Also, since 2006, Hickory Downtown Development Association has represented Hickory, North Carolina, for the North Carolina Main Street program. This program was based on a four point approach. It revolved around eight different principles that focus on creating economic development through historic preservation. Each year, the Downtown Development Association was required to meet 18 basic requirements, and their director was required to attend year round training at various sites.

President of the Hickory Downtown Development Association Board, Brandon Hedrick advised as they look to the future, they see downtown being not only a place where the community gathers, but also for recreation and entertainment. They see new urban living, and maybe some additional corporate headquarters, hopefully coming to downtown. In the coming year they plan to continue their annual events that bring over 150,000 participants to the Hickory area, not only to downtown to the streets and to Union Square, but also the Greater Hickory area touching all avenues from retail, banking, to tourism. With continued downtown construction, the Downtown Development Association was allocated funding to help local merchants and businesses thrive. During the renovations, they were a little worried, but Union Square in the downtown footprint actually had a 100 percent retention rate, and they also gained some new businesses during this trying time. Overall, they were very pleased with the effort that they had. Over the past year, downtown businesses had listened to the community voices and increased their store hours and were now trying to allow more evening and weekend foot traffic.

Ms. Amy Ogle advised their goal was to not only retain businesses they have but to continue to fill vacant storefronts with entrepreneurs who are dedicated to the well-crafted vision of our City. They were excited for the future of downtown, but they needed Council's help in being able to continue celebrating these new store openings. As an office of one they lean heavily on their board members and their volunteers. A lot of the things listed on their submitted paperwork couldn't happen without them working together. They call helping one another community. The funding goes a long way to helping the community and will be especially important this year as they handle new construction and the rising operating costs. She thanked the City employees, City Council, the public services departments, Hickory Police Department, the Fire Department, as well as the community and their partners, many of which were present to support them and had been loyal supporters for many years.

Alderman Williams asked how many minority businesses they had in the downtown association, whether it be African-American, Asian or Hispanic. He also asked what their initiatives were that they set going forward and what they were going to do to recruit those minority businesses and include them in their downtown events and festivals in this day and time where all dollars are green. He asked what their plans were.

Mr. Brandon Hedrick commented, speaking as the President, he thought they had been really focused on trying to include everyone. They had their feelers out to the business development group at the City, also to the Chamber, and to the Tourism Bureau as well to make sure that any interest in the downtown area was filtered at least somewhat through them. That way, it gives them the opportunity to try to get in front of anyone, of any race or any stature that wants to participate in downtown, that they find a way to make it possible for them.

Alderman Williams asked how many businesses they had currently.

Mr. Brandon Hedrick did not know.

Ms. Amy Ogle didn't know that she had a percentage of exactly how many minority businesses they had downtown. She could think off hand at least five. They were working diligently, though, to be a part of, on their Business Development Committee's, to work with the Business Development Committee with the City of Hickory to create pathways for young entrepreneurs. For entrepreneurs of all varieties, for entrepreneurs of all walks of life to be able to come to them, and they have an avenue and a path for them to follow. To be able to put in place resources, connections, basic business classes, basic marketing class, the ability to connect with the City and with other programs, including the Main Street Programs to offer things such as Small Business Grants, and rehabilitation grants. They are trying to branch out as much as they can into the community to make it a warm and inviting place for anybody that has an idea that has a dream that wants to start. They want to be open to them, to come to them and build that pathway for them.

Alderman Williams commented as far as their festivals and events they have coming downtown, what were they going to do to make it more welcoming to minorities.

Ms. Amy Ogle commented as far as what her vision would be for that, to be welcoming to minorities, was to just to be a welcoming, open arms, accepting organization. Especially with their events they have a lot of minorities, and cultures that come and participate, and food vendors of all different types, musicians of all different types. When you are dealing in festivals it becomes very exciting because they get to look at all different walks of life and invite all of those people to come down and share their culture with everyone and share it with the community.

Hickory Metro Convention & Visitors Bureau, Mandy Pitts Hildebrand advised the Chair of the Tourism Development Board Bruce Eckard was also present. She also noted that City Manager Warren Wood was on their Board as well as Mark Seaman. She commented there were a lot of tourism partners present as well. She referred to the prior presentations and was excited to hear from the other entities about all the events happening in and around the City. She stressed how important visitors are to the community, because visitors do make a major economic impact. She knew that Council had received a lot of that information in their packet. City of Hickory's partnership dollars help them talk about the City's assets. When they are marketing to the rest of the world, they are focusing with the dollars that the City gives them, on City of Hickory assets that really are a great amenity for all visitors. The money that they ask for today goes strictly to marketing, it was not building or any other operations, it was all pure marketing. She advised she had a PowerPoint presentation that was just presented to the Tourism Development Board last week. Some of the funds that the City gives them would go toward their new destination guide, which they were working on right now for 2020. She referred to the PowerPoint and display a beautiful picture which was taken in Hickory. It was going to have new stories, new photography, everything. It was going to be exciting and would be out in a couple months. They really had been working hard with their new visit Hickory Metro website. She hoped that they would take some time to look at it. The numbers really continued to increase and they were able to track where people were from, i.e. Argentina, they had some people from China, different places all across the world, and especially in our country. They have lots from Atlanta looking our way, Charlotte, Nashville, and Tennessee. They are able to capture a lot of data. They are actually also able to add a lot more photos of what they look like when they are in national publications. She shared some photos of what they look like when they are in national publications. They work closely with Hickory Metro Sports Commission and Mark Seaman and his team to promote sporting events that they are bringing to our community and a lot of those amenities do take place on City fields. She displayed examples. She referred to the PowerPoint and displayed their Sports Planning Guide which was nationwide. They are meeting with people that organize sporting events from across the country. She advised they are really a hot spot for bass fishing, we are the angler capital. That was the next thing after the furniture capital of the world, they were going to be the angler capital. She showed some other photos which were taken at the bike trails. She advised in 2019, in Convention South, they were named one of the cities that had the best music scene pairing with conventions. She referred to an ad and commented "up a creek isn't necessarily a bad thing". She advised it was a shot on Lake Hickory. They continue to partner with a lot of the different groups that come to the convention center that bring visitors whether it was pottery, the quilt program that was there every other year, and that brings a lot of visitors, or the gem and mineral, and the list goes on and on. She showed some more examples.

Ms. Mandy Hildebrand advised that she had promised Council a couple years ago, that in the first couple years of being in this position, they wanted to bring the North Carolina Tourism Conference to Hickory, North Carolina. It had never been here, and it was going to be here next year, and they were super excited about that, partnering with several of the tourism partners in this room tonight to bring that group to Hickory next year. She referred to the PowerPoint and showed an ad that was going to go into the program that they were hosting a luncheon in Asheville next month to talk about our crafted life here and what we have for visitors. Ultimately they hope they become residences that was a possibility as well. A lot of the City's funds goes to these special projects that really talk about the City assets. She asked Council for any questions.

Alderman Wood commented in his other life he was a recruiter and he just used a lot of this material and material from the City of Hickory Marketing Department to get a family from Michigan, who were relocating to Hickory. This was an invaluable part of that process, along with the material from the City of Hickory. It was fantastic.

Ms. Mandy Hildebrand thanked Alderman Wood and commented that the team works really hard and they continue to have a major impact in the State. \$293 million was a conservative number for what visitors spent in the County in 2018. That was a lot of money. She advised that they were ranked 16th in the State of where visitors are. We don't have Atlantic oceans, or an NFL team, so she thought they were doing really well.

Alderman Williams mentioned that he recently had his hair show at the Convention Center. They had done such a wonderful job with the tourism. Everything was set up perfectly. He had a lot of people come from out of town and even those people were saying they wanted to start coming back to Hickory and see the City because of the job that they had done. He commended her for that.

Alderman Seaver thought that the Altenburg Sister City Delegation that was coming in October was interested in how we do tourism and development here too.

Ms. Mandy Hildebrand advised she had spoken to some Egyptians last year that were learning about that and it was a whole different interesting experience.

SALT Block Foundation, Michael Thomas advised this was his fourth year in a row on behalf of the SALT Block Foundation. The mission of the SALT Block Foundation was to pay the costs for the physical structures of the non-governmental organizations that live on the SALT Block. This included the Catawba Science Center, the Hickory Museum of Art, the Western Piedmont Symphony, the Hickory Choral Society and the United Arts Council. In all there were three buildings that they maintain on campus, the Arts and Science Center, the Aquarium and Planetarium building, and the West Wing. It was an expensive proposition. Two of those buildings are very old, and one of them contains an aquarium. There was a lot of updating and maintenance that goes into that. That investment, however, pays dividends. The SALT Block organizations are a major economic and cultural asset to our community, collectively serving more than 300,000 people per year, including students from each and every one of the Hickory Public Schools and most of the County schools that have students in the City of Hickory. If you add on the visitors to the Patrick Beaver Memorial Library, over half a million people annually visit the Block. The SALT Block was a vital asset which helps attract businesses and individuals to Hickory. The center of activity plays a key role in making Hickory an attractive place to live and work for all generations. Since the opening of the Arts and Science Center in 1986 the City had been a wonderful partner in their work at the SALT Block. The City had and continued to help them in many ways, beyond the funding they were requesting tonight. Providing security, grounds maintenance, and the capital replacement funds that are part of their request. The County had also been a wonderful partner for over 30 years, providing much needed annual operating funds. The SALT Block was fortunate to have the support of many generous citizens and businesses in our community who have helped them develop their endowment, from which they also operate the building. The tenant organizations also contribute annually towards maintenance of their space and the common space at the Block. They continue to diligently raise funds to support the Salt Block Foundation. They have a small annual giving campaign and their primary effort was through planned giving. They are happy to say those planned giving efforts were successful, at least in terms of the gifts that they had been proposed, but obviously planned giving takes time to come through to the bottom line, which was a good thing for their contributors. In past years, their Derby Day event had raised awareness and attracted hundreds of visitors to the Block to educate them better about who they are and what their mission was. This coming year they were looking forward to a new format of an event to raise awareness of the Block, which was their upcoming concert on Saturday, March 14th with Liam Bailey and 2 Bird Stone. Good tickets were still available, just go to the website. One of the goals of this was to really further enhance the role of their Drendel Auditorium, as a focal point for activities, musical and otherwise in our community. Some of that had already been highlighted here this evening. Because of the public/private partnership between the City, the County and private donors, the Salt Block Foundation had the necessary funds to keep the lights on, the heat on, and keep the building safe, attractive, in good condition, and in good repair. Ongoing support from the City and matching support from the County was vital to ensure that the SALT Block Foundation and its resident organizations remain strong in the near and the long term. They were pleased to announce that the Salt Block Foundation was currently working through a strategic planning process with their Board and other community stakeholders. They thanked the community, the City and County leaders who had participated in that endeavor for their time and working on it in participating in recent interviews. Their Board of Directors recently met to finalize their new mission, which was to provide a quality cultural destination and vision to create a self-sustaining cultural hub and look forward to releasing a full report on their findings in early summer. This strategic plan would help guide their planning funding and engagement efforts for the next three years. Unexpected expenses arose this past year when refurbishment work needed to repoint the brick on the front and sides of the Arts and Science Center building had to be compressed in time. What was originally identified as a three year project had to be completed sooner this year due to deterioration, so that added a cost of \$96,000 to their capital budget for this year. In addition, they identified brown bats in the wall of the West Wing building and the cost for removing the bats and sealing up that building was going to be over \$16,000. In 2020, they will be updating the security panel and the system for the campus as well as their fire system. It remains likely, as always, that they will need to replace major HVAC units, which was a significant part of their costs each and every year. One of their big challenges was that many years ago they embarked on a capital campaign to replace a lot of HVAC units all at once. The only downside of that was that all of those units are going to wear out at the same time as well. They were trying to plan for that coming up in the

near future. They maintain a library spreadsheet of all the HVAC units and what was going to be needed and when they expect them to run out so they can plan for that capital expense in advance. The bottom line was that the City's investment in the SALT Block was paying off. The City's capital replacement funds were enabling them to keep the three buildings on the SALT Block in good shape and make improvements. He trusted Council had seen the sculpture garden between the Arts and Science Building and the West Wing building. It had received an award for improvement this year and they were very proud of that. It was an ongoing process, but they believe that keeping the SALT Block strong and attractive to hundreds of thousands of our citizens/visitors each year was vital to Hickory. All of them thanked Council for their important ongoing support and they asked for Council's continued to support as in past years. He asked Council for any questions.

United Arts Council of Catawba County, Jamie Treadaway advised he had the privilege of representing the United Arts Council here tonight because he was the President of the Board of Directors. He thanked Council for their past support of the Arts Council and the cultural organizations under its umbrella and then also ask that they continue their commitment of \$1 per capita in arts funding. As a local business person he had seen firsthand of the strength of the cultural organizations. It was a key part of recruitment of new businesses as well as young professionals in the community. The longtime support of the Hickory City Council for the United Arts Council had been crucial in keeping arts, science and history programming at a very high quality level. They believe cultural organizations such as the SALT Block, the Hickory Museum of Art, the Catawba Science Center and it's Planetarium and Aquarium, The Hickory Community Theater, the Western Piedmont Symphony, Hickory Choral Society, Hickory Landmark Society and the Hickory History Center, as well as the United Arts Council, were vital to the quality of life that we all enjoy and share here in our community. In making their decision, he asked Council to please keep in mind the results of the economic impact study they conducted and shared with them. It revealed that \$49,200,000 in economic activity was generated annually in Catawba County by the arts, science and history organizations. An average attendee at cultural events in our area spends \$41.56, beyond the price of admission for food, transportation, childcare or lodging. This was well-above the national average. He also mentioned that the United Arts Council sub-grants the City's funds after matching them very often with State and local grants. For some of their grants they require organizations to have a dollar for dollar match, and in the end, this leads to the minimum of a fourfold investment of the City's dollars back into the community. That was exciting to him. In 2018/2019 their project operating and individual grants totaled just over \$315,000. This year they hope the number will be even higher. He asked Council to consider for 2020/2021 a requests for \$40,925 which was just \$1 per capita. He thanked Council not only for the monetary support, but for their continued message that quality of life and the arts are connected very directly here. He was proud to live here for many reasons, but the amazing arts community was one of them. He and his wife had taken their son to the Smithsonian in Washington, D.C. a few years ago. When they were in there, there was a three hour line to see Sesame Street's One Earth One Sky at the theater. He felt so proud to live in a place where he could say that the United Arts Council had just given a grant the week before, where the Catawba Science, for five years would be licensing that very same program, the One Earth One Sky video in both English and in Spanish. They could go home, leave Washington D.C., leave the Smithsonian, come back to Hickory they could see the very same thing there that people were waiting three hours for at the Smithsonian. He advised they were preparing to break ground on their public art project celebrating the Ridgeview High School Panthers in 1964, The Untouchables. He thanked the City and City staff for supporting this exciting project, which was primarily being funded by a grant from ZC. Smith Reynolds Foundation. He was grateful for the opportunity to thank Council personally and to encourage a continued investment in the United Arts Council and all those they support happening. He asked for any questions.

Alderman Seaver questioned how they counted all the citizens, maybe they could help out with the census.

Ms. Kathy Greathouse advised she used several sources, there were a few different numbers. But the main thing was it was always rising, which was good news.

Western Piedmont Sister Cities Association, Hani Nassar presented a PowerPoint presentation. The reason he wanted to do this for the first time was because the Western Piedmont Sister Cities Association has been going on since 1993 in Hickory. He didn't know how many people knew about it and how many people recognized some of the benefits they have. He wanted to explain to everyone what the Western Piedmont Sister Cities Association was and why he was trying to grow it, because it had been kind of dormant for the last 30 years, and it was time to do something that would be hopefully proven to do. He advised Hickory has a sister city in Altenburg. Altenburg was about 225 miles northeast of Frankfurt. This was in the old German country, East Germany. Altenburg was very similar to Hickory from the land shape, temperature and weather. We are the first region to region partnership. Usually it was city to city, we have region to region, so it was the Western Piedmont, as compared to Hickory. The local governments that started this progress in 1993 were Alexander, Burke, Caldwell and Catawba, quite a

few of them. He noted the entities that were still part of the Western Piedmont Sister Cities Association, (Alexander, Morganton, Taylorsville, and Hickory). His job right now as Chair of this nonprofit Sister City was to grow it and to bring back the communities and/or to develop into businesses and/or individual memberships. The local governments, as well as Hickory, pay \$500 per year to be part of that association and each one appoints two representatives to be on the board. Naturally, those individuals who come wish to have something in the region or in the community as part of that relationship, but unfortunately they only have a few members who participate in those communities. The Western Piedmont Council of Governments provides the services such as budgeting. They do the budgeting, so they don't have any paid individuals on the Boards it was all volunteers. They have had cooperation and engagements between the two organizations over the years. He referred to the PowerPoint and showed a picture from 2016 of groups from Altenburg. Over the years there had been physicians, medical professionals, sports teams, young soccer players, bankers, students, school superintendents, etc. He advised on October 8th through October 13th the Altenburg Land delegation representing the County Commissioners were coming, as well as the Director of the Lindenau Museum, Chamber of Commerce Economic Development, Civic Engagement, and fiber optic/broadband representatives. They had assigned certain groups to individuals to share with them what we have here, for example US Conec would be part of that, and the Museum of Art would be part of that as well as other organizations. That was happening this year. In addition, in September 2020, they were going to have regionally events celebrating the German sister cities around us and in Charlotte. He advised that Charlotte, Gastonia, Mooresville and Hickory have sister cities. There will be four regions that are going to get together in September and have a region to region celebration. He explained the request for the \$610. Basically, the Sister Cities International was an organization that they have to belong to and pay \$610 as membership that would allow them to create those region to region relationships. There was quite a bit of membership that they can recruit from. They can talk to all these sister cities around us to learn from, to grow with, and it also provides added benefits like the directors and officers insurance, networking and so forth. There was a lot of positive to be a member of Sister Cities International and although they do have it in the budget to actually become a member, they would like the City to be involved in making it an official request and give them some input to create this collaboration with our close by sister cities and hopefully grow it into more of a regional relationship. He advised that Alderman Seaver was a member of the Board and he was sure he probably knew more than he did. He had been there for 20 to 30 some years. He asked Council for any questions.

DRAFT

Alderman Seaver added that the Altenburg Sister City sign had grown. He thought that it had been changed out at some time and they were bigger. They were just about as big as the "Welcome to the City of Hickory" sign. He advised they were all over, at all of the entrances into the City.

Mayor Guess thanked all of the presenters. Obviously each and every one of them gave of their time and their talent and Council appreciated that. Council had some work to do with the advice from staff and others. They won't be making any decisions tonight, but they heard the requests and would certainly be taking those under consideration for the next year which was July 1, 2020.

V. Persons Requesting to Be Heard

A. Mr. Barry Sanders, 4132 2nd Street NE, Hickory, Regarding Flooding on Falling Creek

Mr. Barry Sanders thanked Council for allowing him to speak. He thanked City Manager Warren Wood and Public Services Director Kevin Greer for speaking to him earlier today. He explained the reason that he was speaking. He had brought in a video clip of what happened (flooding) on June 9, 2019. He advised it started about 3:30 in the morning. This was actually filmed by a former neighbor of his and showed the results of some of the damages to their property. He advised it was the constant fear of what they might get tonight or maybe tomorrow night. There had been rain on the 6th and the 13th. He advised it had taken his wife and himself, with the help of some of the community and they had gotten concrete slabs or blocks. He advised that Assistant Public Services Director Steve Miller provided them with some concrete to dump on the back of their property, but they had yet to get it moved because of the size. He referred to a photo of himself unloading concrete slabs or blocks into the area that was deeply damaged by the flood. He advised that it was every time it rains, especially on the 6th of this month, and the 13th of this month. He was headed to work and turned around and came back because his walk wife was very disturbed. Every time they get up in the morning, look out the back, come down their steps, and look at their den, laundry room and storage room, all they saw was a blank wall. Compliments of Samaritans Purse, on the 15th of last month and June, they came and stripped the walls out and saved their property from any black mold. He mentioned that he works part-time at Manheim Auto Auction. Ten of their employees came by and helped clean up the debris. Billy Graham, Evangelical Association had two pastors come and prayed with them, neighbors, and a friend of his who is like a brother cleaned up that mess, that basement and den area. He had heard a lot of talk about money, their problem was

they didn't have the money to fix the problem, to fix the bank, to replenish the bank. They had talked to the City Manager today and he provided names of companies, whether they will do a project like that for them, he didn't know. He needs help. That was all that he could say. He thanked Council for their time, as well as City Manager Warren Wood, Public Services Director Kevin Greer and Assistant Public Services Director Steve Miller.

B. Ms. Sheila Sanders, 4132 2nd Street NE, Hickory, Regarding Flooding on Falling Creek

Ms. Sheila Sanders thanked Council for allowing her and Mr. Sanders to speak on behalf of them losing their home, which would eventually be done if the creek bank was not fixed. As Mr. Sanders "Barry" said, they need help. They were senior citizens and would like to be retired. They can't do that. They have to continue working because they have such a financial burden on them right now. Either they need to get out of the house, which they had been told they needed to get out. But to start over with a new mortgage at their age was impossible for them. They felt like they were stuck and they felt like they have a noose around their neck every time it rains. They are up every hour. Why? Because they can't do anything about the creek. They can pull things up from the den and get them back upstairs so they don't have more things ruined. Falling Creek was taking their yard and it would eventually take their home. Being a good resident of Hickory all of her life and her father and mother too, this was her parent's home. She was just very disappointed that they were unable to get any assistance from the City or the State to save their home. They had many blessings through the Samaritans Purse, Manheim, and friends and neighbors. Their neighborhood had been wonderful, and that was one of the reasons they don't want to leave. They love their neighborhood. It was just a good well established neighborhood. If they were unable to sell their home, it will be impossible for them to start over at their ages. She reiterated that they feel stuck and they are scared. And each time it rains they were stressed to their limits. The bank erodes more and more each time it rains. They didn't really realize that that might continue happening after June 9th, but they just saw in February that it does. On February 6th, the creek was coming up so fast that they were sure it was going to come out of the banks and come back into their downstairs. A neighbor and her husband moved all their appliances from the downstairs onto a pickup truck and onto their carport. They had replaced these appliances in 2013, which they got four inches of the creek water, and they replaced them again in 2019 when they got 21 inches. They just could not continue to keep moving them every time it rains and they are scared and then moving them back. They have questions like can some of the water be diverted another way? Can there be better piping to where they don't get so much of the water from the rest of the City? Can they get financial assistance to place more concrete slabs, rock and dirt? At their ages, they had plans to semi-retire and enjoy life and it was hard to do this when they don't have joy in their life anymore. God had always taught her to take care of her brothers and sisters in need and they just don't feel like that was happening here for the residents in Hickory. There was a lot of other things happening and they were good things. Hickory needs good things, but they just don't feel like that the residents are being taken care of. She asked Council to please help them to be able to continue to live in their house. A home was security, was love, was everything to a family, but they know no longer feel this at all. She thanked Council.

C. Mr. Paul Byrd, 4205 2nd Street NE, Hickory, Regarding Flooding on Falling Creek

Mr. Paul Byrd addressed City Council on behalf of the Sanders. He appreciated the opportunity to speak to Council on behalf for these good people. He felt like he was among friends. The only person he had not met was Alderman David Williams. He admired the questions that he asked and the interest that he has. He advised Alderman Williams that he would come by his business and speak with him someday. He advised he was speaking on behalf of their neighbors in the 4100 Block of 2nd Street NE, Sheila and Barry Sanders. They lived in the house that was built by Sheila's father years ago. The last flooding devastated their property and compromised the creek banks that bordered, their home. They have nowhere else to go. They have no options. They stay here and if it floods again that will close this chapter of their lives. He realized that snap decisions cannot be made, but he asked if the City could send engineers to their home and evaluate the problem with the banks and determine if any kind of wall or barrier could be put in place so that these people at least have a chance and do not live the remainder of their lives looking at the weather reports. He and his wife had lived in their home at 4205 2nd Street NE for more than 20 years. Up until the last few years, Falling Creek had not been a problem. Now, for whatever reason, there were massive amounts of runoff that turns a simple creek into a monster. It was like living in a Stephen King novel or something. They have flat land that had gone into marsh, everything was soaked, and they worry about trees that may fall simply from the ground being too wet. This may be climate change. He remembered the drought of 2000-2002. Churches prayed for rain, they did a pretty good job, and they have so much water now. He didn't know if it was from development, or routing water into different areas, but he knew that people needed help. They can't wait on a team of government officials to do massive research, the danger was imminent. These people were on the robes. Sometimes he felt like they live in a California nightmare and an excess of water he was afraid would not go away. It was not only becoming a danger, but it was an eyesore. When they moved there Falling Creek was Falling Creek. Now it

was the monster of Falling Creek. These people, they can't do anymore. He was begging Council to try to do something to shore up that bank because this was their life. They have nowhere to go. He would beg Council to give consideration, at least of the evaluation of this problem, and that he hopes that this couple's home could be saved. He asked for any questions or comments from Council.

D. Mr. Kelly Mosteller, 142 Joe Teague Road, Hickory, Regarding Flooding on Falling Creek

Mr. Kelly Mosteller addressed City Council on behalf of Barry and Sheila Sanders who he had known for 40 years. He thanked Council for listening to them. He asked what if every time it rained they had to miss work or call in, or cancel a Council meeting because your home was going to flood. What if that happened every time it rained? That was what they were going through. The City tells them it was not the City's responsibility, it was the Sander's responsibility. He understood that their house was in a floodplain, but it seemed funny that for more than 40 years this had not been a problem. It had only been the last year and a half or so. They had lost 20 feet of their backyard into the creek. He advised the creek was within two foot of the back corner of their house. It used to be the creek in the summer was ankle deep. When it rains it was six foot deep. That was how much water was coming down. The City did clean out some of the debris above the house, but that doesn't help if the creek was blocked below the house because that was where it backed up and washes out. He thought the problem was building too many cement parking lots and condos upstream and not taking into account how much water runoff was dumped into Falling Creek. Falling Creek goes all the way to Lenoir-Rhyne College. Why can't the City put rock all along the creek around the curb past their house just like at the new bridge that they just built right above their house over the creek. This was where the water does the most damage. He understood progress, but when the City can't take care of their own people, is it really a city. He thought that the problem was when the City does progress, it doesn't look how this can affect people. It was all about the money. Maybe they should use some of the Riverwalk money or other money to do what was right. Maybe the creek needs piped in. He guessed the Sanders' tax money was just used for certain people. If this was the Sanders' responsibility, even though they can't, he would recommend them to fill in the creek on their property and let the City worry about their water. After all that was what the City told them. It was their land they deal with it. He was just upset seeing friends lose their home. He asked how they would feel. Does anyone care? He thanked Council for listening to his frustration.

E. Mr. John Lundeen, 4215 2nd Street NE, Hickory, Regarding Flooding on Falling Creek

Mr. John Lundeen addressed Council advising that he owned two properties along Falling Creek. He was present to ask the City to take some positive action to reduce the storm water damage, and in particular to increase the capacity of the stream. He advised he would speak to three points tonight. The first being debris removal. Debris removal should be a City service. The City bears responsibility because it was allowed development along the creeks watershed. The last few years they had seen Publix's, the Hawk's Landing apartment complex, Falling Creek expansion, Habitat housing, and all of that contributes to the runoff going into Falling Creek. Realizing that the debris doesn't originate at the property owners location, it came from upstream. The property owner doesn't have an obligation to remove it. So what happens? It results in damage to the adjoining neighbors as the water backs up. That doesn't make sense to him. He considered debris removal like police and fire protection, a City service provided to protect their property. He advised he had submitted some pictures of some of the debris piles. His second point was investigations were necessary to determine the root cause of the flooding. The storm water containment features upstream in compliance and effective. He asked if anybody from the City had walked the stretch from the new bridge down to the Water Treatment Plant to see what was there. He had, and could tell Council the stream bed was becoming smaller in both width and depth due to silting. Debris piles are all over clogging that channel. There was no way when there was a rain event that water was going down because it was impeded. Evaluations necessary to determine what could be done, at least to seek some potential solutions. He knew that NC State had a stream restoration team, and he suspected there were other State and Federal advisory resources available. His third point was there monies available to fund these initiatives. His research had found North Carolina Water Resource Development grants for stream restoration and the Clean Water Management Trust Fund funds stream restoration. There was probably more resources available if there would be an initiative to look for them. He knew that the properties along Falling Creek were in a flood zone and he accepted that, but that should not be a reason for inaction and accepting that property damage was inevitable. He believed with proper attention to the storm water, that the storm water damage could be greatly reduced if not eliminated. He thanked Council for their time and asked them for any questions.

Mayor Guess asked if anyone else present in the audience wished to be heard. No one else appeared.

VI. Approval of Minutes

A. Regular Meeting of February 4, 2020

Alderman Patton moved, seconded by Alderman Williams that the Minutes of February 4, 2020 be approved. The motion carried unanimously.

VII. Reaffirmation and Ratification of Second Readings. Votes recorded on first reading will be reaffirmed and ratified on second reading unless Council Members change their votes and so indicate on second reading.

Alderman Patton moved, seconded by Alderman Williams that the following be reaffirmed and ratified on second reading. The motion carried unanimously.

A. Budget Revision Number 15. (First Reading Vote: Unanimous)

B. Consideration of Amending Chapter 6 Buildings Section 6-3 Fire Limits of the Hickory City Code of Ordinance. (First Reading Vote: Unanimous)

VIII. Consent Agenda: All items below are considered to be routine by the City Council and will be enacted by one motion. There will be no separate discussion of these items unless a Council Member so requests. In which event, the item will be removed from the Consent Agenda and considered under Item IX.

Mayor Guess moved, seconded by Alderman Patton approval of the Consent Agenda. The motion carried unanimously.

A. Approved the 2020 Loan Agreement with the National Museum of the United States Air Force under their Static Display Program for the Loan of Aircraft.

Staff requests City Council's approval of the 2020 Loan Agreement with the National Museum of the United States Air Force under their Static Display Program for the loan of aircraft to the City of Hickory. The City has taken part in the US Air Force's Static Display Program for many years whereby certain aircraft are on loan to the City for display by the Hickory Aviation Museum. In return, the Hickory Aviation Museum agrees to maintain and ensure the preservation of said aircraft in good condition while furnishing the Air Force with photos and for the aircraft to remain prepared for expedition and periodic inspection. There are no City budgetary requirements under this agreement. The Hickory Regional Airport currently has on loan two aircraft that fall under this agreement. They are an F-105B and T-33A. Staff recommends City Council's approval of said Loan Agreement for 2020.

B. Approved a Resolution for the Adoption of the 2020 Unifour Regional Hazard Mitigation Plan.

Hazard mitigation plans are required by FEMA to be updated every five years in order for the jurisdictions covered under them to remain eligible for federal mitigation and public assistance funding. To simplify and enhance planning efforts for the jurisdictions in the Unifour Region, Alexander, Burke, Caldwell, and Catawba counties made the decision to move forward with the creation of the Unifour Regional Hazard Mitigation Plan. This regional approach allows resources to be shared amongst the participating jurisdictions and eases the administrative duties of all of the participants by combining the four existing county level plans, and the requirements for the five-year plan update, into one coordinated regional planning process. AECOM was contracted by the State to update the current Unifour Regional Hazard Mitigation Plan. The local committee involved with this initiative was informed the North Carolina Department of Emergency Management approved the draft plan on January 21, 2020. The next step is to have the plan formally adopted by each elected body in the four county region. In the most recent version of the hazard mitigation plan, the City of Hickory provided twenty mitigation strategies it would commit to undertake. The plan, in its entirety, is in excess of 1,200 pages of data, analysis, and other information from all local governments in the four county area. The complete 2020 Unifour Regional Hazard Mitigation Plan can be found at <https://gis.aecomonline.net/IRISK2/NCHMP.aspx?region=32>. The activities related to the mitigation of hazards involve the activities of the City's Police, Fire and Public Services Departments; and involve preparation for emergencies, and the continual upgrade and improvement of public infrastructure. The strategies include approximate cost estimates for the identified activities, but those are not new or additional costs the City is to incur. The costs shown are already part of the City's budget, but have been listed to demonstrate the City's effort in emergency preparedness and mitigation. Staff recommends approval of a Resolution for the Adoption of the 2020 Unifour Regional Hazard Mitigation Plan.

RESOLUTION NO. 20-07
RESOLUTION OF ADOPTION
2020 UNIFOUR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the City of Hickory are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the city are particularly vulnerable to flooding, high winds, and severe thunderstorms; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Hickory has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Hickory City Council to fulfill this obligation in order that the City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City;

NOW, therefore, be it resolved that the Hickory City Council hereby:

1. Adopts the 2020 Unifour Regional Hazard Mitigation Plan; and
2. Vests the Office or Business Development with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Office of Business Development to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Hickory City Council for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

SECTION 3. This Resolution shall become effective immediately upon adoption.

- C. Approved on First Reading Amendment to the Traffic Ordinance to Reduce the Posted Speed Limit.

Staff requests Council's approval of a Traffic Ordinance amendment to reduce the posted speed limit along 17th Avenue NW from North Center Street to 4th Street NW, 4th Street NW from 16th Avenue NW to 17th Avenue NW, 2nd Street NW from 16th Avenue NW to 17th Avenue NW, 17th Avenue Lane NW, and 2nd Street Drive NW from 35 mph to 25 mph. City Council implemented a Neighborhood Traffic Calming Program that enables citizens to request measures to improve traffic safety in the area where they own property. Citizens are required to submit an application to request measures and provide a reason for the request. Then, the City performs analysis to determine what, if any, measures are warranted. Citizens requesting traffic calming measures are required to complete and submit a petition with 75 percent of properties in favor of implementation for the request to move forward. Traffic Division staff received the completed petition from property owners

along: 17th Avenue NW from North Center Street to 4th Street NW, 4th Street NW from 16th Avenue NW to 17th Avenue NW, 2nd Street NW from 16th Avenue NW to 17th Avenue NW, 17th Avenue Lane NW, and 2nd Street Drive NW with regards to the Neighborhood Traffic Calming Program and have found the property owners to be in compliance with the guidelines. The petition does qualify for a speed limit reduction on the roadways listed. Thirty-three properties were included in the petition and twenty-seven properties signed in favor of implementation. This represents 82 percent approval, which meets the requirement. The necessary sign modifications along the roadway can be performed as a normal part of the Traffic Division's signs/markings shop operations. Staff recommends Council's approval of a Traffic Ordinance amendment to reduce the posted speed limit along 17th Avenue NW from North Center Street to 4th Street NW, 4th Street NW from 16th Avenue NW to 17th Avenue NW, 2nd Street NW from 16th Avenue NW to 17th Avenue NW, 17th Avenue Lane NW, and 2nd Street Drive NW from 35 mph to 25 mph.

ORDINANCE NO. 20-12
AN ORDINANCE OF THE HICKORY CITY COUNCIL
AMENDING THE TRAFFIC ORDINANCE AUTHORIZED IN THE
HICKORY CODE OF ORDINANCES – ARTICLE III, SECTION 18-81

WHEREAS, Article III of the City of Hickory Code of Ordinances be and is hereby amended through the modification of the official maps authorized therein as follows, to wit:

Amend the Traffic Ordinance by reducing the speed limit along 17th Avenue NW from North Center Street to 4th Street NW, 4th Street NW from 16th Avenue NW to 17th Avenue NW, 2nd Street NW from 16th Avenue NW to 17th Avenue NW, 17th Avenue Lane NW, and 2nd Street Drive NW to 25 mph.

All ordinances or provisions of the Hickory City Code of Ordinances which are not in conformance with the provisions of the Amendment occurring herein are repealed as of the effective date of this Ordinance.

This Ordinance shall become effective immediately upon adoption.

- D. Approved the Citizens' Advisory Committee Recommendations for Assistance through the City of Hickory's Housing Programs.

The following request was considered by the Citizens' Advisory Committee at their regular meeting on February 6, 2020.

- Eula Ruff, 226 8th Avenue SE, Hickory, was recommended for approval of a Housing Rehabilitation Loan. The Citizens' Advisory Committee recommends approval for assistance not to exceed \$25,000 for repairs to her house. Assistance would be in the form of a zero percent interest deferred loan.

Funds are budgeted for this item through the City of Hickory's former Housing Rehabilitation Program income received in FY 2019 and/or program income received through the City of Hickory's Community Development Block Grant Program.

The following applicant is being recommended for approval for assistance under the City of Hickory's 2019 Urgent Repair Program. This program provides qualified low income citizens with assistance for emergency-related repairs not to exceed \$10,000.

- DeLisa Reid, 545 7th Street SE, Hickory-up to \$6,569.

The Citizens' Advisory Committee recommends approval of the aforementioned requests for assistance through the City of Hickory's housing assistance programs.

- E. Approved the Issuance of a Pyrotechnic Display Permit to Hickory Crawdads for 2020.

Douglas Locascio, General Manager of the Hickory Crawdads, has submitted a request to obtain permission to conduct public fireworks display(s) on the following dates: April 17, 2020, May 1, 2020, May 15, 2020, May 25, 2020, June 5, 2020, June 6, 2020, June 19, 2020, July 3, 2020, July 10, 2020, July 17, 2020, July 31, 2020, August 7, 2020, August 21, 2020, and September 4, 2020. The following would be rain dates: April 18, 2020, May 2, 2020, May 16, 2020, June 20, 2020, July 18, 2020, August 1, 2020, August 8, 2020, August 22, 2020, and September 5, 2020. The North Carolina Fire Code requires an operational permit for the use and handling of pyrotechnic special effects material. The Hickory Fire Department Fire & Life Safety Division shall review all required documentation for the event, including Alcohol Tobacco and Firearm's (ATF) License, Operator and Assistant Operators Permits from North Carolina Office of State Fire Marshal (NCOSFM), Site Plan, and the one million dollar liability insurance policy. The Fire & Life Safety Division will also inspect the pyrotechnics display area before the event to ensure compliance with NCOSFM Guidelines, National Fire Protection Association (NFPA) NFPA 1123 Code for

Fireworks Display, and NFPA 1126 Use of Pyrotechnics before a Proximate Audience (if applicable). Staff recommends approval of the above pyrotechnics displays.

F. Approved on First Reading Budget Revision No. 16.

ORDINANCE NO. 20-13
BUDGET REVISION NUMBER 16

BE IT ORDAINED by the Governing Board of the City of Hickory that, pursuant to N.C. General Statutes 159.15 and 159.13.2, the following revision be made to the annual budget ordinance for the fiscal year ending June 30, 2020 and for the duration of the Project Ordinances noted herein.

SECTION 1. To amend the General Fund within the FY 2019-20 Budget Ordinance, the expenditures are to be changed as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Culture and Recreation	2,250	-
TOTAL	2,250	-

provide funding for the above, the General Fund revenues will be amended as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Miscellaneous Revenues	2,250	-
TOTAL	2,250	-

SECTION 2. To amend the Storm water Fund within the FY 2019-20 Budget Ordinance, the expenditures are to be changed as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Environmental Protection	64,000	-
TOTAL	64,000	-

To provide funding for the above, the Storm water revenues will be amended as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Other Financing Sources	64,000	-
TOTAL	64,000	-

SECTION 3. To amend the Consortium Home Program Fund, the expenditures shall be changed as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Economic and Community Development	-	5,000
Other Financing Uses	5,000	-
TOTAL	5,000	5,000

SECTION 4. To amend the NC Housing Finance Agency Fund within the FY 2019-20 Budget Ordinance, the expenditures are to be changed as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Economic and Community Development	5,000	-
TOTAL	5,000	-

To provide funding for the above, the Storm water revenues will be amended as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Other Financing Sources	5,000	-
TOTAL		

SECTION 5. To amend the Trivium Corporate Center Capital Project Ordinance (#B1B001), the expenditures are to be changed as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
General Capital Projects	352,334	-
TOTAL	352,334	-

To provide funding for the above, the Project revenues will be amended as follows:

FUNCTIONAL AREA	INCREASE	DECREASE
Miscellaneous Revenues	352,334	-
TOTAL	352,334	-

SECTION 6. Copies of the budget revision shall be furnished to the Clerk of the Governing Board, and to the City Manager (Budget Officer) and the Finance Office for their direction.

IX. Items Removed from Consent Agenda

X. Informational Item

XI. New Business:

A. Public Hearings

B. Departmental Reports

1. Presentation by Scott Mitchell for Architectural/Engineering Services Related to Additions and Upgrades at the Hickory Metro Convention Center.

Staff requests Council's acceptance of a proposal for professional services with Scott Mitchell Design Architects in the amount of \$677,500 for architectural/engineering services related to additions and upgrades at the Hickory Metro Convention Center. The Hickory Metro Convention Center Board commissioned an evaluation of the current and future needs of the Convention Center to maintain the attraction of trade shows and conventions. The staff has recommended, and the Board has agreed, that an addition of approximately 15,000 square feet and updates to the current facility are necessary to continue hosting modern conventions. City of Hickory and Convention Bureau staff developed an RFQ for architect/engineer services to complete this project. Scott Mitchell Design Architects was selected previously from four submittals to be the most qualified firm. This qualifications package included this element of work and due to the successful completion of the previous phase the Board has selected the same team to move forward with design plans. The fees for this project were negotiated by City staff and meet market guidelines. The funding for this operation is collected by Hickory in the form of an occupancy tax that is collected by hotel stays. The Tourism and Development Authority Board and the City will enter into a funding agreement to ensure the City gets reimbursed for all expenses. Staff recommends Council's acceptance of the proposal for professional services with Scott Mitchell Design Architects in the amount of \$677,500 for architectural/engineering services related to additions and upgrades at the Hickory Metro Convention Center.

City Manager Warren Wood explained the departmental report was a presentation by Scott Mitchell for architectural engineering services related to additions and upgrades of Hickory Metro Convention Center. He shared some background with Council. The City owns the Hickory Metro Convention Center. The City contracts with the Tourism Development Authority to operate, which Council had heard in the previous presentation tonight. Those funds that they utilize to operate that facility come from what was called the hotel/motel occupancy tax which was six percent on everyone that stays at our hotels as well as some event revenues that they receive. He asked Council for action on this item at the end of the presentation. The funds to cover the expense related to the design would come from the TDA, the Hickory Conover Tourism Development Authority. Then ultimately the fund for the proposed expansion and renovation would also come from the TDA but in that the City owns the facility and the money will run through the City's account. One of the questions that had come up was the costs of the design services. The estimated expense of this project was between \$8 and \$10 million dollars for an expansion and renovation, and the general rule of thumb for design services related to that would be between eight and ten percent. In addition to the design, Mr. Mitchell would also be doing construction management. When you do the math on that, this was well within the range of being more than reasonable. He had asked Mr. Mitchell to come do a presentation on the project itself and go over some of the details, and entertain any questions that Council might have.

Chair of the Tourism Development Board Bruce Eckard reiterated what City Manager Warren Wood said. The work that Scott Mitchell was going to be doing on this project, they were going to have to do this expansion at the same time that they were bringing visitors to Hickory and to Catawba County. They may have a handful of days in 2020 that aren't being used. They were already scheduling events for 2021, 2022, even 2023. What Mr. Mitchell was going to have to do was manage this project, and it was not going to be a six months or a year build out, it was going to take a while to do it. He reiterated as City Manager Warren Wood said, the TDA funds are available and they could write a check to Mr. Mitchell today if they had to. Pay him and he would be done. As the elected officials knew,

their job was never done they work 24/7. He was signing checks over here. There was a check going to the City of Hickory for the parking deck monthly payment. The building itself, he was proud to tell Council, it was paid for. The TDA/Hickory does not owe anything on the building. The only thing that was left owing was on the parking deck, so the funds would be available to make these payments. He asked Mr. Mitchell to the podium to explain how he was going to be doing it.

Mr. Scott Mitchell presented a PowerPoint presentation. He advised it was an exciting and a complex project. He explained to Council what had been approved on the plan. He referred to the PowerPoint and showed a sketch of the existing facility as it stands now. He pointed out Interstate 40 and the parking deck at the lower part of the page, and west or the right was the mass of hotels that continues to grow. The original facility was built in 1997 and contained the exhibit halls to the left. The meeting rooms on the right were added in 2004. Hardly anything had been done to the original facility or the additions. The study that was done to show what needed to happen to the convention center concluded that it needed \$18 to \$20 million dollars' worth of work to bring it up to today's standards. A lot of what they were doing was upgrading toilets that had plastic laminate countertops, china lavatories, and it needed a total upgrade to meet the competition that convention centers were hitting. They were going to upgrade all of the audio visual systems, security systems, fire alarm systems, and sprinkler systems. It was much more complex than just a minor addition. He referred to the PowerPoint and pointed out the addition that was put in 2004 which left no place to expand. It didn't anticipate the further growth of the facility, which was great. It was doing a fantastic job. The fact that they need more space was a positive sign. He explained the additions that they were doing were at multiple places. He pointed out the original building, and the 2004 addition. Currently, the way it was configured to create smaller meeting rooms, it configured a corridor by using movable walls that move away from one side of the building and are stored in a location about 280 feet away. Those systems have not lasted and they were worn out and needed to be replaced. That alone was about a \$700 to a million dollar line item in the budget. They had come up with some innovative ideas and they were going to reconfigure those with a corridor that runs the short length of the building, which would give them five meeting spaces that they can configure and shorten all the distances from moving the panels. It also created usable space which was what just storage of the wall panels was previously. They were going to increase the storage capacity, create a green room for presentations and allow presenters to get backstage, have a bathroom/dressing room, which was not a part of the facility now. They were going to upgrade all the bathrooms that were existing. To create a space to put the addition, they were actually relocating the Economic Development Corporation (EDC) offices from their location to an addition they were putting on the north side of the building. They would actually get windows in those offices now. They were also completely tearing out the existing bathrooms which were in this location to make the exhibit hall one clean open area. They were recreating those on the west side of the building, which would give them a pre-function corridor to get better access to each of those exhibit halls and four new exhibit rooms that would be on the west side. There was a part of the study that said the existing convention center was dark and had no windows. This allows them to get some windows in the new meeting rooms, plus a glass enclosed business lounge for vending and meetings before the exhibits. It makes it a little more upscale, a little more in keeping with what the competition has. They were creating a little iconic exhibit hall where the north entrance was now just to lend some height to the existing building. Right now it was lost between all of the new hotels. He discussed some of the details on each individual space. He referred to the PowerPoint presentation and pointed out the little traffic circle, the parking back and the location for the addition of offices and the addition for the exhibit rooms on the west side, a glass enclosed business lounge in the new entry tower in the front. He noted that it was not a clean cut addition in one space, and Mr. Bruce Eckard said, this was probably a two and a half to a three year project. The TDA was excited about it and was excited about being involved. He asked Council for any questions.

Alderman Seaver asked if it was going to reduce the parking.

Mr. Scott Mitchell responded it does. That west addition takes 50 parking spaces, which the parking deck that was done two to three years ago, was part of the reason for doing that parking deck was to get ready for the loss of any addition. With the pottery show or gun show, something that fills the entire facility, they were going to have to rely on these hotels next door and shuttle people in. But the only other place the convention center could grow was west or south. In this addition, they had anticipated that, so they now have a corridor that opens to the south side and a corridor opens to the west side, which does two things, it gives you two places to expand and the parking that was there was closer to the entrances.

Instead of everyone having to walk all the way around to the front they could enter at the other two entrances. People should scatter a whole lot easier.

Alderman Zagaroli asked if local contractors were allowed to bid on this program.

Mr. Scott Mitchell responded that it would be a public opening. It was not just him doing this they have engineering firms, structural engineer, mechanical engineer, electrical, and an associate architect to help and they were all located in Hickory. Everybody was local. They hope that a local contractor would get it, but once it was a public bid, they have to go with the low bidder.

Alderman Zagaroli asked if all of those were included in that amount.

Mr. Scott Mitchell confirmed they were. It's all one big team.

Mr. Bruce Eckard referred to Alderman Seaver's questions and advised there would be another hotel that was going to be built. The TDA has a cross agreement with the hotels that they can use their parking when they run out of parking. They may lose a few on their piece, but there will be plenty of parking.

Ms. Mandy Hildebrand advised they have a parking lot at the top of the hill behind CarMax which was approximately 100 spaces that was used maybe twice a year.

Mr. Eckard commented one of the reasons and maybe the main reason that all this was being done was because their biggest customer over the years had been MDI and they had come to them in the past and told them they may go to Charleston, or they may go to Charlotte because they have a bigger place. They told Ms. Hildebrand that they need 80,000 feet. They can't give them 80,000 feet in one, but they can give it to them in the two that they are getting now. They are keeping them as best as they can. A political issue for Council. When they see MDI people they need to stay in Hickory.

Alderman Patton moved, seconded by Alderman Seaver approval of the professional services agreement in the amount of \$677,500 with Scott Mitchell Design Architect. The motion carried unanimously.

2. Appointments to Boards and Commissions

Mayor Guess asked for appointments to Boards and Commissions.

COMMUNITY APPEARANCE COMMISSION

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
At-Large (Outside City but within HRP) (Council Appoints) VACANT

COMMUNITY RELATIONS COUNCIL

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
Other Minority (Council Appoints) VACANT
Other Minority (Council Appoints) VACANT
Other Minority (Council Appoints) VACANT
Other Minority (Council Appoints) VACANT
Differently-Abled and is African-American or Other Minority (Council Appoints) VACANT

HICKORY REGIONAL PLANNING COMMISSION

(Terms Expiring 6-30; 3-Year Terms With Unlimited Appointments)
(Appointed by City Council)
Brookford (Mayor Appoints with Recommendation from Brookford) VACANT

LIBRARY ADVISORY BOARD

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
Ward 3 (Seaver Appoints) VACANT

PARKS AND RECREATION COMMISSION

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
Ward 4 (Alderman Williams Appoints) VACANT
(Randall Williams No Longer Eligible to Serve)

Alderman Wood nominated Susan Bisulca as Ward 1 Representative on the Parks and Recreation Commission. (Note: Ryan Carroll moved out of Ward 1 and resigned 2-18-2020).

PUBLIC ART COMMISSION

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
Ward 4 (Alderman Williams Appoints) VACANT

(Randall Williams No Longer Eligible to Serve)

PUBLIC HOUSING AUTHORITY

(Terms Expiring 6-30; 5-Year Terms) (Appointed by the Mayor)
Position 3 (Mayor Appoints) (Matthew Fallaw Resigned 11-6-19) VACANT

RECYCLING ADVISORY BOARD

(Terms Expiring 6-30; 3-Year Terms) (Appointed by City Council)
At-Large (Council Appoints) VACANT
At-Large (Council Appoints) VACANT

UNIVERSITY CITY COMMISSION

(Terms Expiring 6-30; 2-Year Terms) (Appointed by City Council)
At-Large (not including ETJ) (Council Appoints)
(Matthew Maulding Resigned 11-9-2019) VACANT
At-Large (not including ETJ) (Council Appoints)
(Rob Taylor Resigned 11-18-2019) VACANT

YOUTH COUNCIL

(Terms Expiring 6-30; 1-Year Terms) (Appointed by City Council)
Hickory Career Arts Magnet VACANT
At-Large VACANT

Alderman Seaver moved, seconded by Alderwoman Williams approval of the above nomination. The motion carried unanimously.

C. Presentation of Petitions and Requests

XII. Matters Not on Agenda (requires majority vote of Council to consider)

XIII. General Comments by Members of Council, City Manager or City Attorney of a Non-Business Nature

City Manager Warren Wood commented tonight they heard an emotional story from Mr. and Mrs. Sanders. He and Public Services Director Kevin Greer met with them this afternoon for quite a while and went over quite a bit of information. He commented that everybody was moved by that, and he had to be the heartless bureaucrat and try to explain. That house was built in the floodplain in 1967. He thought that it was annexed into the City in the 90s. You wouldn't be allowed to build that home there today. It had been in the floodplain for quite a while and they are experiencing major erosion. We have had significant storms in the last ten years or so and it has eaten away at that. The City's policy and practice had been not to go on private property to address these issues and leave it as private property owner's responsibility. That was the struggle with this. The example of the one time they veered from that was the Buffalo's scenario and they all know that ended up costing the City millions of dollars in the end and they didn't head down the path to pay the money that they paid, but they did pay for it. That was the challenge with this, and it was ultimately a public policy issue. The City does have a storm water program, and there are State and Federal guidelines that they have to abide by, and they do. They do not have an aggressive approach to go on private property because of the scope and scale of what that could look like across the City. That was the struggle with this. They had removed some debris around the bridge to protect infrastructure of both the bridge and the sewer line. They do get involved when they are protecting the City's assets. That was the challenge related to that. That had been the City's policy and practice in terms of not going on private property to address these issues.

Alderwoman Patton commented that it was in a floodplain and Council had a map showing it was in the 500 year and they were right there. She asked if they did not have flood insurance that would help mitigate some of this cost.

City Manager Warren Wood advised they indicated that they couldn't afford it because of the costs related to living in a floodplain.

Alderwoman Williams commented they indicated that in Mr. Wood's discussions he gave them some suggestions or referrals.

City Manager Warren Wood advised there were some contractors that were of the size that would tackle a job like this. One of the things that the City does, was we have large slabs of concrete from sidewalk rehabilitation projects that we have stored at the yard, and we don't need all that, so when citizens come forward and want some of that they give it to them. He thought they sign a waiver related to that. That was something that they had done and would do that for anybody, but they don't place it in the creek.

Alderman Wood asked if the private property lines stretched or covered Falling Creek, all the area that Falling Creek encompassed.

City Manager Warren Wood advised all of Falling Creek was owned by multiple owners. If you are on Falling Creek, you probably own a piece of Falling Creek and the City of Hickory owns a piece of Falling Creek at the Waste Water Treatment Plant, the northeast plant. In the map Council could see there was a number of properties that were in the floodplain, but not very many structures, which was the difference here, there was a structure versus somebody's backyard.

Mayor Guess asked for any other comments related to Falling Creek.

- XIV. Closed Session Per NC General Statutes 143-318.11(a)(1)(4) to consult with the attorneys regarding the following: (Action on these items, if any, will occur in Open Session)

Mayor Guess moved that Council go into closed session to consult with the attorneys on the items listed below, seconded by Alderwoman Patton. The motion carried unanimously.

- 1. Approval of Closed Session Minutes of December 3, 2019 and February 4, 2020 - NCGS §143-318.11(a)(1)
- 2. Discussion of Potential Economic Development - NC General Statute 143-318.11(a)(4)

Council convened to closed session at approximately 8:47 p.m.

Council reconvened to open session at approximately 9:03 p.m.

Mayor Guess moved, seconded by Alderwoman Patton approval of an Authorizing Resolution the Rural Economic Development Division North Carolina Department of Commerce Building Reuse Program Project "Brick" Building Reuse Application. The motion carried unanimously.

RESOLUTION NO. 20-08
City of Hickory Authorizing Resolution the Rural Economic Development Division
North Carolina Department of Commerce Building Reuse Program Project "Brick"
Building Reuse Application

WHEREAS, the North Carolina General Assembly authorized in 2013 funds to the North Carolina Department of Commerce Rural Economic Development Division to stimulate economic development and job creation. A portion of the funding authorized the making of grants to aid eligible units of government to stimulate the creation of jobs through the expansion and renovation of buildings currently in use that will spur economic activity; and

WHEREAS, The City of Hickory desires to assist through grant funding the economic renovation of a former manufacturing building located in Hickory; and

WHEREAS, The City of Hickory intends to request from NC Department of Commerce Rural Economic Development Division grant assistance for the project from the Building Reuse Program for the "up-fitting" and renovation of the facility;

NOW THEREFORE BE IT RESOLVED, BY THE HICKORY CITY COUNCIL:

That the City of Hickory will provide a minimum 5% match for an estimated \$175,000 grant request, if approved for a grant.

That Warren Wood, City Manager, and successors so titled, is hereby authorized to execute and file an application on behalf of the City of Hickory with The NC Department of Commerce Rural Economic Development Division for a grant to assist in the pre-development of the project described above.

That Warren Wood, City Manager, and successors so titled, is hereby authorized and directed to furnish such information as The NC Department of Commerce Rural Economic Development Division may request in connection with such application or the project; to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.

That the City of Hickory has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to the grants pertaining thereto.

- XV. There being no further business, the meeting adjourned at 9:03 p.m.

Mayor

City Clerk

RESOLUTION OF ADOPTION

CATAWBA COUNTY HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Catawba County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, winter storms, hurricanes and tropical storms, severe thunderstorms and tornadoes, wildfires, and earthquakes; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Catawba County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Catawba County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

WHEREAS, the Town of Long View actively participated in the planning and update process of the Catawba County Hazard Mitigation Plan and has fulfilled all the requirements pertaining to jurisdictions participating in a multijurisdictional plan as established by FEMA;

NOW, therefore, be it resolved that the Board of Aldermen of the Town of Long View hereby:

1. Adopts the Catawba County Hazard Mitigation Plan; and
2. Vests the Planning Department with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Planning Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Aldermen of the Town of Long View for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, February 10, 2020

By: Marla G. Thompson
Marla Thompson, Mayor

Randall Mays
Randall Mays, Alderman

Gary Lingerfelt
Gary Lingerfelt, Alderman

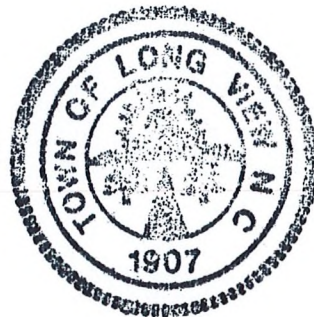
Thurman VanHorn
Thurman VanHorn, Alderman

David Elder
David Elder, Alderman

Dallas Tester
Dallas Tester, Alderman

Certified by: Stephanie C. Watson
Stephanie Watson, Town Clerk, CMC

SEAL:



Date: 2/10/2020

RESOLUTION NO. 2020-4

ADOPTION OF UNIFOUR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Catawba are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, tornadoes, winter storms, dam failures and geological hazards such as sink holes and earthquakes; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Catawba has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

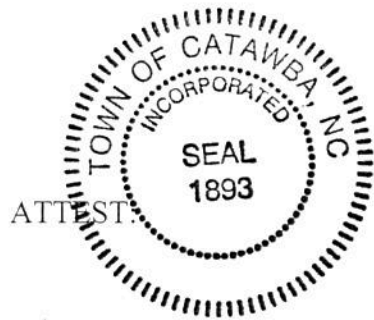
WHEREAS, it is the intent of the Catawba Town Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Catawba Town Council hereby:

1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests the Catawba Town Manager with the responsibility, authority, and the means to:
 - a. Inform all concerned parties of this action.

- b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Catawba Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to Catawba Town Council for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 2nd day of March, 2020.



Donald Robinson, Mayor
Catawba Town Council

Kathy W. Johnson, Clerk

City of Claremont
North Carolina
Resolution 03-20

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the City of Claremont are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, etc.; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 - -- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Claremont has, in conjunction with other local units in the Unifour Region, performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Claremont City Council to fulfill this obligation in order that the City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City;

NOW, therefore, be it resolved that the Claremont City Council:

1. Adopts the Hazard Mitigation Plan – Unifour Regional Plan; and

2. Vests the Claremont City Manager with the responsibility, authority, and the means to:

- (a) Inform all concerned parties of this action.
- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Claremont City Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Claremont City Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this 2nd day of March 2020

By: Shawn R. Brown, Mayor

Shawn R Brown

Attested:

Wendy L. Helms
Wendy L. Helms, City Clerk



**TOWN OF LONG VIEW
BOARD OF ALDERMEN
MEETING MINUTES
FEBRUARY 10, 2020**

The Town of Long View Board of Aldermen met in the Council Chambers of Long View Town Hall on Monday, February 10, 2020 at 6:30 p.m.

BOARD MEMBERS PRESENT: The following members of the Board were present: Mayor Marla Thompson, Mayor Pro Tempore/ Alderman Randall Mays, Alderman David Elder, Alderman Gary Lingerfelt, Alderman Dallas Tester, and Alderman Thurman VanHorn.

STAFF MEMBERS PRESENT: The following members of staff were present: Town Administrator David Draughn, Town Clerk Stephanie Watson, Town Attorney Jimmy Summerlin, Jr., Finance Director James Cozart, Town Planner Charles Mullis, Public Works Director Chris Eckard, Police Chief T.J. Bates, and Fire Chief James Brinkley

OTHERS PRESENT: Billy Rice and Brittany Higgins were present.

MEETING CALLED TO ORDER: Mayor Marla Thompson called the meeting to order and Alderman Thurman VanHorn gave the invocation.

APPROVAL OF MINUTES: Motion was made by Alderman Thurman VanHorn, seconded by Alderman David Elder to approve the January 13, 2020 Regular Meeting Minutes. The vote to approve was unanimous.

AYES: Mayor Pro Tem / Alderman Randall Mays
Alderman David Elder
Alderman Gary Lingerfelt
Alderman Dallas Tester
Alderman Thurman VanHorn

NOES: None

DRAFT HAZARD MITIGATION PLAND AND ADOPTION OF RESOLUTION – TOWN PLANNER CHARLES MULLIS

Town Planner Charles Mullis stated that the following is a portion of the Catawba County Hazard Mitigation Plan that lists the sections of the plan that are specific to the Town of Long View. The plans have been approved by FEMA. The plans must be adopted by the Board of Aldermen and sent the North Carolina Division of Emergency Management. An approved plan must be in place should the Town of Long View wish to apply for and receive money from specific federal and state assistance programs that address pre and post disaster mitigation projects, planning, flood assistance, and repetitive loss buy-outs. Participation in this program ensures that the Town of Long View will be eligible for state and federal disaster relief funds should a natural disaster strike Long View. The plans must be updated every five years.

This has been going on for several years and this is the second Hazard Mitigation Plan that he has been through since he began his employment with the Town. Most of these are straight forward. Some have been deferred due to lack of funding. Other plans are continuous and ongoing; such as Mitigation

Action #9. Some things are permanent such as the requirement of burial of electrical telephone and cable lines for new development.

These plans have already been approved by FEMA. FEMA approved Long View's portion of the plan along with the entire Catawba County plan.

Motion was made by Alderman Thurman VanHorn, seconded by Alderman Dallas Tester to adopt the Catawba County Hazard Mitigation Plan.

AYES: Mayor Pro Tem / Alderman Randall Mays
Alderman David Elder
Alderman Gary Lingerfelt
Alderman Dallas Tester
Alderman Thurman VanHorn

NOES: None

**CITY OF CONOVER
RESOLUTION 7-20**

**RESOLUTION OF ADOPTION
HAZARD MITIGATION PLAN**

WHEREAS, the citizens and property within the City of Conover are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to such hazards as winter storms, wildfires, flooding, and high winds; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Conover has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Conover City Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED by the Conover City Council that the City of Conover hereby:

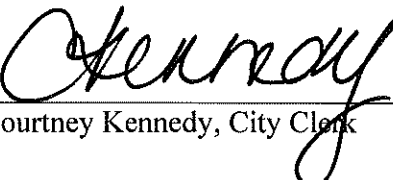
1. Adopts the Unifour Regional Hazard Mitigation Plan; and
2. Vests Conover City Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.

- (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

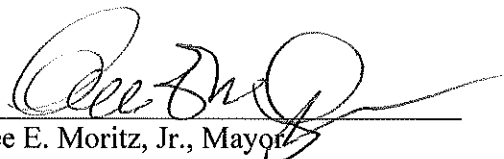
3. Appoints the Conover City Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Conover City Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this 2nd day of March, 2020.



Courtney Kennedy, City Clerk



Lee E. Moritz, Jr., Mayor



Appendix B – Local Mitigation Plan Review Tool

LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this Local Mitigation Plan Review Guide when completing the Local Mitigation Plan Review Tool.

Jurisdiction:	Title of Plan:	Date of Plan:
Alexander, Burke, Caldwell, and Catawba Counties and all incorporated municipalities	Unifour Regional Hazard Mitigation Plan	July 2019
Local Point of Contact:		Address:
Brent Edwards		1600 Perimeter Park Drive Suite 400 Morrisville, NC 27560
Title:		
Hazard Mitigation Planner		
Agency:		
AECOM		

State Reviewer:	Title:	Date:

FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (insert #)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

SECTION 1: REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element / sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Subelements should be referenced in each summary by using the appropriate numbers(A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this Plan Review Guide in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 2: Planning Process, 2.4 Hazard Mitigation Planning Committee Pages 27-45, 32-34			
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 2: Planning Process, 2.5 Meetings and Workshops Pages 27-45, 34-42			
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 2: Planning Process, 2.6 Involving the Public Pages 27-45, 42-45			
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 2: Planning Process, 2.2 History of Hazard Mitigation Planning in the Plan Region; Section 8: Plan Maintenance Procedures, 8.1 Implementation Pages 26-27, 1062-1063			
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 8: Plan Maintenance Procedures, 8.3 Continued Public Involvement Pages 1065			
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 2: Planning Process, 2.4 Hazard Mitigation Planning Committee; Section 8: Plan Maintenance Procedures, 8.3 Continued Public Involvement Pages 27-45, 32-34, 1065			
ELEMENT A: REQUIRED REVISIONS				

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Section 4: Risk Assessment, 4.5 Hazard Profiles, Analysis, and Vulnerability; See subsections Location within the Planning Area and Extent (Magnitude and Severity) for each hazard in the plan Pages 55-857			
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Section 4: Risk Assessment, 4.5 Hazard Profiles, Analysis, and Vulnerability; See subsections Historical Occurrences and Probability of Future Occurrences for each hazard in the plan Pages 55-857			
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Section 4: Risk Assessment, 4.5 Hazard Profiles, Analysis, and Vulnerability; See subsections Hazard Vulnerability for each hazard in the plan; 4.6 Hazard Extent Summary Pages 55-857			
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Section 2: Risk Assessment, 4.5 Hazard Profiles, Analysis, and Vulnerability; See Tables NFIP Entry Dates and Numbers of Repetitive Loss Properties by Jurisdiction for river and coastal flooding hazards in the plan Table 4.49 Pages 172-173			
ELEMENT B: REQUIRED REVISIONS				
ELEMENT C. MITIGATION STRATEGY				

1. REGULATION CHECKLIST		Location in Plan (section and / or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 5: Capability Assessment; Section 7: Mitigation Action Plans Pages 858-890, 893-1061			
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 5: Capability Assessment, 5.3 Capability Assessment Findings Pages 857-885			
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 6: Mitigation Strategy, 6.2 Mitigation Goals Pages 888-892, 889-890			
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 7: Mitigation Action Plans Pages 893-1061			
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 7: Mitigation Action Plans Pages 893-1061			
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 8: Plan Maintenance Procedures Pages 1062-1065			
ELEMENT C: REQUIRED REVISIONS				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 4: Risk Assessment Pages 55-857			
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 7: Mitigation Action Plans Pages 893-1061			
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Section 7: Mitigation Action Plans Pages 893-1061			
ELEMENT D: REQUIRED REVISIONS				

1. REGULATION CHECKLIST	Location in Plan (section and / or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)			
ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Appendix A		
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Appendix A		
ELEMENT E: REQUIRED REVISIONS			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2: PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

How does the Plan go above and beyond minimum requirements to document the planning process with respect to:

- *Involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.);*
- *Involvement of Planning, Emergency Management, Public Works Departments or other planning agencies (i.e., regional planning councils);*
- *Diverse methods of participation (meetings, surveys, online, etc.); and*
- *Reflective of an open and inclusive public involvement process.*

Element B: Hazard Identification and Risk Assessment

In addition to the requirements listed in the Regulation Checklist, 44 CFR 201.6 Local Mitigation Plans identifies additional elements that should be included as part of a plan's risk assessment. The plan should describe vulnerability in terms of:

- 1) *A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;*
- 2) *The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and*
- 3) *A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.*

How does the Plan go above and beyond minimum requirements to document the Hazard Identification and Risk Assessment with respect to:

- *Use of best available data (flood maps, HAZUS, flood studies) to describe significant hazards;*
- *Communication of risk on people, property, and infrastructure to the public (through tables, charts, maps, photos, etc.);*
- *Incorporation of techniques and methodologies to estimate dollar losses to vulnerable structures;*
- *Incorporation of Risk MAP products (i.e., depth grids, Flood Risk Report, Changes Since Last FIRM, Areas of Mitigation Interest, etc.); and*
- *Identification of any data gaps that can be filled as new data became available.*

Element C: Mitigation Strategy

How does the Plan go above and beyond minimum requirements to document the Mitigation Strategy with respect to:

- *Key problems identified in, and linkages to, the vulnerability assessment;*
- *Serving as a blueprint for reducing potential losses identified in the Hazard Identification and Risk Assessment;*
- *Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development;*
- *An understanding of mitigation principles (diversity of actions that include structural projects, preventative measures, outreach activities, property protection measures, postdisaster actions, etc.);*
- *Specific mitigation actions for each participating jurisdictions that reflects their unique risks and capabilities;*
- *Integration of mitigation actions with existing local authorities, policies, programs, and resources; and*
- *Discussion of existing programs (including the NFIP), plans, and policies that could be used to implement mitigation, as well as document past projects.*

Element D: Plan Update, Evaluation, and Implementation (Plan Updates Only)

How does the Plan go above and beyond minimum requirements to document the 5-year Evaluation and Implementation measures with respect to:

- *Status of previously recommended mitigation actions;*
- *Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk;*
- *Documentation of annual reviews and committee involvement;*
- *Identification of a lead person to take ownership of, and champion the Plan;*
- *Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards;*
- *An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.);*
- *Discussion of how changing conditions and opportunities could impact community resilience in the long term; and*
- *Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- *What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance(HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions ?*
- *What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System(CRS), Risk MAP, etc.) may provide assistance for mitigation activities?*
- *What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?*
- *Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?*
- *What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration(NOAA), Environmental Protection Agency(EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and / or state and local agencies?*

SECTION 3: MULTI-JURISDICTION SUMMARY SHEET(OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were ‘Met’ or ‘Not Met,’ and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city / borough / township / village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	Alexander County	County										
2	Town of Taylorsville	Town										
3	Burke County	County										
4	City of Morganton	City										
5	Town of Connelly Springs	Town										
6	Town of Drexel	Town										
7	Town of Glen Alpine	Town										
8	Town of Hildebran	Town										
9	Town of Rutherford College	Town										
10	Town of Valdese	Town										

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city / borough / township / village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
11	Caldwell County	County										
12	City of Lenoir	City										
13	Town of Cahaj's Mountain	Town										
14	Town of Gamewell	Town										
15	Town of Granite Falls	Town										
16	Town of Hudson	Town										
17	Town of Rhodhiss	Town										
18	Town of Sawmills	Town										
19	Village of Cedar Rock	Village										
20	Catawba County	County										
21	City of Claremont	City										
22	City of Conover	City										
23	City of Hickory	City										
24	City of Newton	City										
25	Town of Brookford	Town										
26	Town of Catawba	Town										

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city / borough / township / village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)				
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption
27	Town of Long View	Town									
28	Town of Maiden	Town									

Appendix C – State and Federal Approval Letters



FEMA

March 27, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
1636 Gold Star Drive
Raleigh, NC 27607

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

We are pleased to inform you that the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan Update is in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years effective March 27, 2020 to March 26, 2025.

This plan approval extends to the following participating jurisdictions that provided a copy of their resolutions adopting the plan:

- Alexander County, Unincorporated
- Burke County, Unincorporated
- Catawba County, Unincorporated
- City of Hickory
- Town of Long View
- City of Newton
- Town of Taylorsville

The approved participating jurisdictions are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

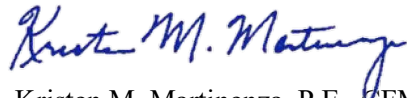
National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants of the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note, all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When you prepare a comprehensive plan update, it must be resubmitted through the State as a “plan update” and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

The State and the participants of Unifour Regional Multi-jurisdictional Hazard Mitigation Plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or the participants of Unifour Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (404) 433-3968.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is written in a cursive style with a large, stylized initial 'K'.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

April 9, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

This is a follow-up to our previous correspondence of March 27, 2020, in which we approved the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Unifour Regional Multi-jurisdictional Hazard Mitigation Plan, effective April 8, 2020:

- Town of Drexel
- Town of Glen Alpine
- Town of Hildebran
- City of Morganton
- Town of Rutherford College
- Town of Valdese

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

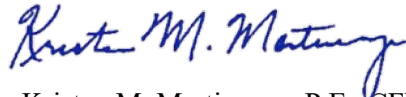
We commend the participants in the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in Unifour Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (919) 825-2297.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is written in a cursive style with a large, stylized initial 'K'.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

April 17, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

This is a follow-up to our previous correspondence of March 27, 2020, in which we approved the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Unifour Regional Multi-jurisdictional Hazard Mitigation Plan, effective April 17, 2020:

- Town of Rhodhiss
- Town of Hudson
- Town of Granite Falls
- Village of Cedar Rock
- Town of Connelly Springs
- City of Claremont
- Town of Catawba
- Town of Cahah's Mountain

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

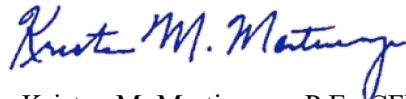
We commend the participants in the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in Unifour Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (919) 825-2297.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is written in a cursive style with a large, stylized initial 'K'.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

June 10, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
1636 Gold Star Drive
Raleigh, NC 27607

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

This is a follow-up to our previous correspondence of March 27, 2020, in which we approved the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Unifour Regional Multi-jurisdictional Hazard Mitigation Plan:

- Caldwell County, Unincorporated
- City of Lenoir

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.


We commend the participants in Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in Unifour Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (404) 433-3968.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is written in a cursive style with a large, looped initial 'K'.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

July 7, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

This is a follow-up to our previous correspondence of March 27, 2020, in which we approved the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Unifour Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Brookford
- City of Conover

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants in the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (404) 433-3968.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is written in a cursive, flowing style.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

August 11, 2020

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management
NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

Reference: Multi-jurisdictional Hazard Mitigation Plan: Unifour Regional

Dear Mr. McGugan:

This is a follow-up to our previous correspondence of March 27, 2020, in which we approved the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Unifour Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Gamewell
- Town of Maiden
- Town of Sawmills

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.


We commend the participants in the Unifour Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Unifour Regional Multi-Jurisdictional Hazard Mitigation Plan have any further questions or need any additional information, please do not hesitate to contact Jean Neptune, of the Hazard Mitigation Assistance Branch, at (770) 220-5474 or Edwardine S. Marrone, of my staff, at (404) 433-3968.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza". The signature is fluid and cursive, with the first name "Kristen" being the most prominent.

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

Appendix D – Public Outreach Strategy

Unifour Regional Hazard Mitigation Plan

Public Outreach Strategy 2019

Project Summary

The counties of Alexander, Burke, Caldwell and Catawba, in coordination with their participating municipal jurisdictions, are preparing a regional hazard mitigation plan that will cover the four-county Unifour area. The Unifour Regional Hazard Mitigation Plan will identify local policies and actions for reducing risk and future losses from natural hazards such as floods, severe storms, wildfires, and winter weather.

The plan will also serve to meet key federal planning regulations which require local governments to develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance, including funding for hazard mitigation projects. These mitigation planning requirements stem from the Disaster Mitigation Act of 2000, which was passed by the U.S. Congress in October of 2000. This Act amended federal law to require that all states and local governments must have hazard mitigation plans in place in order to be eligible to apply for funding under such programs as the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) program.

Public Outreach

A key element in the mitigation planning process is the discussion it promotes among community members about creating a safer, more disaster-resilient community. A plan that accurately reflects the community's values and priorities is likely to have greater legitimacy and "buy-in" and greater success in implementing mitigation actions and projects to reduce risk.⁶ Therefore, the purpose of the Unifour Regional Hazard Mitigation Plan Public Outreach Strategy is to:

- Generate public interest;
- Solicit citizen input; and
- Engage additional partners in the planning process.

The following specific public outreach opportunities and methods have been identified for citizens and targeted stakeholders to participate at various points in the mitigation planning process, and are presented in more detail on the following pages:

1. In-person public meetings (2)
2. Public information website (including social media integration)
3. Project information fact sheet

⁶ FEMA, *Local Mitigation Planning Handbook*, March 2013.

4. Planning resources
5. Public participation survey

OUTREACH METHOD 1
In-Person Public Meetings (2)
AVAILABILITY
January 24, 2019 and April 4, 2019
BRIEF DESCRIPTION
Two public meetings will be scheduled at key points in the project timeline, one following completion of the draft risk and capability assessments and one following completion of the draft plan (and prior to the plan's local adoption). These meetings will be coordinated and arranged by Catawba County with facilitation support from AECOM.
DETAILS
For both public meetings: <ul style="list-style-type: none"> • The purpose will be to inform the public on the process and current status of the regional planning process, as well as gain input to the process during the drafting stage and prior to plan completion and approval • AECOM will prepare presentation and handout materials to help facilitate two-way communication with public meeting attendees
LEAD AGENCY
Caldwell County/AECOM

OUTREACH METHOD 2
Public Information Website (including Social Media Integration)
AVAILABILITY
TBD
BRIEF DESCRIPTION
A project information website will be hosted by Catawba County Emergency Management and will be available to the general public and to members of the Hazard Mitigation Planning Committee for the duration of the project at the following web address: http://www.catawbacountync.gov/EmergencyServices/Hazard/RegionalPlan.asp . The primary purpose of this site will be to share information relevant to the 2014 Unifour Regional Hazard Mitigation Plan planning process.
DETAILS
Specific resources to be included on this site include: <ul style="list-style-type: none"> • Project information fact sheet • Drafts of Unifour Regional Hazard Mitigation Plan sections • List of Unifour Local Jurisdiction Leads • List of project tasks and subtasks with schedule • PowerPoint files from Hazard Mitigation Planning Committee meetings • PDFs of existing county-level hazard mitigation plans for reference during the plan update process • Links to planning resources, including recently published FEMA hazard mitigation planning guidance • Social media integration including, but not limited to, Facebook, Twitter, Tumblr, and Pinterest

LEAD AGENCY
Caldwell County/AECOM

OUTREACH METHOD 3
Project Information Fact Sheet
AVAILABILITY
January 24, 2019
BRIEF DESCRIPTION
A 1-page (double-sided) project information fact sheet will be available online in PDF format for the duration of the project. The primary purpose of this document will be to provide information on the regional planning process and to provide project contact information and links for interested parties to engage in the planning effort. This resource will be available on the project information website described above in Outreach Method 3. Printed copies may be made available on an as-needed basis.
DETAILS
Specific information to be provided in this fact sheet includes: <ul style="list-style-type: none"> • Project overview • Overview of the regional hazard mitigation planning process, including: <ul style="list-style-type: none"> ○ Public outreach ○ Risk assessment ○ Capability assessment ○ Mitigation strategy development ○ Plan maintenance ○ Plan adoption • Explanation of project leadership • Project schedule • Contact information and links to project information website • Project graphics/illustrations
LEAD AGENCY
Caldwell County/AECOM

OUTREACH METHOD 4
Planning Resources
AVAILABILITY
November 29, 2018
BRIEF DESCRIPTION
Mitigation planning resources will be made available for Hazard Mitigation Planning Committee members and other interested parties in order to promote education and participation in the mitigation planning process.
DETAILS
Specific planning resources will include: <ul style="list-style-type: none"> • FEMA mitigation planning guidance <ul style="list-style-type: none"> ○ <i>Local Mitigation Planning Handbook</i> ○ <i>Mitigation Ideas</i> ○ <i>Integrating Hazard Mitigation Into Local Planning</i>

<ul style="list-style-type: none"> • Other appropriate planning resources as identified throughout the duration of the planning process
LEAD AGENCY
Caldwell County/AECOM

OUTREACH METHOD 5
Public Participation Survey
AVAILABILITY
December 5, 2018 through April 18, 2019
BRIEF DESCRIPTION
<p>An online public participation survey will be hosted by AECOM using the SurveyMonkey web hosting service and will be open to the public for a duration of three months. The primary purpose of this survey will be to solicit input from any interested parties in the planning area and will be used so that individuals throughout the planning area have the opportunity to provide valuable information and feedback to the project team. The online survey will give individuals that are unable to attend the in-person meetings the opportunity to participate in the plan update process. Information from the online survey will allow the project team to better understand the types of hazards that most concern the public and the mitigation actions that are of particular interest. The survey will be made accessible through hyperlinks posted on the project information website and can be circulated via email, Facebook, etc. Additionally, hard copies of the survey will be distributed at the in-person public meetings. The feedback received will be evaluated and incorporated into the Hazard Mitigation Planning Committee's decision making process and the final plan.</p>
DETAILS
<p>Types of specific questions to be asked as part of this survey include:</p> <ul style="list-style-type: none"> • Personal history with natural hazards • Natural hazard concerns • Perception of vulnerable community assets • Importance of community assets • Priorities concerning natural hazard preparedness • Steps local government can take to reduce natural hazard risk • Types of mitigation activities deemed important • Personal interest in natural hazard mitigation • Effective ways to communicate with residents • Location in the floodplain • Questions regarding flood insurance • Personal actions to mitigate property • Mitigation activities planned for the respondent's household • Location within the planning area • Age (optional)* • Gender (optional) • Highest level of education (optional) • Length of time living in the planning area • Ownership of property versus rental status • Type of dwelling • Open comments** <p><i>* All information will be kept strictly confidential</i></p> <p><i>** Information will be processed and summarized by AECOM in order to produce summary statistics and summary responses</i></p>

LEAD AGENCY
Caldwell County/AECOM

Appendix E – Project Information Fact Sheet

Unifour Regional Hazard Mitigation Plan

Natural hazards have the potential to cause property damage, loss of life, economic hardship, and threats to public health and safety. Hazard mitigation measures are the things we do today to be more protected in the future. They are actions taken before a disaster happens to reduce the impact of future hazard events on people and property

Project Overview

The counties of Alexander, Burke, Caldwell and Catawba, in coordination with their participating municipal jurisdictions, are preparing a **regional hazard mitigation plan** that will cover the four-county Unifour area. The Unifour Regional Hazard Mitigation Plan will identify local policies and actions for reducing risk and future losses from natural hazards such as floods, severe storms, wildfires, and winter weather.

The plan will also serve to meet key federal planning regulations which require local governments to develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance, including funding for hazard mitigation projects.

These requirements stem from the Disaster Mitigation Act of 2000 which was passed by the President in October of 2000. This Act mandates that all states and local governments must have hazard mitigation plans in place in order to be eligible to apply for funding under such programs as the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) program.

The Planning Process

The planning process for the Unifour Regional Hazard Mitigation Plan will consist of six main phases described in detail in the following sections: **public outreach, risk assessment, capability assessment, mitigation strategy development, plan maintenance, and plan adoption.**



Public Outreach

The goals of the public outreach strategy for this planning effort are to: generate public interest, solicit citizen input, and engage additional partners in the planning process.

Public outreach will include two open public meetings, a project information website (the Unifour Hazard Mitigation Planning website located at [URL TBD]), a web-based public participation survey (<https://www.surveymonkey.com/r/K67QRZD>), and updates and information shared through social media, such as on Facebook (find us at [URL TBD]).

Risk Assessment

The desired outcomes of a risk assessment are an evaluation of each identified hazard’s potential impacts on the people, economy, and built and natural environments in the planning area plus an understanding of each participating jurisdiction’s overall vulnerability and most significant risks. These

potential impacts and a thorough understanding of the overall vulnerability can be used to create problem statements and identify mitigation actions to reduce risk.

Capability Assessment

Each participating jurisdiction has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources available to accomplish mitigation and reduce long-term vulnerability. By reviewing the existing capabilities in each jurisdiction, the planning team can identify capabilities that currently reduce disaster losses or could be used to reduce losses in the future.

Mitigation Strategy Development

The primary purpose of mitigation planning is to systematically identify policies, actions, and activities to reduce the impact that future natural hazard occurrences will have on people and property in the planning area. Mitigation strategy development includes long-range mitigation goals common to the planning area and short-term mitigation actions specific to each participating jurisdiction.

Plan Maintenance

Plan maintenance is the process established to track the plan’s implementation and to aid in updating the plan every five years. These procedures help to ensure that the mitigation strategy is implemented according to the plan. They also provide the foundation for an ongoing mitigation program, standardize long-term monitoring of hazard-related activities, integrate mitigation principles into local officials’ daily job responsibilities, and maintain momentum through continued

engagement and accountability in the plan's progress.

Plan Adoption

Each participating jurisdiction seeking plan approval must adopt the plan. Adoption by the local governing body demonstrates the community's commitment to implementing the mitigation strategy and authorizes responsible agencies to execute their actions. The final plan is not approved until the community adopts the plan and FEMA receives documentation of formal adoption by the governing body of the jurisdictions requesting approval.

Project Leadership

This regional planning effort is being led by the Caldwell County Emergency Management, with technical assistance from AECOM. A local Hazard Mitigation Planning Committee made up of local officials, representatives, and stakeholders has been established to guide this process. In addition, local points of contact have been established for each of the four counties as well as all of the participating municipal jurisdictions. Planning committee meetings and open public meetings will be scheduled to occur at key points throughout the project timeline.

Schedule

The planning process began in November 2018 and a fully updated plan is expected to be ready for review by the North Carolina Division of Emergency Management and the Federal Emergency Management Agency by July 2019. Draft documents will be available on the project information website at various stages in the planning process.

For More Information

To learn more about this project, or to find out how you can be involved, please contact Kenneth Teague, Caldwell County Emergency Management Coordinator, at (828) 757-1419 or kteague@caldwellcountync.org. Additional information and regular updates throughout the duration of this project can be found on the Unifour Hazard Mitigation Planning website at [URL TBD].

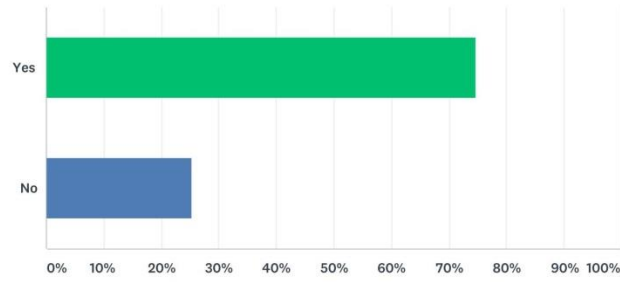


Appendix F – Public Participation Survey Results

2019 Unifour Hazard Mitigation Plan Update

Q1 Have you ever experienced or been impacted by a disaster?

Answered: 391 Skipped: 5

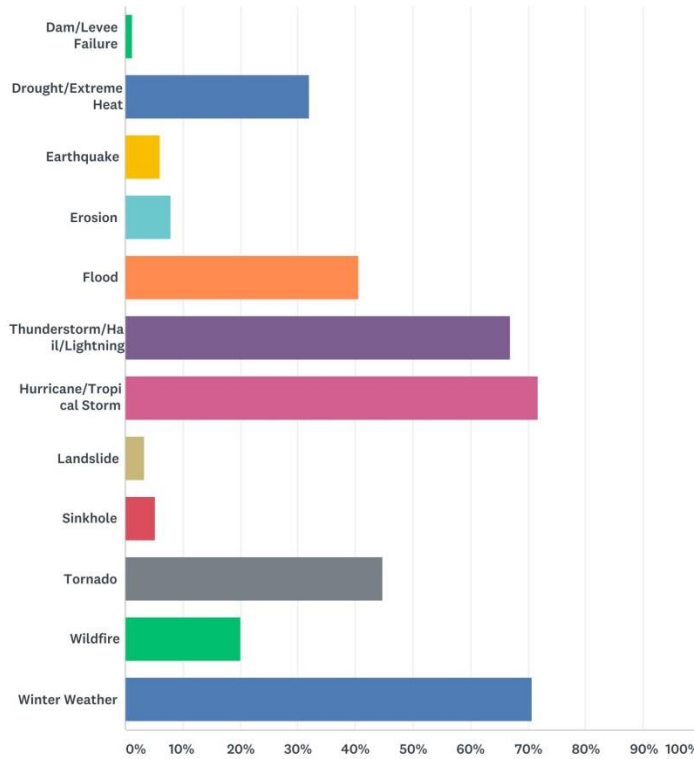


ANSWER CHOICES	RESPONSES	
Yes	74.68%	292
No	25.32%	99
TOTAL		391

2019 Unifour Hazard Mitigation Plan Update

Q2 If yes, Which of these natural hazards have you experienced or been impacted by? (Check all that apply.)

Answered: 300 Skipped: 96

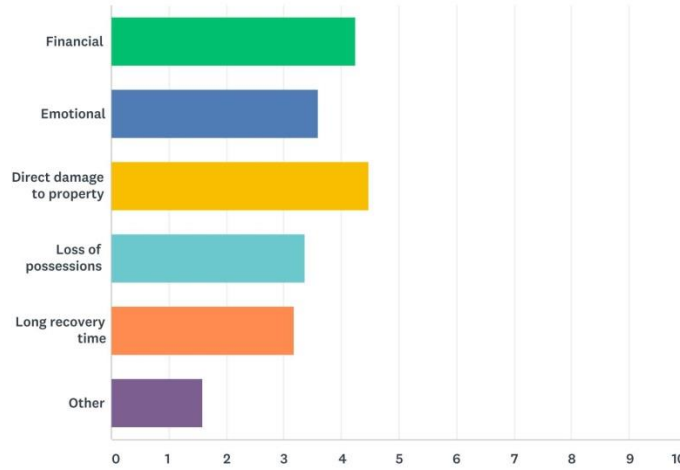


ANSWER CHOICES	RESPONSES	
Dam/Levee Failure	1.33%	4
Drought/Extreme Heat	32.00%	96
Earthquake	6.00%	18
Erosion	8.00%	24
Flood	40.67%	122
Thunderstorm/Hail/Lightning	67.00%	201
Hurricane/Tropical Storm	71.67%	215
Landslide	3.33%	10
Sinkhole	5.33%	16
Tornado	44.67%	134
Wildfire	20.00%	60
Winter Weather	70.67%	212
Total Respondents: 300		

2019 Unifour Hazard Mitigation Plan Update

Q3 What was the most difficult part for you in recovering from past disasters that you have experienced? (1 being most difficult and 6 being least difficult.)

Answered: 297 Skipped: 99

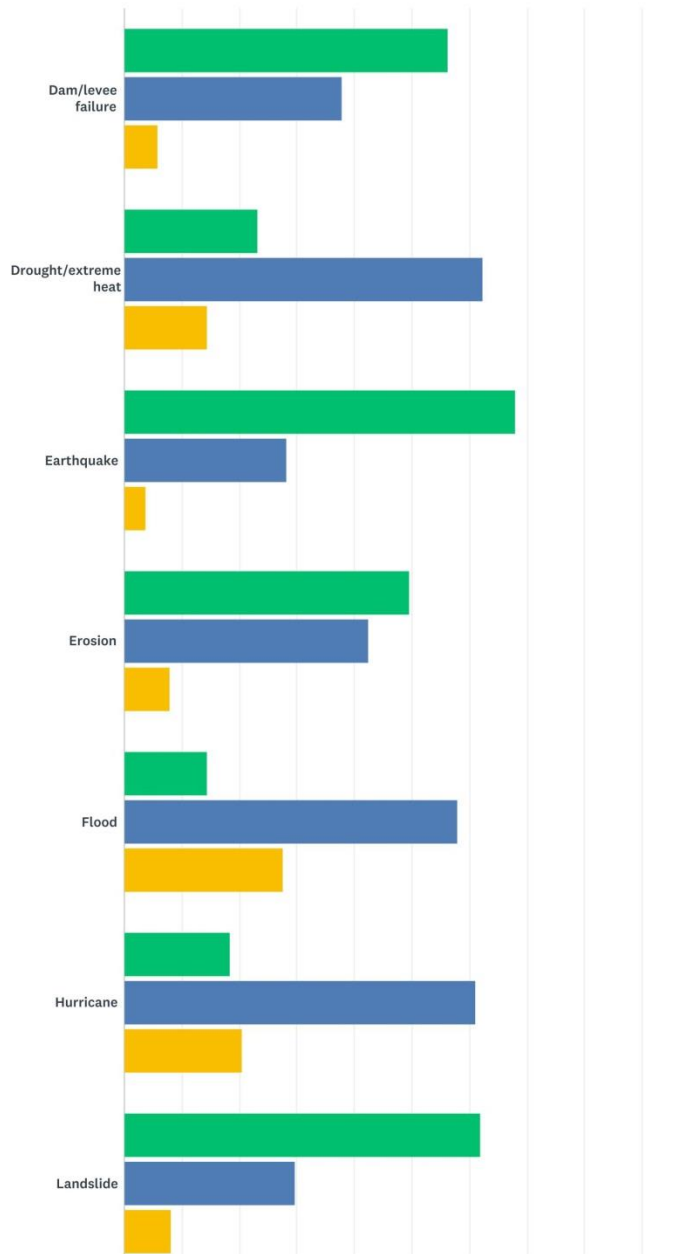


	1	2	3	4	5	6	TOTAL	SCORE
Financial	24.39% 50	26.34% 54	20.00% 41	13.17% 27	10.24% 21	5.85% 12	205	4.24
Emotional	15.42% 33	14.95% 32	22.43% 48	18.22% 39	18.69% 40	10.28% 22	214	3.59
Direct damage to property	32.92% 79	21.25% 51	22.50% 54	11.25% 27	7.92% 19	4.17% 10	240	4.47
Loss of possessions	9.31% 19	12.75% 26	20.59% 42	31.37% 64	15.20% 31	10.78% 22	204	3.37
Long recovery time	11.93% 29	13.17% 32	11.52% 28	18.11% 44	34.57% 84	10.70% 26	243	3.18
Other	4.52% 7	2.58% 4	3.23% 5	3.23% 5	9.03% 14	77.42% 120	155	1.58

2019 Unifour Hazard Mitigation Plan Update

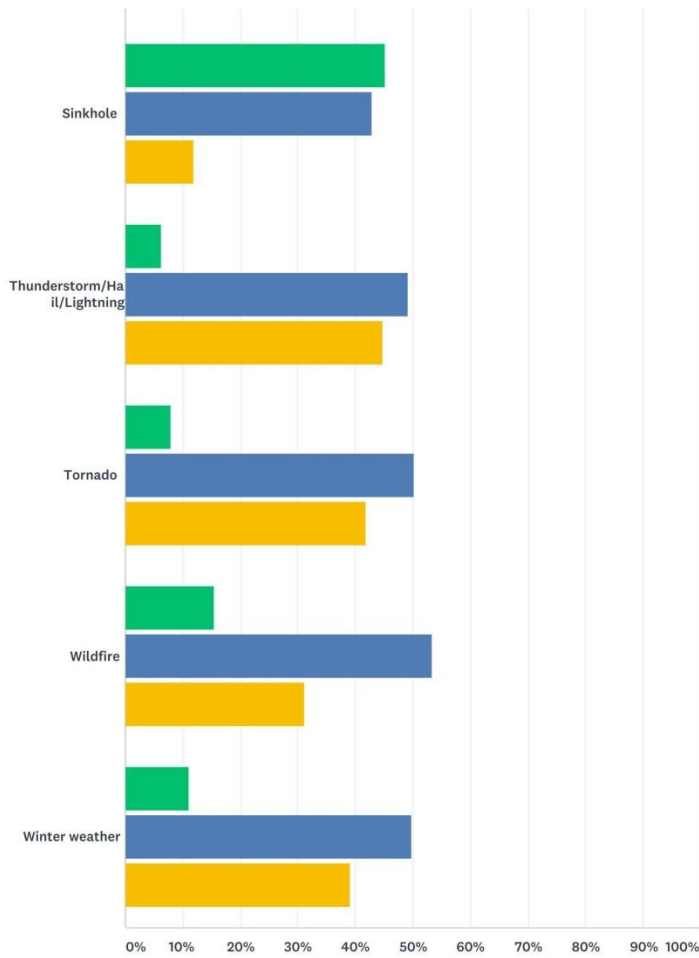
Q4 How concerned are you about the possibility of your community being impacted by each of these natural hazards? (Check the corresponding circle for each natural hazard.)

Answered: 391 Skipped: 5



4 / 32

2019 Unifour Hazard Mitigation Plan Update



■ Not Concerned
 ■ Somewhat Concerned
 ■ Very Concerned

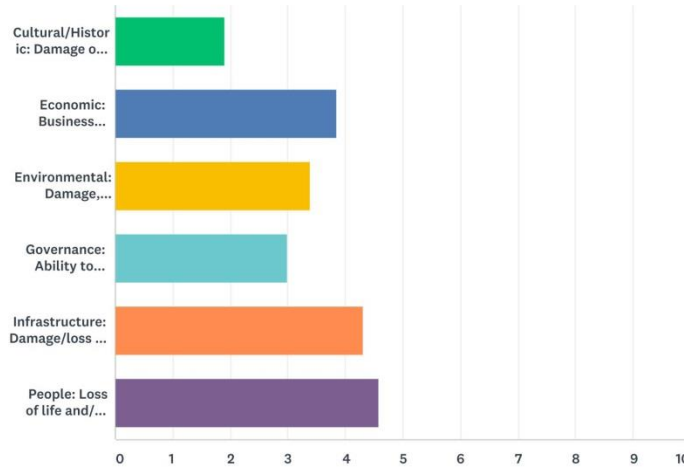
	NOT CONCERNED	SOMEWHAT CONCERNED	VERY CONCERNED	TOTAL	WEIGHTED AVERAGE
Dam/levee failure	56.27% 211	37.87% 142	5.87% 22	375	1.50
Drought/extreme heat	23.22% 88	62.27% 236	14.51% 55	379	1.91
Earthquake	68.09% 256	28.19% 106	3.72% 14	376	1.36
Erosion	49.60% 186	42.40% 159	8.00% 30	375	1.58
Flood	14.36% 55	57.96% 222	27.68% 106	383	2.13
Hurricane	18.39% 71	61.14% 236	20.47% 79	386	2.02
Landslide	61.97% 233	29.79% 112	8.24% 31	376	1.46

2019 Unifour Hazard Mitigation Plan Update

Sinkhole	45.24% 171	42.86% 162	11.90% 45	378	1.67
Thunderstorm/Hail/Lightning	6.23% 24	49.09% 189	44.68% 172	385	2.38
Tornado	8.05% 31	50.13% 193	41.82% 161	385	2.34
Wildfire	15.45% 59	53.40% 204	31.15% 119	382	2.16
Winter weather	11.08% 43	49.74% 193	39.18% 152	388	2.28

Q5 In your opinion, which of the following categories are most susceptible to natural hazards in your community? (Rank the community assets in order of vulnerability, 1 being most vulnerable and 6 being least vulnerable.) Please note, the list will automatically re-order itself as you make your selections. You can also drag and drop the items on the list to reorder them.

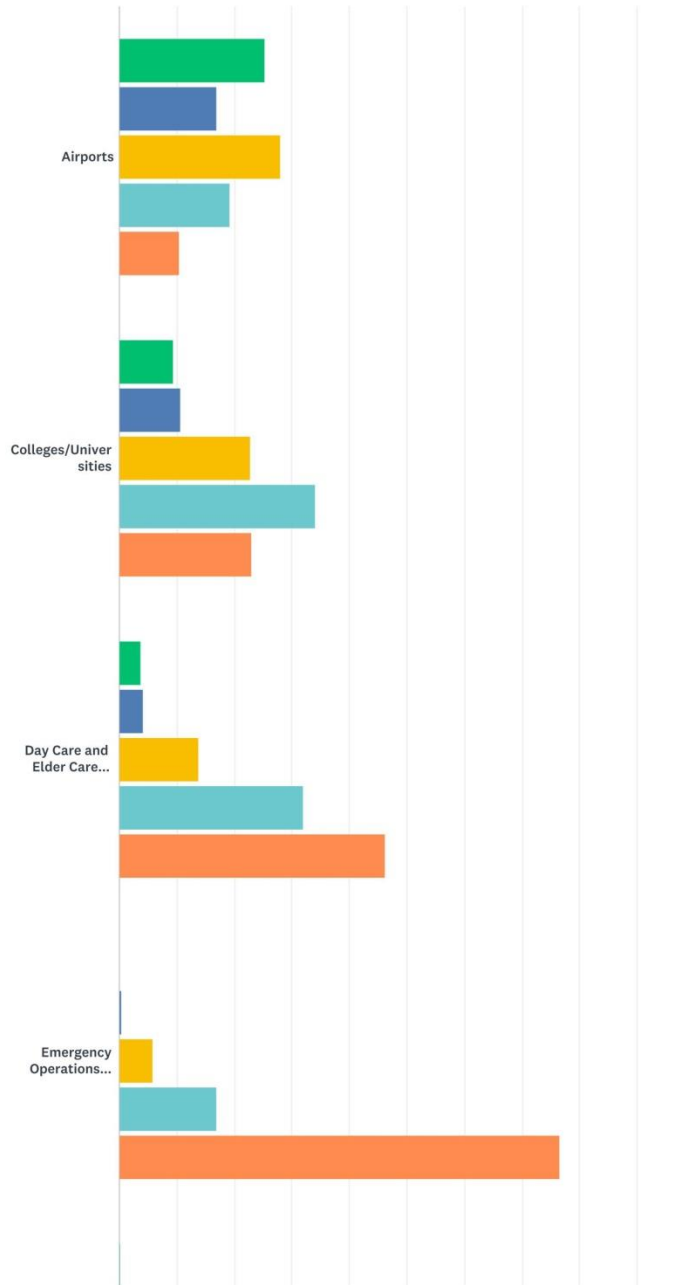
Answered: 381 Skipped: 15



	1	2	3	4	5	6	TOTAL	SCORE
Cultural/Historic: Damage or loss of libraries, museums, historic properties, etc.	5.01% 17	2.95% 10	4.72% 16	8.55% 29	23.30% 79	55.46% 188	339	1.91
Economic: Business interruptions/closures, job losses, etc.	10.71% 36	22.02% 74	30.36% 102	19.94% 67	12.20% 41	4.76% 16	336	3.85
Environmental: Damage, contamination or loss of forests, wetlands, waterways, etc.	11.75% 39	12.35% 41	18.37% 61	26.51% 88	23.19% 77	7.83% 26	332	3.39
Governance: Ability to maintain order and/or provide public amenities and services	7.67% 26	11.80% 40	14.45% 49	24.48% 83	20.65% 70	20.94% 71	339	2.99
Infrastructure: Damage/loss of roads, bridges, utilities, schools, etc.	18.13% 64	33.14% 117	24.36% 86	11.61% 41	10.76% 38	1.98% 7	353	4.30
People: Loss of life and/or injuries	44.20% 164	18.60% 69	11.59% 43	10.24% 38	7.82% 29	7.55% 28	371	4.58

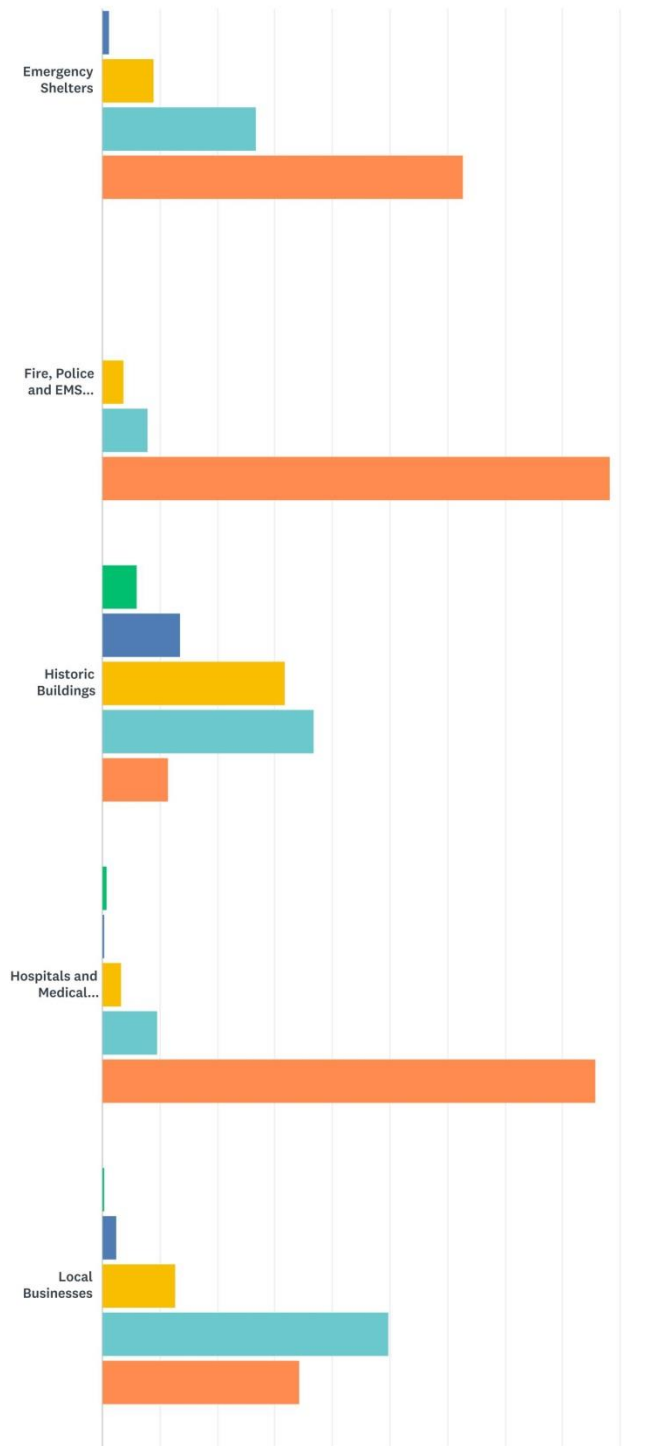
Q6 How important is each of the following specific community assets to you? (Check the appropriate circle for each asset.)

Answered: 394 Skipped: 2



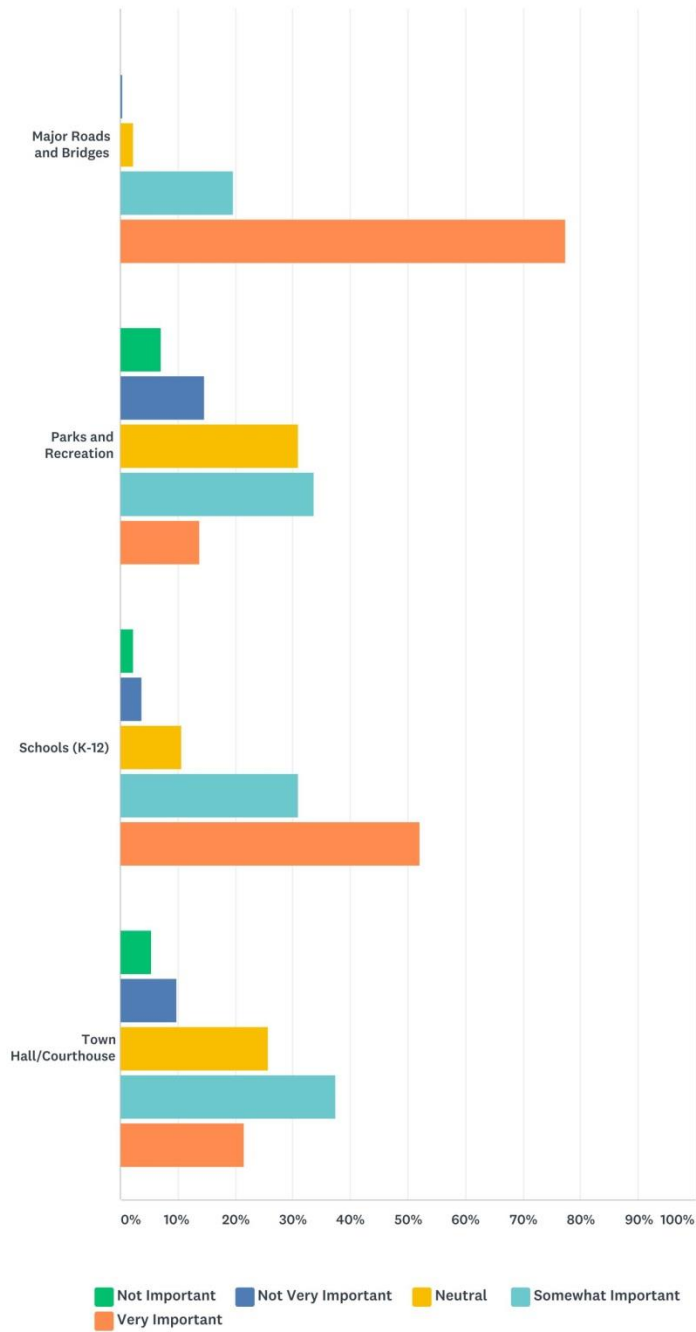
8 / 32

2019 Unifour Hazard Mitigation Plan Update



9 / 32

2019 Unifour Hazard Mitigation Plan Update



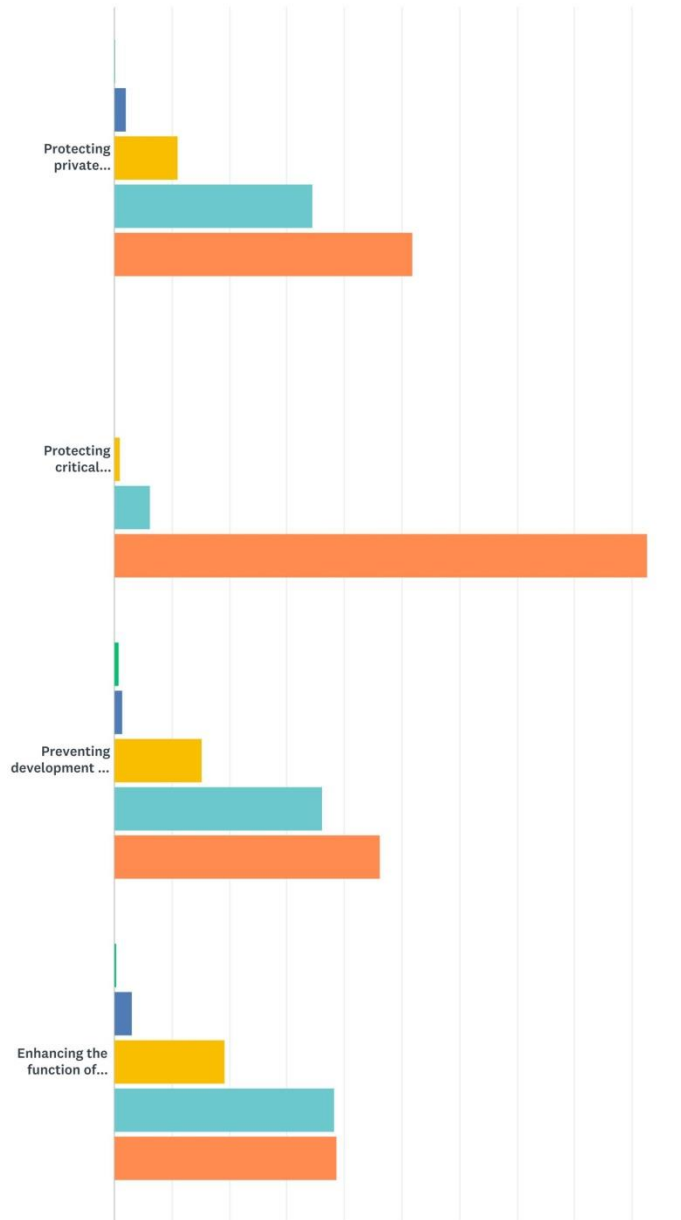
	NOT IMPORTANT	NOT VERY IMPORTANT	NEUTRAL	SOMEWHAT IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Airports	25.26%	16.93%	28.13%	19.27%	10.42%	384	2.73
	97	65	108	74	40		

2019 Unifour Hazard Mitigation Plan Update

Colleges/Universities	9.40% 36	10.70% 41	22.72% 87	34.20% 131	22.98% 88	383	3.51
Day Care and Elder Care Facilities	3.85% 15	4.10% 16	13.85% 54	32.05% 125	46.15% 180	390	4.13
Emergency Operations Centers	0.00% 0	0.51% 2	5.85% 23	17.05% 67	76.59% 301	393	4.70
Emergency Shelters	0.26% 1	1.28% 5	8.95% 35	26.85% 105	62.66% 245	391	4.50
Fire, Police and EMS Stations	0.00% 0	0.00% 0	3.82% 15	7.89% 31	88.30% 347	393	4.84
Historic Buildings	6.17% 24	13.62% 53	31.88% 124	36.76% 143	11.57% 45	389	3.34
Hospitals and Medical Facilities	0.76% 3	0.51% 2	3.30% 13	9.64% 38	85.79% 338	394	4.79
Local Businesses	0.51% 2	2.56% 10	12.79% 50	49.87% 195	34.27% 134	391	4.15
Major Roads and Bridges	0.00% 0	0.51% 2	2.30% 9	19.69% 77	77.49% 303	391	4.74
Parks and Recreation	7.14% 28	14.54% 57	30.87% 121	33.67% 132	13.78% 54	392	3.32
Schools (K-12)	2.31% 9	3.85% 15	10.77% 42	31.03% 121	52.05% 203	390	4.27
Town Hall/Courthouse	5.40% 21	9.77% 38	25.71% 100	37.53% 146	21.59% 84	389	3.60

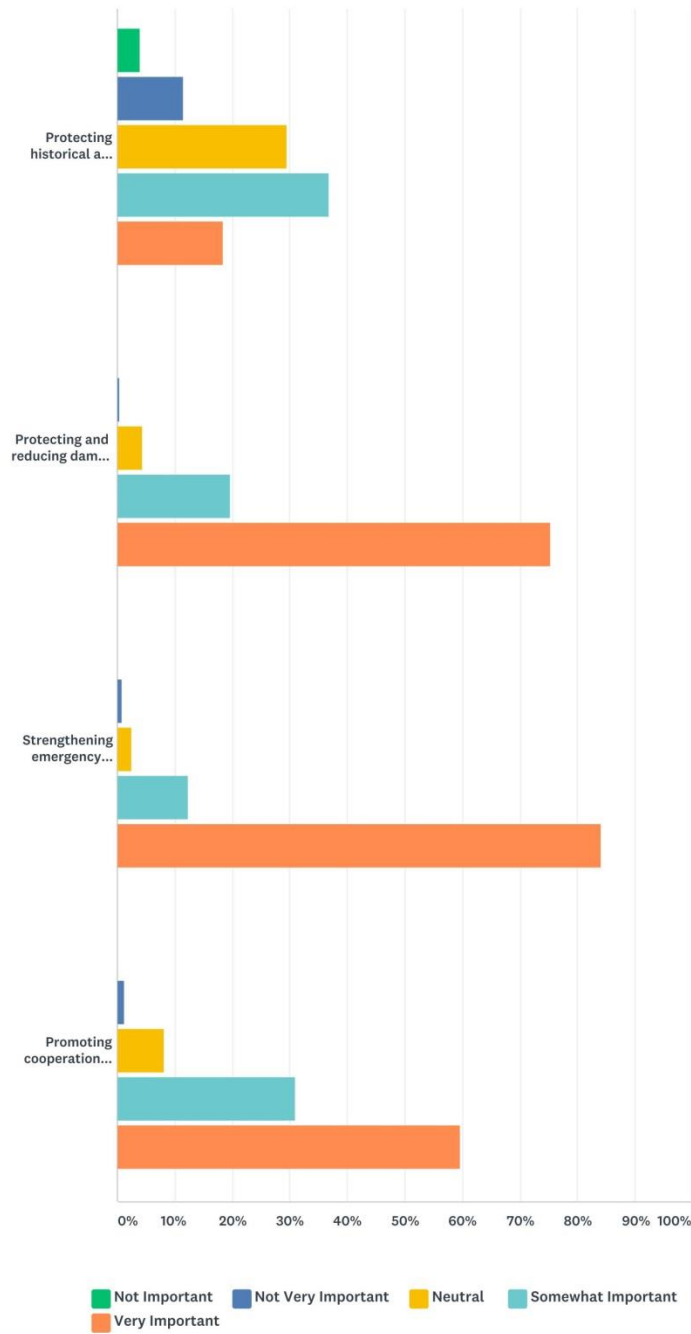
Q7 Natural hazards can have a significant impact on a community, but planning for these types of events can help lessen the impacts. Please tell us how important each statement is to you by checking the appropriate circle for each.

Answered: 387 Skipped: 9



12 / 32

2019 Unifour Hazard Mitigation Plan Update



	NOT IMPORTANT	NOT VERY IMPORTANT	NEUTRAL	SOMEWHAT IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Protecting private property	0.27%	2.17%	11.14%	34.51%	51.90%	368	4.36
	1	8	41	127	191		

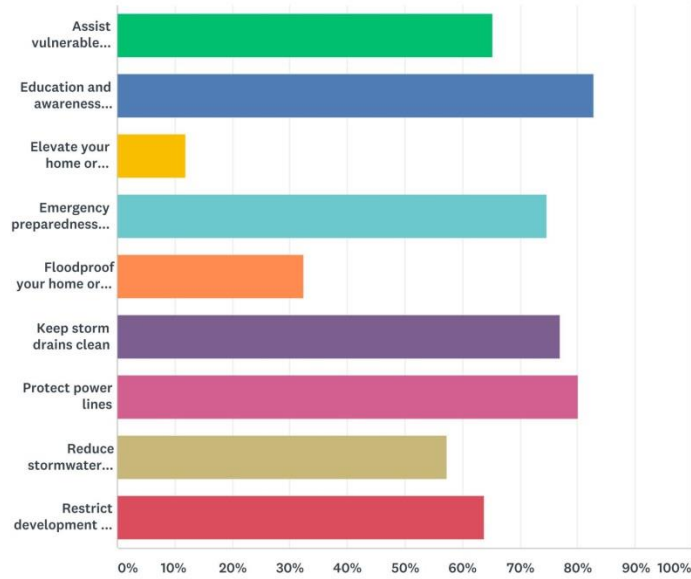
2019 Unifour Hazard Mitigation Plan Update

Protecting critical facilities (for example, hospitals, police stations, fire stations, etc.)	0.00% 0	0.00% 0	1.04% 4	6.23% 24	92.73% 357	385	4.92
Preventing development in hazard areas	0.78% 3	1.56% 6	15.32% 59	36.10% 139	46.23% 178	385	4.25
Enhancing the function of natural features (for example, streams, wetlands, etc.)	0.52% 2	3.13% 12	19.32% 74	38.38% 147	38.64% 148	383	4.11
Protecting historical and cultural landmarks	3.91% 15	11.46% 44	29.43% 113	36.72% 141	18.49% 71	384	3.54
Protecting and reducing damage to utilities	0.00% 0	0.52% 2	4.42% 17	19.74% 76	75.32% 290	385	4.70
Strengthening emergency services (for example, police, fire, ambulance)	0.00% 0	0.78% 3	2.59% 10	12.44% 48	84.20% 325	386	4.80
Promoting cooperation among public agencies, citizens, non-profit organizations, and businesses	0.00% 0	1.30% 5	8.07% 31	30.99% 119	59.64% 229	384	4.49

2019 Unifour Hazard Mitigation Plan Update

Q8 What are some steps that you and/or your local government could take to reduce or eliminate the risk of future natural hazard damages in your neighborhood?

Answered: 386 Skipped: 10

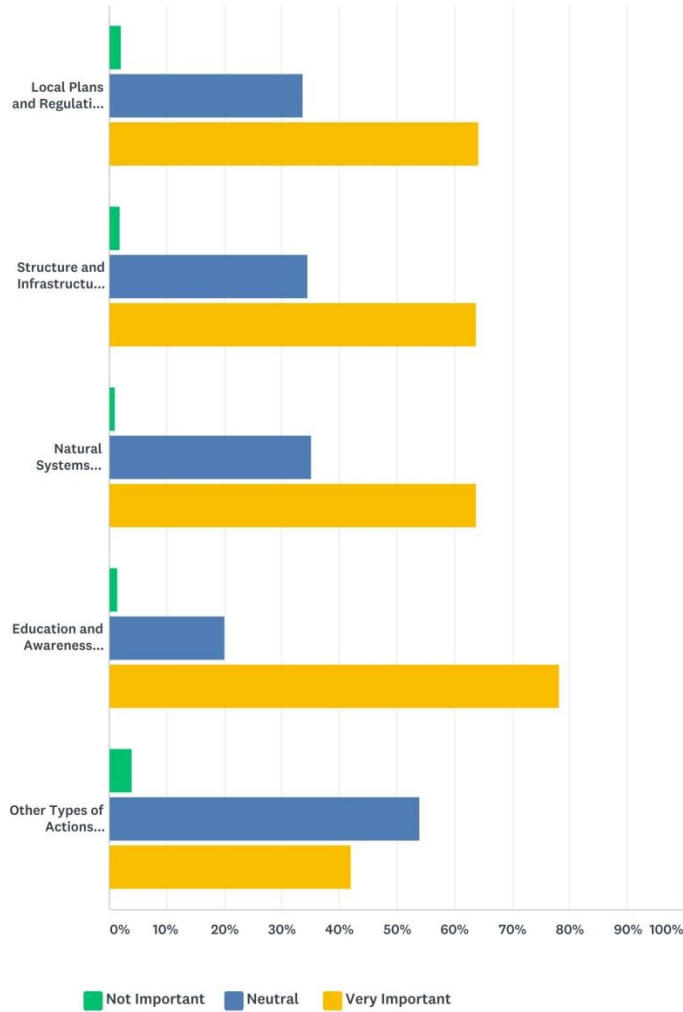


ANSWER CHOICES	RESPONSES
Assist vulnerable populations	65.28% 252
Education and awareness activities	82.90% 320
Elevate your home or business	11.92% 46
Emergency preparedness kits	74.61% 288
Floodproof your home or business	32.38% 125
Keep storm drains clean	76.94% 297
Protect power lines	80.05% 309
Reduce stormwater runoff	57.25% 221
Restrict development in floodplain areas	63.73% 246
Total Respondents: 386	

2019 Unifour Hazard Mitigation Plan Update

Q9 A number of community-wide activities can reduce risk from natural hazards. Please tell us how important you think each one is for your community to consider pursuing.

Answered: 385 Skipped: 11



	NOT IMPORTANT	NEUTRAL	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Local Plans and Regulations (Government policies or codes that influence the way land and buildings are developed and built.)	2.08% 8	33.77% 130	64.16% 247	385	2.62
Structure and Infrastructure Projects (Modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area.)	1.83% 7	34.46% 132	63.71% 244	383	2.62

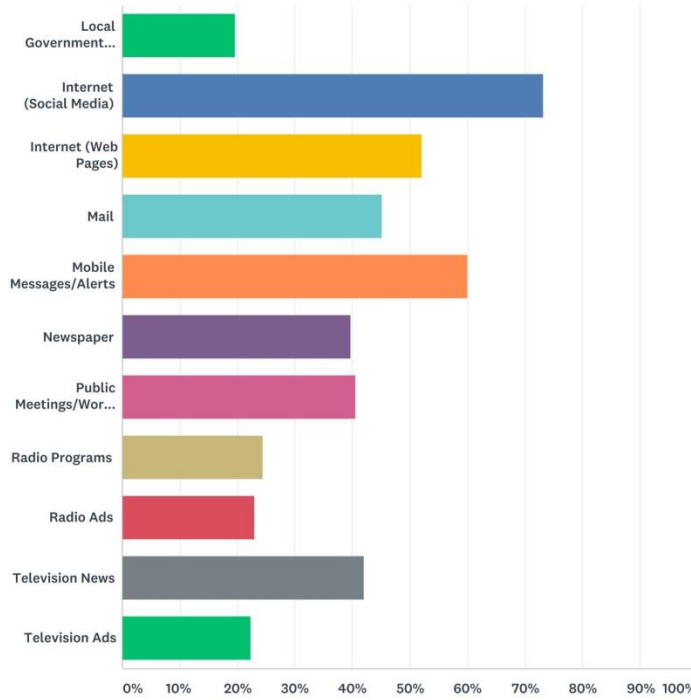
2019 Unifour Hazard Mitigation Plan Update

Natural Systems Protection (Actions that minimize damage and losses and also preserve or restore the functions of natural systems.)	1.04% 4	35.25% 135	63.71% 244	383	2.63
Education and Awareness Programs (Actions that inform and educate citizens, elected officials and property owners about hazards and potential ways to mitigate them.)	1.57% 6	20.10% 77	78.33% 300	383	2.77
Other Types of Actions (Actions that are related to mitigation in ways that make sense to the local government that do not fall into one of the categories above.)	4.02% 15	53.89% 201	42.09% 157	373	2.38

2019 Unifour Hazard Mitigation Plan Update

Q10 What are the most effective ways for you to receive information about how to make your home and neighborhood more resistant to natural hazards?

Answered: 392 Skipped: 4

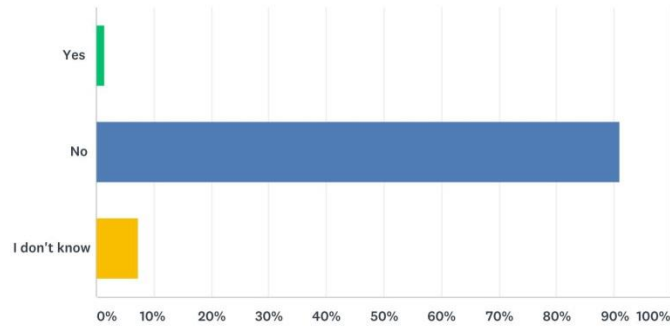


ANSWER CHOICES	RESPONSES	
Local Government Channel	19.64%	77
Internet (Social Media)	73.21%	287
Internet (Web Pages)	52.04%	204
Mail	45.15%	177
Mobile Messages/Alerts	59.95%	235
Newspaper	39.80%	156
Public Meetings/Workshops	40.56%	159
Radio Programs	24.49%	96
Radio Ads	22.96%	90
Television News	42.09%	165
Television Ads	22.45%	88
Total Respondents: 392		

2019 Unifour Hazard Mitigation Plan Update

Q11 Is your home located in a floodplain?

Answered: 391 Skipped: 5

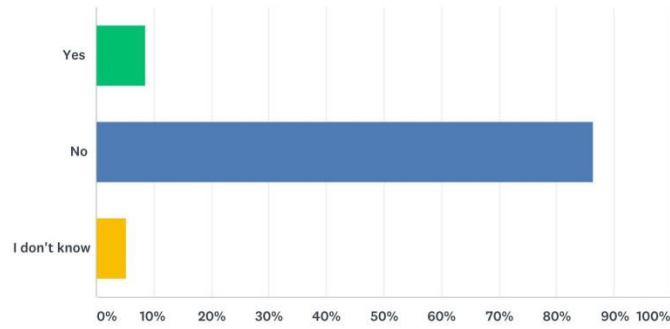


ANSWER CHOICES	RESPONSES
Yes	1.53% 6
No	91.05% 356
I don't know	7.42% 29
TOTAL	391

2019 Unifour Hazard Mitigation Plan Update

Q12 Do you have flood insurance?

Answered: 389 Skipped: 7

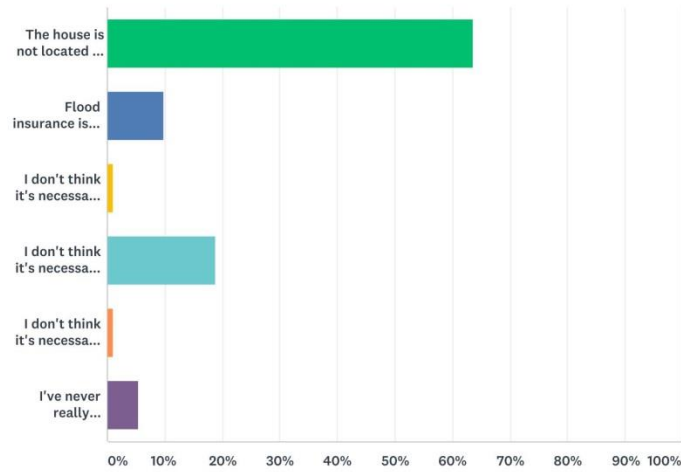


ANSWER CHOICES	RESPONSES	
Yes	8.48%	33
No	86.38%	336
I don't know	5.14%	20
TOTAL		389

2019 Unifour Hazard Mitigation Plan Update

Q13 If “No,” why not?

Answered: 349 Skipped: 47

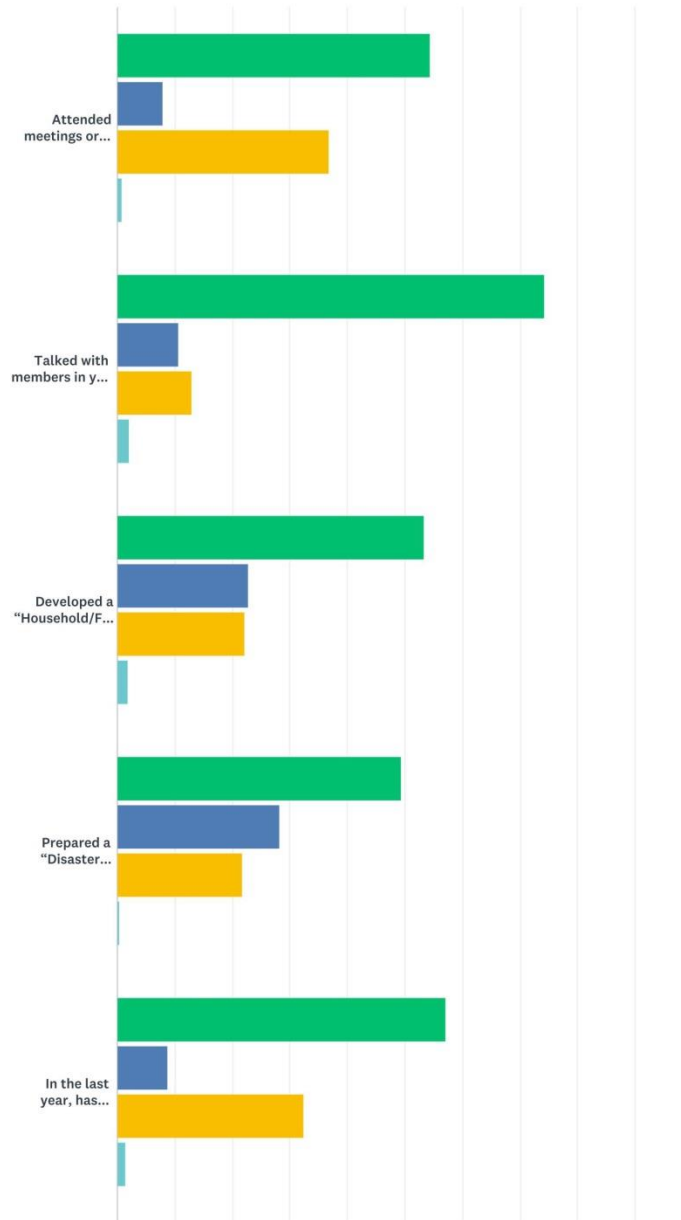


ANSWER CHOICES	RESPONSES	
The house is not located in a floodplain	63.61%	222
Flood insurance is too expensive	9.74%	34
I don't think it's necessary because it never floods	1.15%	4
I don't think it's necessary because I'm elevated or otherwise protected	18.91%	66
I don't think it's necessary because I have homeowners insurance	1.15%	4
I've never really considered it	5.44%	19
TOTAL		349

2019 Unifour Hazard Mitigation Plan Update

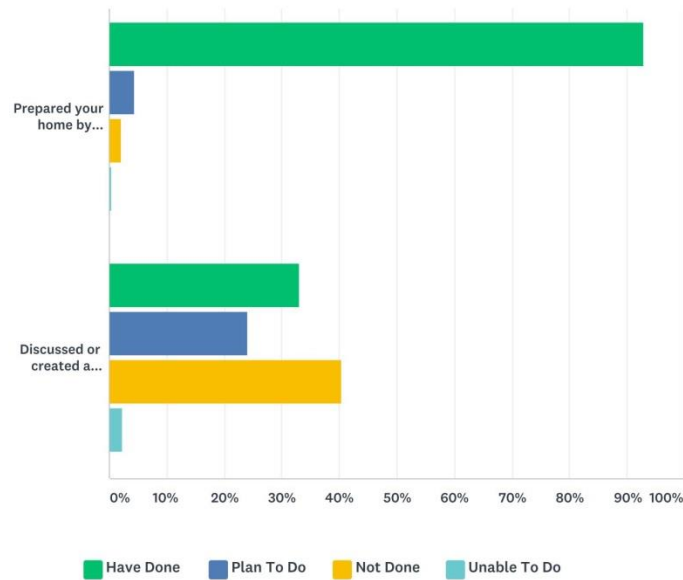
Q14 In the following list, please check the activities that you have done in your household, plan to do in the near future, have not done, or are unable to do. (Please check one response for each preparedness activity.)

Answered: 386 Skipped: 10



22 / 32

2019 Unifour Hazard Mitigation Plan Update

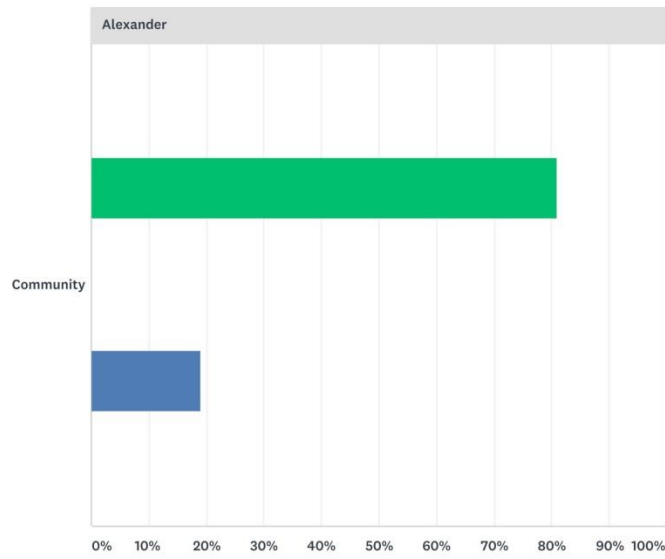


	HAVE DONE	PLAN TO DO	NOT DONE	UNABLE TO DO	TOTAL
Attended meetings or received written information on natural disasters or emergency preparedness?	54.45% 208	7.85% 30	36.91% 141	0.79% 3	382
Talked with members in your household about what to do in case of a natural disaster or emergency?	74.29% 286	10.65% 41	12.99% 50	2.08% 8	385
Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in the event of a disaster?	53.25% 205	22.86% 88	22.08% 85	1.82% 7	385
Prepared a "Disaster Supply Kit" (stored extra food, water, batteries or other emergency supplies)?	49.35% 190	28.31% 109	21.82% 84	0.52% 2	385
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulmonary Resuscitation (CPR)?	57.14% 220	8.83% 34	32.47% 125	1.56% 6	385
Prepared your home by installing smoke detectors on each level of the house?	92.99% 358	4.42% 17	2.08% 8	0.52% 2	385
Discussed or created a utility shutoff procedure in the event of a natural disaster?	33.07% 126	24.15% 92	40.42% 154	2.36% 9	381

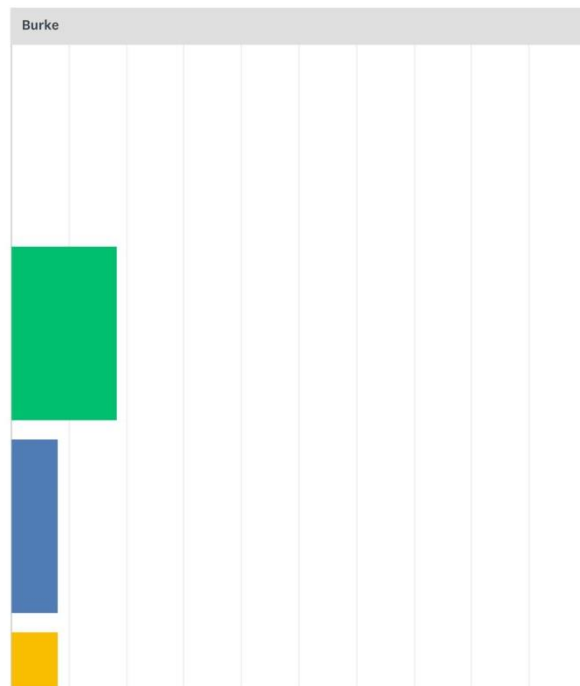
2019 Unifour Hazard Mitigation Plan Update

Q15 In which community do you live?

Answered: 376 Skipped: 20

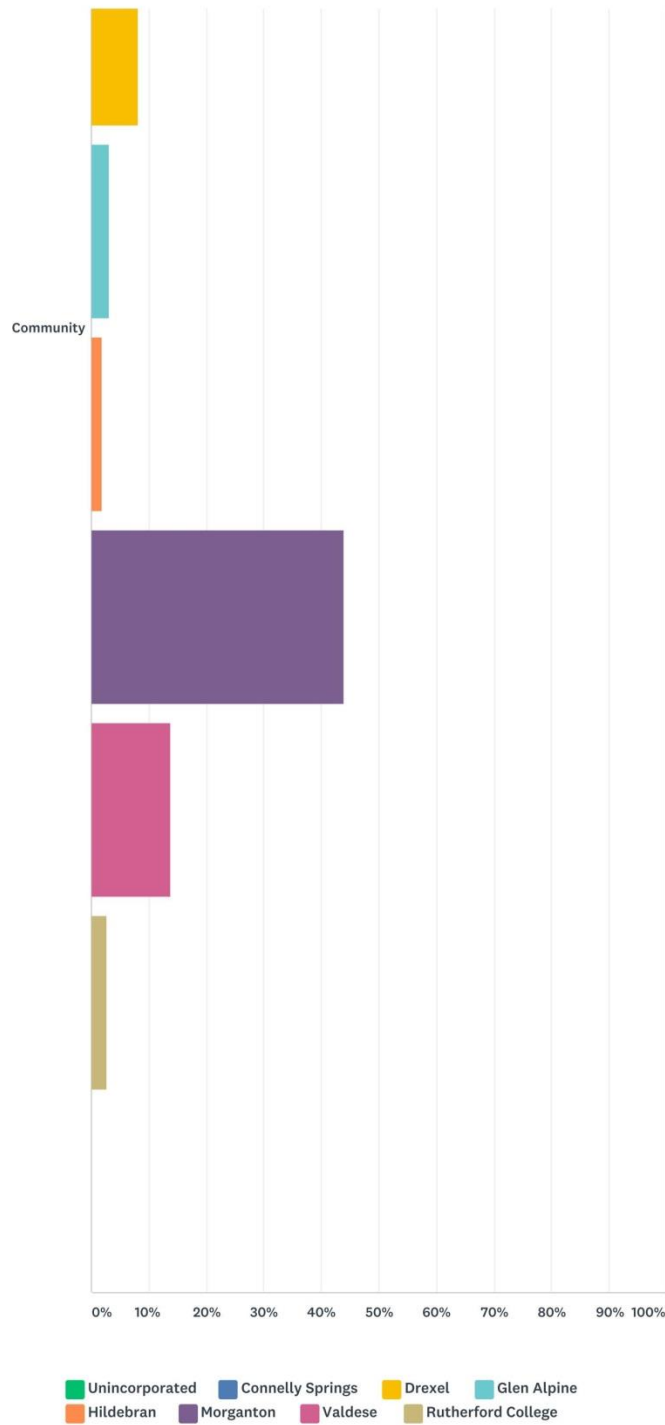


Unincorporated Taylorsville

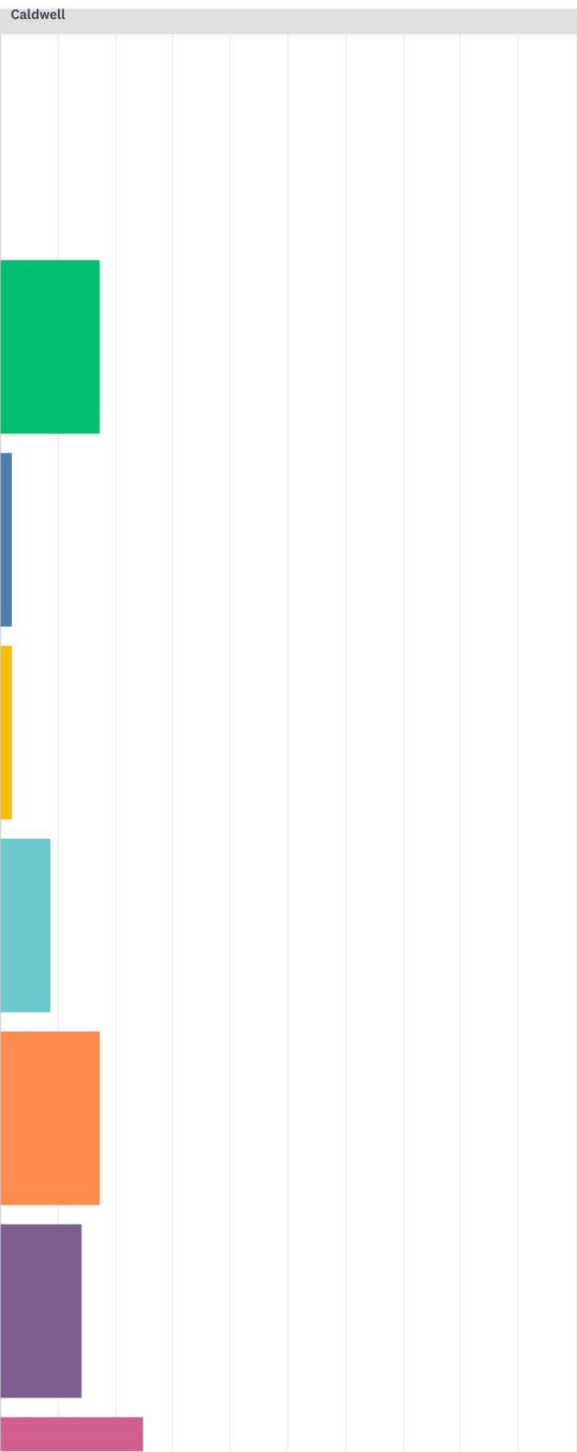


24 / 32

2019 Unifour Hazard Mitigation Plan Update

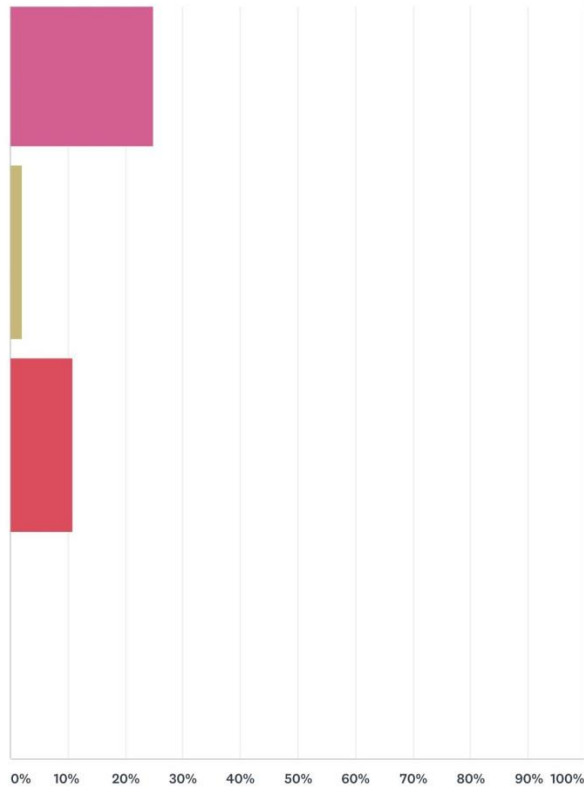


2019 Unifour Hazard Mitigation Plan Update

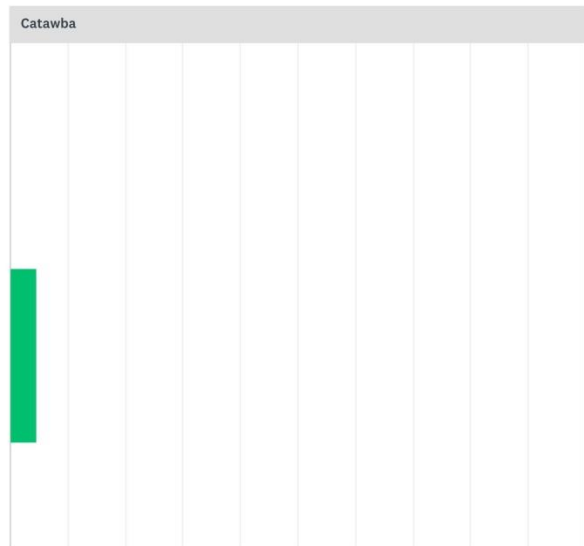


26 / 32

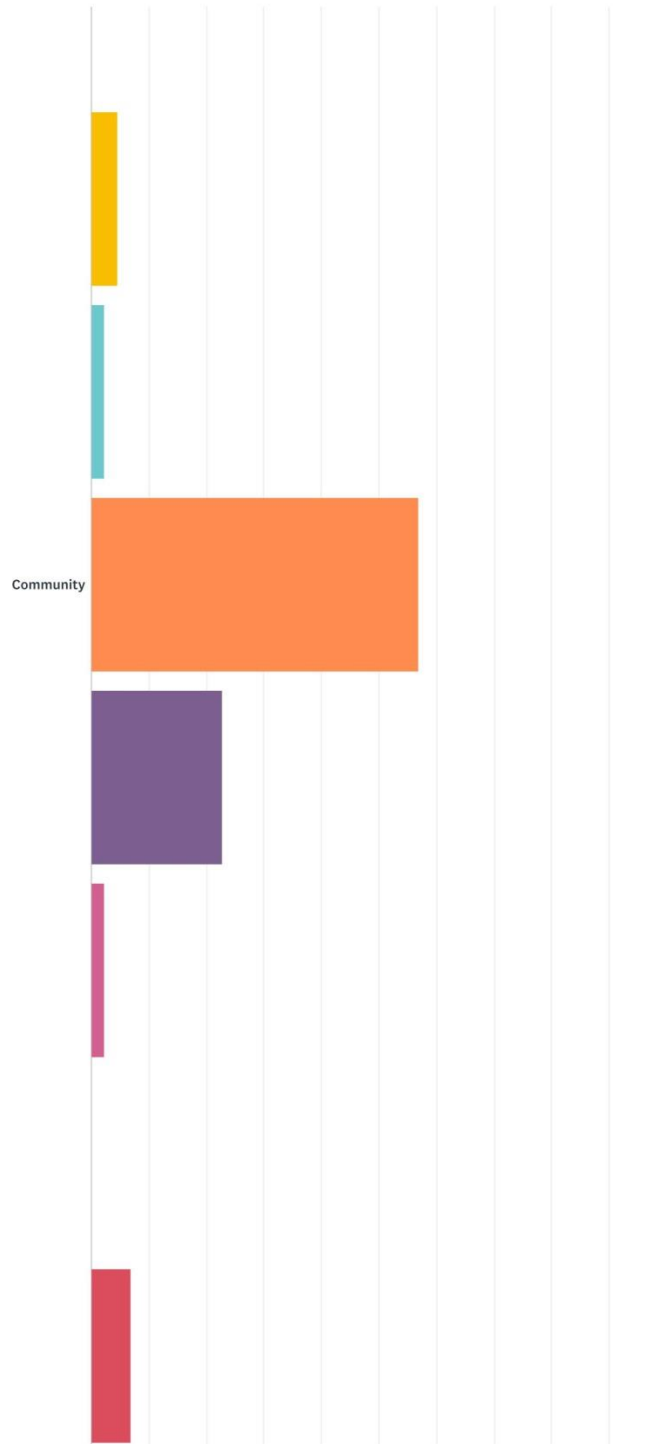
2019 Unifour Hazard Mitigation Plan Update



- Unincorporated
- Cahaj's Mountain
- Cedar Rock
- Gamewell
- Granite Falls
- Hudson
- Lenoir
- Rhodhiss
- Sawmills

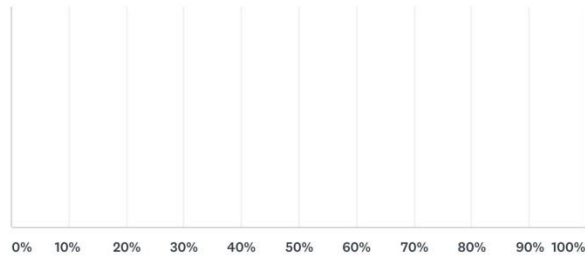


2019 Unifour Hazard Mitigation Plan Update



28 / 32

2019 Unifour Hazard Mitigation Plan Update



■ Unincorporated
 ■ Brookford
 ■ Catawba
 ■ Claremont
 ■ Conover
■ Hickory
 ■ Long View
 ■ Maiden
 ■ Newton

Alexander										
	UNINCORPORATED				TAYLORSVILLE				TOTAL	
Community	80.95%				19.05%					
	17				4				21	

Burke										
	UNINCORPORATED	CONNELLY SPRINGS	DREXEL	GLEN ALPINE	HILDEBRAN	MORGANTON	VALDESE	RUTHERFORD COLLEGE	TOTAL	
Community	18.39%	8.07%	8.07%	3.14%	1.79%	43.95%	13.90%	2.69%		
	41	18	18	7	4	98	31	6	212	

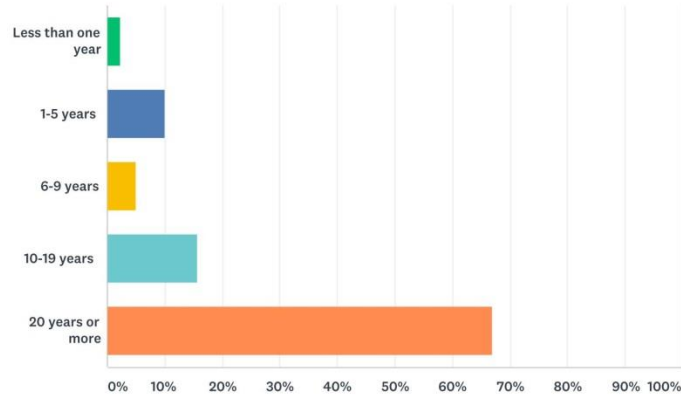
Caldwell										
	UNINCORPORATED	CAJAH'S MOUNTAIN	CEDAR ROCK	GAMEWELL	GRANITE FALLS	HUDSON	LENOIR	RHODHISS	SAWMILLS	TOTAL
Community	17.39%	2.17%	2.17%	8.70%	17.39%	14.13%	25.00%	2.17%	10.87%	
	16	2	2	8	16	13	23	2	10	

Catawba										
	UNINCORPORATED	BROOKFORD	CATAWBA	CLAREMONT	CONOVER	HICKORY	LONG VIEW	MAIDEN	NEWTON	TOTAL
Community	4.55%	0.00%	4.55%	2.27%	56.82%	22.73%	2.27%	0.00%	6.82%	
	2	0	2	1	25	10	1	0	3	

2019 Unifour Hazard Mitigation Plan Update

Q16 How long have you lived in the Unifour region?

Answered: 391 Skipped: 5

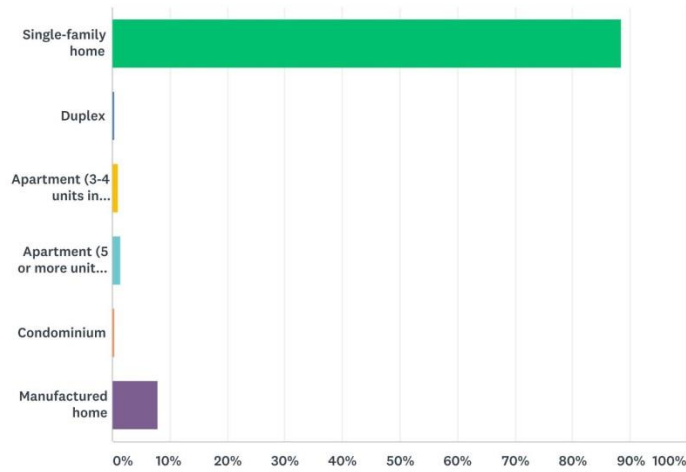


ANSWER CHOICES	RESPONSES	
Less than one year	2.30%	9
1-5 years	9.97%	39
6-9 years	5.12%	20
10-19 years	15.60%	61
20 years or more	67.01%	262
TOTAL		391

2019 Unifour Hazard Mitigation Plan Update

Q17 What type of building do you live in?

Answered: 388 Skipped: 8



ANSWER CHOICES	RESPONSES	
Single-family home	88.40%	343
Duplex	0.52%	2
Apartment (3-4 units in structure)	1.03%	4
Apartment (5 or more units in structure)	1.55%	6
Condominium	0.52%	2
Manufactured home	7.99%	31
TOTAL		388

2019 Unifour Hazard Mitigation Plan Update

Q18 Additional Comments

Answered: 39 Skipped: 357

32 / 32

Appendix G – Meeting Files

Unifour Regional Hazard Mitigation Plan Project Kickoff Meeting

November 29, 2018
8:30 a.m. – 12:00 p.m.
2345 Morganton Blvd
SW Lenoir, NC 28645

AGENDA

1. Welcome and Introductions
2. Project Overview
 - Purpose, scope and schedule
 - Roles and responsibilities
3. Plan Update Process
 - Planning team organization, including official adoption
 - Leveraging existing resources
 - Communication, including websites, social media, etc.
 - Capability Assessment surveys
 - Public outreach and stakeholder engagement strategy
 - Tracking time (for in-kind services)
4. Discussion of Existing Plan and Vision Moving Forward
 - Review existing mitigation goals
5. “Mayor for a Day”
 - Hazard identification and assessment exercise
 - Includes discussion of existing and new hazards
6. Exercise Results and Discussion
7. Questions and Open Discussion
 - Potential opportunities for this plan update
 - Potential obstacles or barriers
 - Other local issues, concerns or ideas

8. Next Steps

- Jurisdictions will review and begin updating 2013 Mitigation Action Plans (MAPs)
- Discuss time/date/location for Hazard Mitigation Planning Team Meeting #2

Unifour Regional Hazard Mitigation Plan
 Project Kick-off Meeting - November 29, 2018

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Karyn Yaussy	Catawba Co EM	828-465-8989	KYaussy@Catawbacountync.gov ✓
Karen Hamby	NCem	828-726-4000	Karen, Hamby @ncdps.gov
KENNETH TERGUE	Caldwell County EM	828-757-1419	kterguae@caldwellcountync.org
Vic Misnerhermer	Caldwell county EM	828-850-0995	vmisnerhermer@Caldwellcountync.org
MIKE WILLIS	BURKE CO EM	728-764-9321	MICHAEL WILLIS @BURKECO.ORG
Jeff Curran	Assoc. Super Caldwell Schools	828-310-2051	jothcurran@Caldwellschools.com
Alex Folbright	Asst. Planning Director City of Newton	(828) 895 4326	afolbright@Newtonnc.gov
LARRY PRICE	Colletsville Fire	828 729-0621	lprice@colletsvillefire.com
Eddie Anderson	Caldwell County EMS	828-757-1280	eanderson@caldwellcountync.org
Kim Mc Gee	Caldwell Co. Planning	828-757-6855	kimgm@Caldwellcountync.org

Unifour Regional Hazard Mitigation Plan
 Project Kick-off Meeting - November 29, 2018

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Russell Greene	Alexander County Emergency Services	828 632-1322	rgreene@alexander-county.nc.gov
CHRIS TIMBERLAKE	Asst. Planning Dir Catawba County	828-465-8382	ctimberlake@catawbacounty.nc.gov
Seth Harris	Alexander County Planning NC Em	821-632-1000	Sharris@alexandercounty.nc.gov
Terry Foxxy	Risk Management	828-228-8522	terry.foxxy@ncdps.gov
Hunter Nester	All 24 Municipalities, WPCOG, Dietel and Catawba	828-217-1017	Hunter.nester@wrcg.org
Allison Adams	WPCOG All 24 municipalities	704-682-2081	allisonadams@wpcog.org
Jenny Church	Town of Granite Falls	828 396 3131	churchj@granitefallsnc.com
Bryan Edwards	Grace Chapel Fire Dept	828-312-6655	bjedwards@gdnc.com
Marc Johnson	WATA / CCSO	828-217-0390	mjohnson@caldwellcountync.gov
Ken Hair	Kenoir Fire	828-217-1886	Ken@ci.keno.nc.us

Unifour Regional Hazard Mitigation Plan
 Project Kick-off Meeting - November 29, 2018

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Cheryl Braks	Civil Engineer 1 - Traffic City of Hickory	828-393-7500	abraks@hickorync.gov
Caleb Byrum	Utilities Engineer City of Hickory	828-323-7427	cbyrum@hickorync.gov
Mark Hinson	Fire Chief City of Coverson	828-464-1295	mark.hinson@coverson.gov
Christopher Ferguson	NCEM	(919) - 825-2569	christopher.ferguson@ncdps.gov
Blake Wright	Planning Director Town of Maiden	(928) 420.5034	bwright@maidennc.gov
Alexis Watts	TOWN OF VADESE CHIEF OF FIRE E.M.	(828) 879-2110	awatts@valdesenc.gov
Charl Gambell	Environmental Health Caldwell County	828 420 8579	cgambell@caldwellicountync.gov
Kenny Nelson	Deputy Chief Lenoir Fire	828-757-2192	knelson@lenoirnc.gov
Marty Walters	Mayor Co.	828-850-4386	martyn@marlindemil.nc.gov
Sharon Harmon	Caldwell Co Votefellow	828 754 7088	sharonsharonevotefellow@caldwellicountync.gov

Unifour Regional Hazard Mitigation Plan Update Project Kickoff Meeting

AECOM

Kelly Keefe, Lead Planner
Brent Edwards, Planner

November 29, 2018



AECOM

Agenda

- Welcome and introductions
- Project overview
- Review and discussion of existing plan
- Plan update and integration process
- Open discussion
- Next steps



Handouts

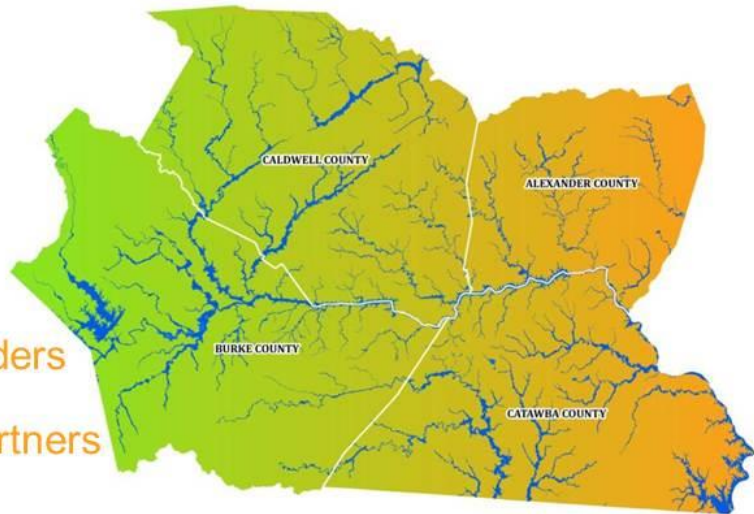
- Meeting agenda
- Meeting sign-in sheet
- Designated “Local Jurisdiction Leads” sign-up sheet



Welcome and Introductions

- **Unifour**

- Alexander County
- Burke County
- Caldwell County
- Catawba County



- **Other local stakeholders**

- **State and federal partners**

- **AECOM**



Project Overview

- **Purpose**

- To update the Unifour Regional Hazard Mitigation Plan for the Unifour area

- **Scope**

- Counties of Alexander, Burke, Caldwell and Catawba
- 28 participating jurisdictions
- Key tasks and subtasks

- **Schedule**

- Complete final draft plan for NCEM / FEMA review by June, 2019



Key Project Tasks

1. Planning Process

- 1.1 Project Initiation
- 1.2 Develop Public Outreach Strategy
- 1.3 Facilitate Regional Planning Team Meetings
- 1.4 Conduct Public Outreach
- 1.5 Document Planning Process

2. Risk Assessment

- 2.1 Data Collection and Analysis
- 2.2 Hazard Identification
- 2.3 Hazard Profiles and Mapping
- 2.4 Inventory of Community Assets
- 2.5 Vulnerability Assessment
- 2.6 Summarize Findings and Conclusions



AECOM

Key Project Tasks

3. Capability Assessment

- 3.1 Review Existing Capabilities
- 3.2 Summarize Findings and Conclusions

4. Mitigation Strategy

- 4.1 Update Goals and Objectives
- 4.2 Analyze Mitigation Actions and Projects
- 4.3 Prepare Mitigation Action Plans
- 4.4 Complete Mitigation Action Prioritization

5. Plan Maintenance Procedures

- 5.1 Plan Implementation
- 5.2 Plan Review and Update
- 5.3 Continued Public Involvement



Plan Update Process



Project Overview

- Roles and responsibilities

- AECOM

- Oversee, manage and document the completion of all key project tasks

- Lead County

- Serving as lead coordinating agency
- Designation of local project manager
- Assistance with the collection of documents, data and other information
- Logistics for project meetings
- Responding to general questions or inquiries from the public or stakeholders
- Coordinating with participating jurisdictions



Project Overview

- Roles and responsibilities

- All participating jurisdictions
 - Designate local jurisdiction lead
 - Attend Hazard Mitigation Planning Committee meetings
 - Coordination between counties, municipalities and local stakeholders
 - Data collection and information sharing
 - Mitigation strategy development (Mitigation Action Plans)
 - Assist with public outreach
 - Review and comment on draft plan materials



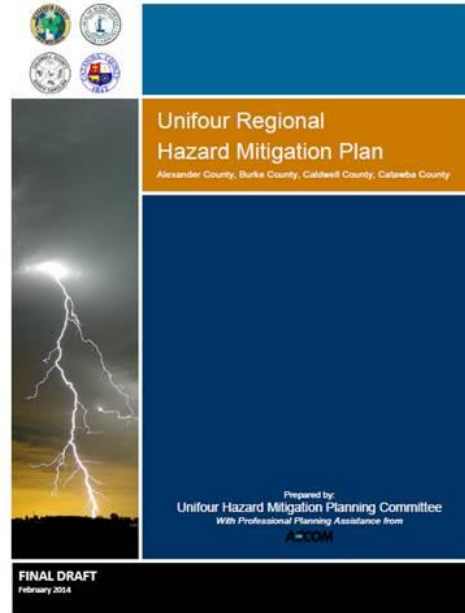
Review and Discussion of Existing Plans

- Alexander County and Town of Taylorsville Multi-Jurisdiction Hazard Mitigation Plan – (September 2009)
- Burke County Hazard Mitigation Plan – (December 2009)
- Caldwell County Multi-Jurisdictional Hazard Mitigation Plan – (December 2010)
- Catawba County Multi-Jurisdictional Hazard Mitigation Plan – (June 2010)



Review and Discussion of Existing Plans

- Unifour Regional Hazard Mitigation Plan (2014)



Task #1: Plan Development															
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	
Admin		10/1/2018													
Planning Process							3/1/2019								
Capability Assessment							3/1/2019								
Website and Survey Design				12/1/2018											
Capability Assessment								4/1/2019							
Risk Assessment								4/1/2019							
Hazard Profiles								4/1/2019							
Mitigation Goals and Strategies										5/1/2019					
Maintenance and Evaluation										5/1/2019					
CRS Incorporation										5/1/2019					
Risk Map Interpretation										5/1/2019					
Community Wildfire Protection Requirements										5/1/2019					
Public Meetings							3/1/2019			5/1/2019					
Planning Meetings					1/1/2019		3/1/2019			5/1/2019					
Review State Plan			11/1/2019												
Maps							3/1/2019								
RMT Resiliency Assessment									5/1/2019						
RMT Hazard Mitigation Module									5/1/2019						
Task #2: NCEM Review, FEMA Review and Final Plan															
Milestones	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	
NCEM HMP Plan Review											7/1/2019				
FEMA HMP Plan Review												8/1/2019			
Plan Revision HMP													9/1/2019		
Plan Revisions Resiliency									5/1/2019						
Adoption Resolution Support														10/1/2019	

Hazards Addressed

- Dam/levee failure
- Drought/extreme heat
- Earthquake
- Erosion
- Flood
- Hail
- Hurricane
- Landslide
- Lightning
- Thunderstorm
- Tornado
- Wildfire
- Winter weather



Mitigation Strategy

- Strategies
- Goals
- Objectives
- Actions
- Implementation plans

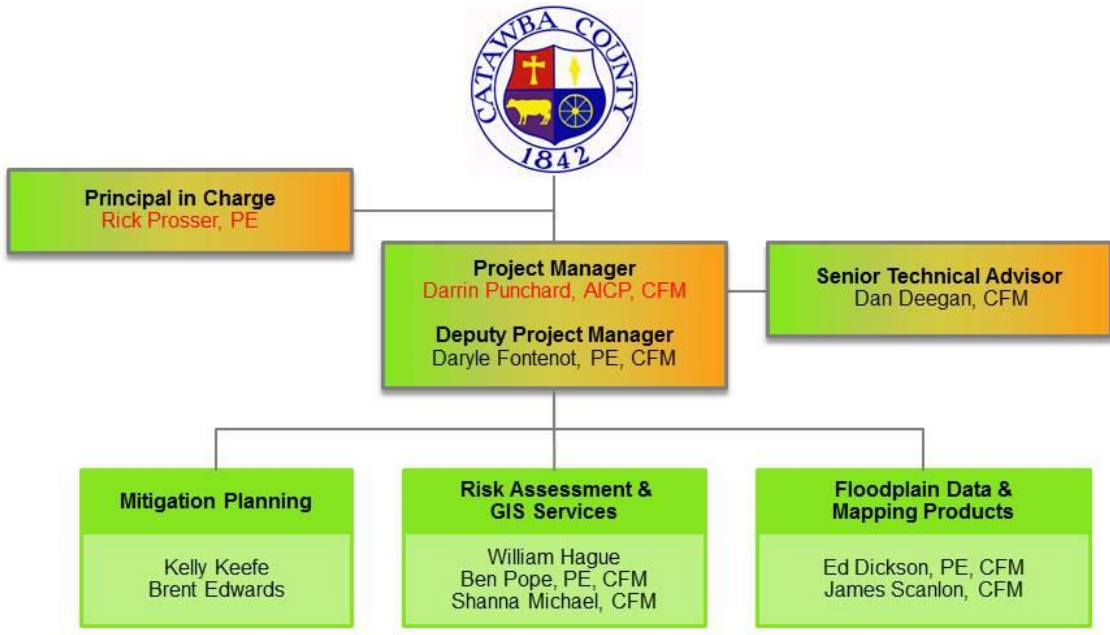


Plan Update and Integration Process

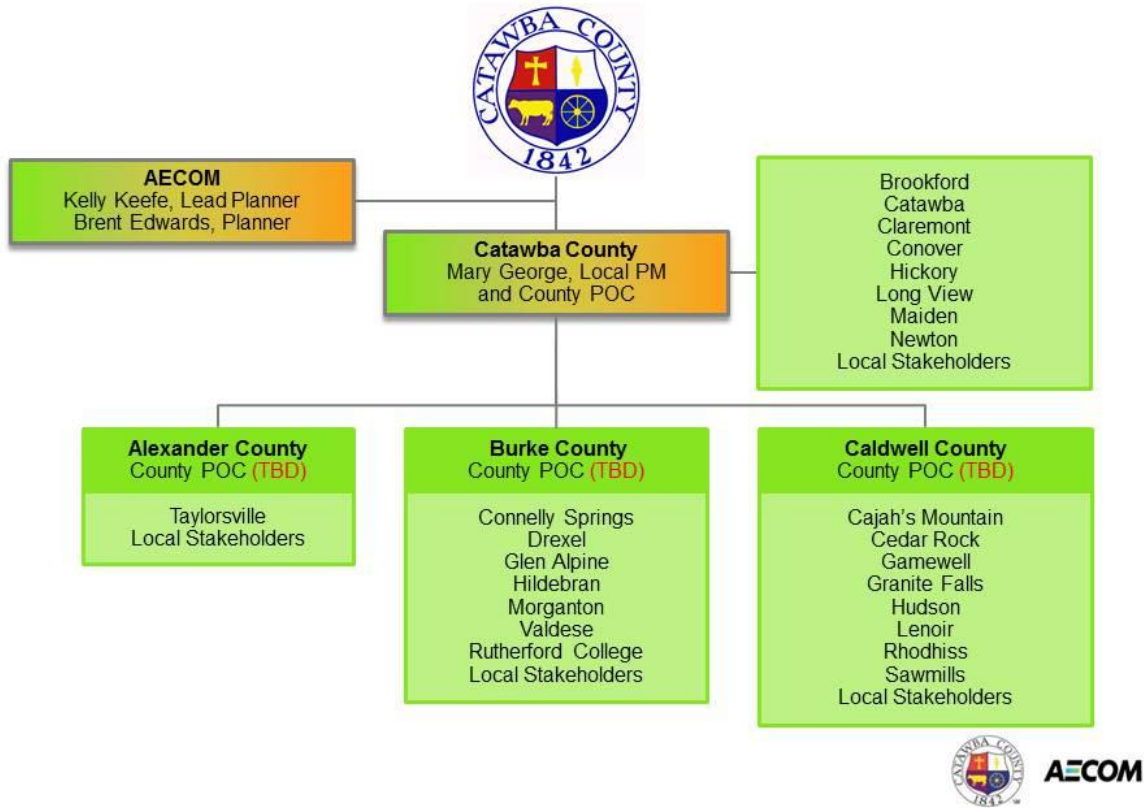
- Planning team organization
- Leveraging existing resources
- Communication
- Data collection
- Public outreach/stakeholder engagement



AECOM Team



Planning Team Organization



Leveraging Existing Resources

- Existing plans, studies and reports
 - Including existing mitigation plans
- Existing data and information
 - Including GIS data
- Local knowledge sharing
- Other resources?



Planning Resources

- **FEMA planning guidance**
 - *Local Mitigation Planning Handbook*
 - *Mitigation Ideas*
 - *Integrating Hazard Mitigation Into Local Planning*



- **Links to other online planning resources**



Communication

- Planning team organization
- Work through channels (2-way communication)
 - Electronic worksheets and surveys to be used for collecting information from all local participating jurisdictions
 - Jurisdictions Leads / POCs assigned primary responsibility, but must coordinate with other local staff
- Project website
- Responsiveness in light of aggressive schedule
- Participation is crucial!



Data Collection

- GIS data collection “wish list”
 - Political boundaries
 - Parcel boundaries and tax information
 - Buildings, infrastructure and critical facilities
 - Transportation
 - Land use
 - Hazard data
- Use same communication channels
- Best readily available data in usable format
- Reasonable consistency across the planning area
- NC OneMap



Public Outreach Strategy

- **Goals**
 - Generate public interest
 - Solicit citizen input
 - Engage additional partners in the planning process
- **Identification of specific opportunities for participation**
 - In-person meetings
 - Project information website
 - Web-based survey(s)
 - Social media (Facebook, Twitter, RSS, etc.)
- **Products/resources**
 - Project information fact sheet



Open Discussion

- Potential opportunities or synergies
- Potential barriers or impediments
- Other local issues, concerns or ideas



Next Steps

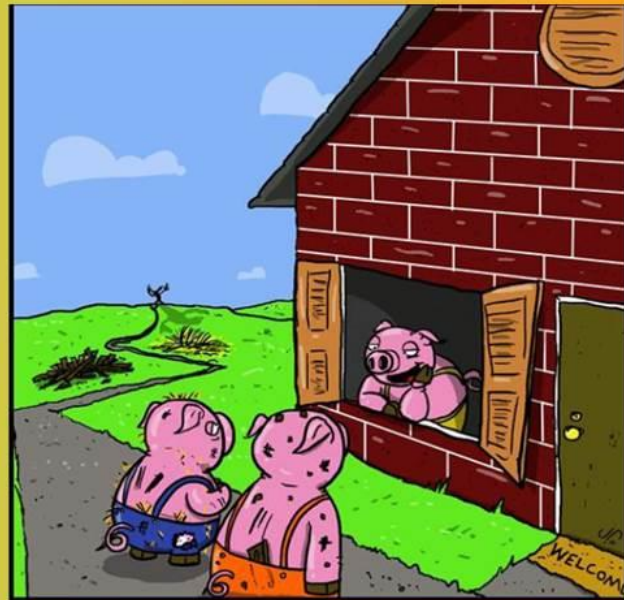
- Assignment of Jurisdiction Leads / POCs (**ASAP**)
- Data collection (through **December**)
- Finalize *Public Outreach Strategy* (by **December**)
- Prepare preliminary risk assessment decisions, analysis and map templates (by **January**)
- Next meeting: **January**



Thank You

Kelly.keefe@aecom.com

Brent.edwards@aecom.com



"Mitigation isn't so funny now, is it?"



AECOM

Unifour Regional Hazard Mitigation Plan

Hazard Mitigation Planning Committee Meeting #2

January 24, 2019

8:30 a.m. – 1:00 p.m.

2345 Morganton Blvd SW Lenoir, NC 28645

AGENDA

1. Welcome and Introductions
2. Public Outreach Strategy
3. Risk Assessment Results
4. Capability Assessment Update
5. Break
6. Vision Statement and Mitigation Goals
7. Mitigation Strategy Update
8. Open Discussion
9. Next Steps

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #2 - January 24, 2019

	NAME	TITLE / AFFILIATION	PHONE	E-MAIL
1	KENNETH A TERRELL	CALDWELL CO EM	828-850-3947	ktgagne@calwellcoem.org
2	MORTY C. WATSON	MAJORS COMPANY	828-850-9538	morty@mafi.commercial.net
3	CHARLES WATTS	TOWN OF VALESE	828-443-0881	cutts@valdesenc.gov
4	COL O'NEHY	CITY OF HICKORY	828-323-7487	coverby@hickorync.gov
5	GREG WILSON	GRANITE FALLS	828-396-3131	wilson@granitefallsnc.com
6	SCOTT LUTKADLO	CITY OF MORGANTON	828 438 9602 438 5248	slutkad@ci.morgantonnc.us
7	PHILIP LUTKADLO	CITY OF MORGANTON	828-938-5270	plutkad@ci.morgantonnc.us
8	BLAKE BRIGHT	TOWN OF MIDDLESBORO	828-428-5034	bright@middleboro.gov
9	JORDAN CRAMER	CALDWELL UNC HEALTHCARE	828-959-8089	jordan.cramer@unchealthcare.edu
10	KEN HARR	LENOIR FIRE	828-757-2191	kharr@ci.lenoir.nc.us

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #2 - January 24, 2019

	NAME	TITLE / AFFILIATION	PHONE	E-MAIL
11.	Tamara Brooks	Town Administrator	828-679-2321	clerk@ci.connelly-springs.nc.us
12.	Shelley Stevens	Planning Director George Rock	828-426-8354	sstevens@calwellcounty.nc.org
13.	Ernie McAteer	Councilman Rowan/Pknes Alexander County	828-381-7841 826 630-100)	emcateer@charter.net
14.	Seth Harris	City of Newton	(828) 622 695 4322	sharris@alexandercounty.nc.us
15.	Alex Fulbright	Fire Chief / City of Charlotte	828-323-5795	afulbright@newburne.gov
16.	Mark Hinson	City of Concord / Fire Chief	828-320-5336	mhinson@concordnc.gov
17.	Mark Hinson	City of Concord / Fire Chief	828-320-5336	mhinson@concordnc.gov
18.	Mike Willis	EM Director	824-769-9321	micethelwillis@burlenc.org
19.	Karyn Yaussey	Catawba Co EM	8284658989	KYaussey@CatawbacountyNC.gov
20.	Jeff Churd	Association Superintendent / Caldwell Schools	828-512-2051	jeffchurd@caldwellschools.com

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #2 - January 24, 2019

	NAME	TITLE / AFFILIATION	PHONE	E-MAIL
21.	Daniel Duncan	City Manager City of Conway, N.C.	828 277 0529	daniel.duncan@conwaync.gov
22.	Brandon Edwards	Fire Captain Town of Granite Falls NC	928 503 8202	gett@granitefallsnc.com
23.	Charles Mullis	Planner / Town of Long View	828 322 3921	charles.mullis@mail.ci.longview.nc
24.	John E. Wear	WPCOG - Senior Planner Rep for: Sawmills, Hubson, Gamwell, Radford College, Vastler, Drexel, Hillsperry, C. Taylor	828-485-4283	john.wear@wpcog.org
25.	Chad Coffey	PC/AAC Health Rep.	828-422-2461	ccoffey@cedwellcounty.org
26.	Russell Green	Alexander County Emergency Services	828 622 5021	rgreen@alexandercounty.org
27.	Mary A. Howell	Alexander County Emergency Services	828-405-2008	Mhowell@alexandercounty.org

Unifour Regional Hazard Mitigation Plan *HMPC Meeting #2*

AECOM

Mike Robinson, Lead Planner
William Hague, GIS Specialist

July 30, 2013



Agenda

- Welcome and introductions
- Public outreach strategy
- Hazard ID exercise and risk assessment recommendations
- Capability assessment/safe growth survey
- Vision statement and mitigation goals
- Data collection progress
- Open discussion
- Next steps



Handouts

- Meeting agenda
- Meeting sign-in sheet
- Public Outreach Strategy
- Capability Assessment Survey
- Safe Growth Survey
- Sample maps



Public Outreach Strategy

Public Outreach Strategy

- Refer to handout
- Goals
 - Generate public interest
 - Solicit citizen input
 - Engage additional partners in the planning process
- Outreach opportunities and resources
 - In-person public meetings (2)
 - Project information website with social media integration
 - Project information fact sheet
 - Web-based public participation survey
 - Links to planning resources for interested parties



In-Person Public Meetings (2)

- **Scheduled at key points during the project timeline**
 - Following completion of the draft risk and capability assessments
 - Following completion of the draft plan
- **Inform the public on the process and current status of the regional planning process**
- **Gain input to the process during the drafting stage and prior to plan completion and approval**
- **AECOM will prepare presentation and handout materials to help facilitate two-way communication with public meeting attendees**



Project Information Website

SOCIAL MEDIA INTEGRATION

PROJECT CONTACT INFORMATION

EXISTING PLAN DOCUMENTS

FEDERAL PLANNING GUIDANCE

DETAILS ON NEXT SLIDE

CONTACTS, TASK LISTS, MEETING SLIDES AND HANDOUTS, ETC.

Bookmark & Share

Quick Links

- Community Alert Registration
- Special Needs Registry
- Be Prepared Catawba
- Pet Safety
- Shelter & Evacuation

2014 Unifour Regional Natural Hazard Mitigation Plan

- Emergency Services Home
- Catawba County Home

Contact: Karyn Yausby
Emergency Management Coordinator
Phone: (828) 465-8909
Email: Karyn.Yausby@co.catawba.nc.us

Physical Address:
1102 A SW Blvd
Lexington, NC 28658

Mailing Address:
PO Box 389
Lexington, NC 28658

Office Hours:
M - F 8:00 a.m. - 5:00 p.m.

REGIONAL PLAN IS UNDER DEVELOPMENT

- Planning Committee
- Existing Plans
 - Alexander County Plan
 - Burke County Plan
 - Caldwell County Plan
 - Catawba County Plan
- Other Resources

Fact Sheet

Share Page | **Rate Page** | **Email Page** | **Print Page**

© 2013, Catawba County Government, North Carolina. All rights reserved.
Disclaimer - Privacy/Security Notice

DIGITAL COUNTRIES SURVEY

AECOM

Project Information Fact Sheet

Fact Sheet

Unifour Regional Hazard Mitigation Plan

Natural hazards have the potential to cause property damage, loss of life, economic hardship, and threats to public health and safety. Hazard mitigation measures are the things we do today to be more protected in the future. They are actions taken before a disaster happens to reduce the impact of future hazard events on people and property in the community. Mitigation reduces the risk of loss and creates a more resilient and sustainable community.

Project Overview

The counties of Alexander, Burke, Caldwell and Catawba, in coordination with their participating municipal jurisdictions, are preparing a **regional hazard mitigation plan** that will cover the four-county Unifour area. The Unifour Regional Hazard Mitigation Plan will identify local policies and actions for reducing risk and future losses from natural hazards such as floods, severe storms, wildfires, and winter weather. It will build upon four separate hazard mitigation plans that were initially prepared by each county in coordination with their municipalities.

The plan will also serve to meet key federal planning regulations which require local governments to develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance, including funding for hazard mitigation projects.

These mitigation planning requirements stem from the Disaster Mitigation Act of 2000, which was passed by the U.S. Congress in October of 2000. This Act amended federal law to require that all states and local governments must have hazard mitigation plans in place in order to be eligible to apply for funding under such programs as the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) program.

The Planning Process

The planning process for the Unifour Regional Hazard Mitigation Plan will consist of six main phases described in detail in the following sections: **public outreach, risk assessment, capability assessment, mitigation strategy development, plan maintenance, and plan adoption.** The end result will be a new regional hazard mitigation plan based in part on the existing plans of the four separate counties and based in part on this new planning effort.

Above: The plan update process being followed for the Unifour Regional Hazard Mitigation Plan.

Public Outreach

The goals of the public outreach strategy for this planning effort are to: generate public interest, solicit citizen input, and engage additional partners in the planning process.

Public outreach will include two open public meetings, a project information website at <http://www.catawbacountync.gov/emergency-services/hazard/regionalPlan.asp>, a web-based public participation survey (accessible through the website), and updates and information shared via social media, such as on Facebook.

Risk Assessment

The desired outcomes of a risk assessment are an evaluation of each hazard's potential impacts on the people, economy, and built and natural environments in the planning area plus an understanding of each participating jurisdiction's overall vulnerability and most significant risks. These potential impacts and a thorough understanding of the overall vulnerability can be used to create problem statements and identify and prioritize mitigation actions to reduce risk.

Capability Assessment

Each participating jurisdiction has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources available to accomplish mitigation and reduce long-term vulnerability. By reviewing the existing capabilities in each jurisdiction, the planning team can identify capabilities that currently reduce disaster losses or could be used to reduce losses in the future.

Mitigation Strategy Development

The primary purpose of mitigation planning is to systematically identify policies, actions, and activities to reduce the impact that future natural hazard occurrences will have on people and property in the planning area. Mitigation strategy development includes long-range mitigation goals common to the planning area and short-term mitigation actions specific to each participating jurisdiction.

Plan Maintenance

Plan maintenance is the process established to track the plan's implementation and to aid in updating the plan every five years. These procedures help to ensure that the mitigation strategy is implemented according to the plan. They also provide the foundation for an ongoing mitigation program, standardize long-term monitoring of hazard-related activities, integrate mitigation principles into local officials' daily job responsibilities, and maintain momentum through continued engagement and accountability in the plan's progress.

Plan Adoption

Each participating jurisdiction seeking plan approval must adopt the plan. Adoption by the local governing body demonstrates the community's commitment to implementing the mitigation strategy and authorizes responsible agencies to execute their actions. The final plan is not approved until the community adopts the plan and FEMA receives documentation of formal adoption by the governing body of the jurisdictions requesting approval.

Project Leadership

This regional planning effort is being led by the Catawba County Planning, Parks & Development office and Catawba County Emergency Services, with technical assistance from AECOM. A local Hazard Mitigation Planning Committee made up of local officials, representatives, and stakeholders has been established to guide this process. In addition, local points of contact have been established for each of the four counties as well as all of the participating municipal jurisdictions. Planning committee meetings and open public meetings will be scheduled to occur at key points throughout the project timeline.

Schedule

The planning process began in June 2013 and a fully updated plan is expected to be ready for review by the North Carolina Division of Emergency Management and the Federal Emergency Management Agency by January 2014. Draft documents will be available on the project information website at various stages in the planning process.

For More Information

To learn more about this project, or to find out how you can be involved, please contact Mary George, Catawba County Assistant Planning Director, at (828) 465-8264 or mary@catawbacountync.gov.

Additional information and regular updates throughout the duration of this project can be found on the Unifour Hazard Mitigation Planning website at <http://www.catawbacountync.gov/emergency-services/hazard/regionalPlan.asp>.

Online Public Participation Survey

9. Are you interested in making your home or neighborhood more resistant to natural hazards?

Yes
 No

10. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to natural hazards?

Newspaper
 Television
 Radio
 Internet (Web Pages)
 Other (please specify): _____

Internet (Social Media)
 Mobile Messages/Alerts
 Mail
 Public workshops/meetings

11. Is your home located in a floodplain?

Yes
 No
 I don't know

12. Do you have flood insurance?

Yes
 No
 I don't know

13. If "No," why not?

Not located in a floodplain
 Too expensive
 Not necessary because it never floods
 Not necessary because I'm elevated or otherwise protected
 Never really considered it

4. In your opinion, which of the following categories are most susceptible to natural hazards in your community? (Please rank the community assets in order of vulnerability, 1 being most vulnerable and 6 being least vulnerable.)

People: Loss of life and/or injuries
 Economic: Business interruptions/closures, job losses, etc.
 Infrastructure: Damage/loss of roads, bridges, utilities, schools, etc.
 Cultural/Historic: Damage or loss of libraries, museums, historic properties, etc.
 Environmental: Damage, contamination or loss of forests, wetlands, waterways, etc.
 Governance: Ability to maintain order and/or provide public amenities and services

5. How important are the following specific community assets to you? (Check the appropriate circle for each asset)

	Very important	Somewhat important	Neutral	Not Very important	Not important
Elder care Facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schools (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Major Bridges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fire/Police Stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Museums/Historic Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Major Employers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Small Businesses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Colleges/Universities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
City Hall/Courthouse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Planning Resources

- **FEMA mitigation planning guidance**
 - *Local Mitigation Planning Handbook*
 - *Mitigation Ideas*
 - *Integrating Hazard Mitigation Into Local Planning*



- **Links to other online planning resources**



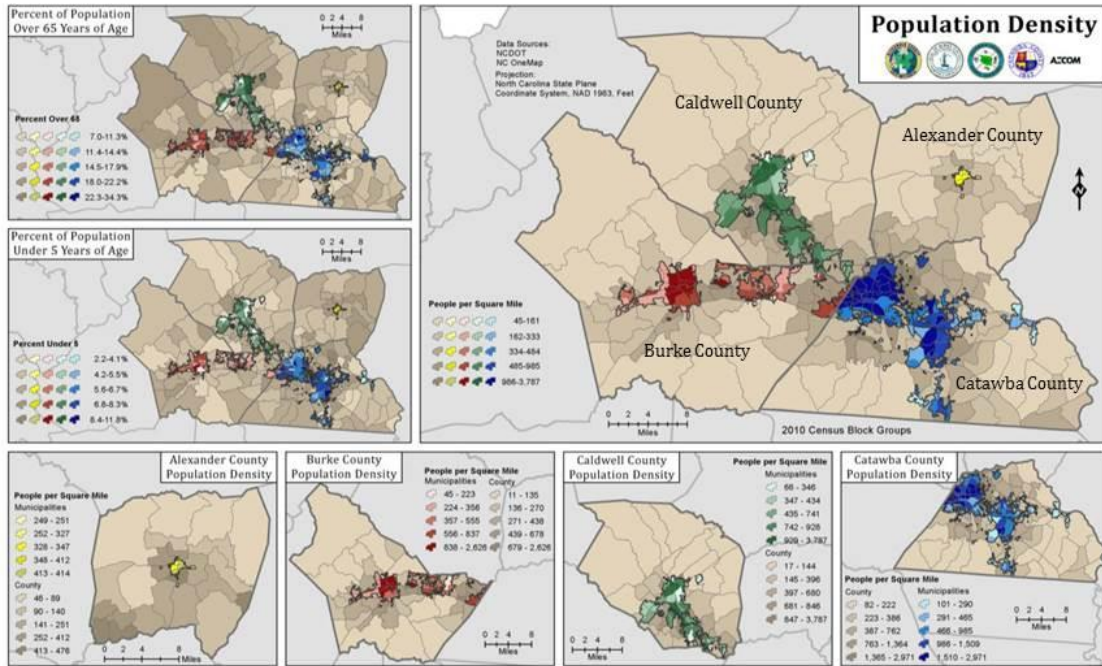
Hazard Identification Exercise and Risk Assessment Recommendations

“Mayor For the Day”

- Dam/levee failure
- Drought/extreme heat
- Earthquake
- Erosion
- Flood
- Hail
- Hurricane
- Landslide
- Lightning
- Nor'easter
- Thunderstorm
- Tornado
- Wildfire
- Winter weather



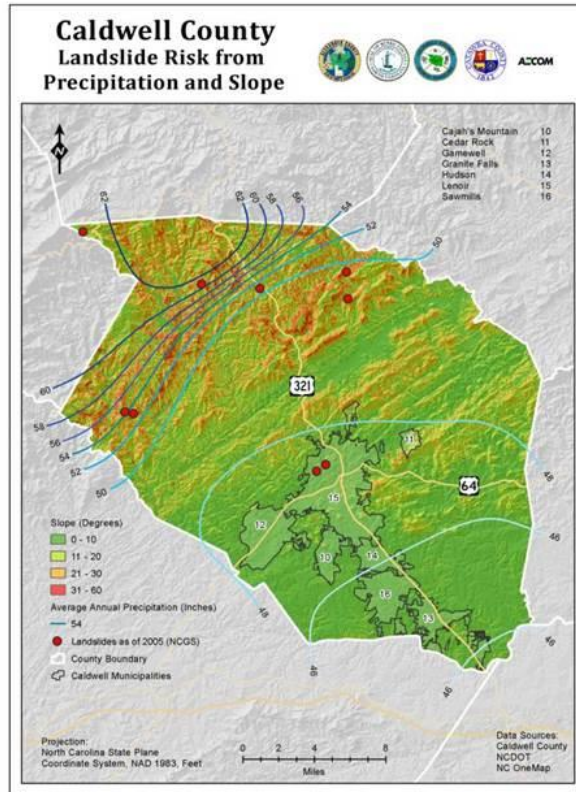
Sample 11x17 Map w/Insets



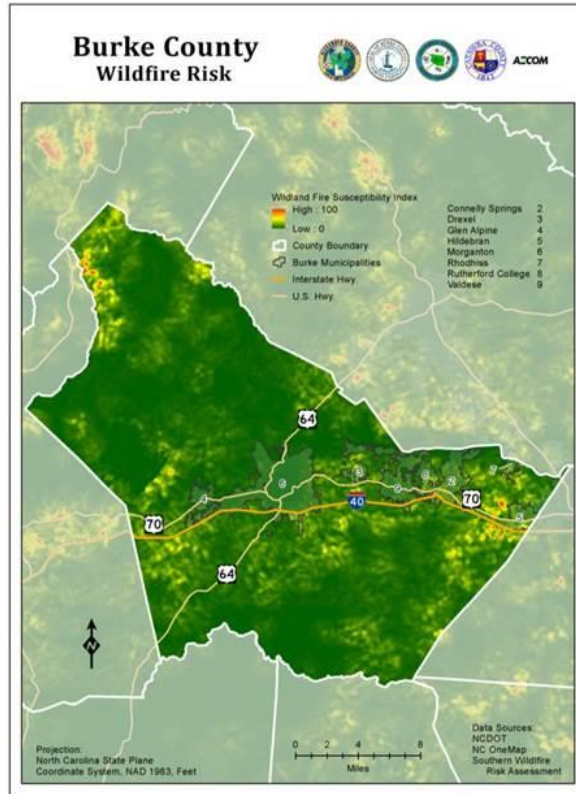
Sample 8.5x11 Landscape Community Profile Map



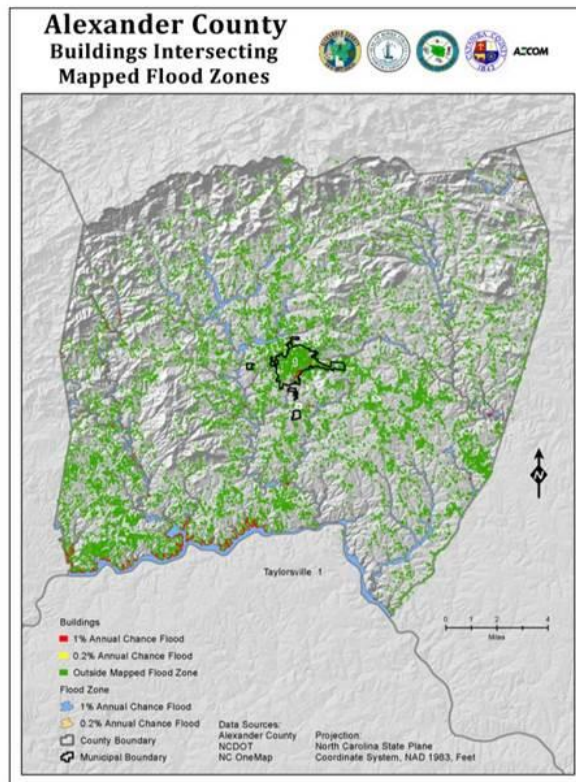
Sample
8.5x11
Portrait
County
Map –
Landslide



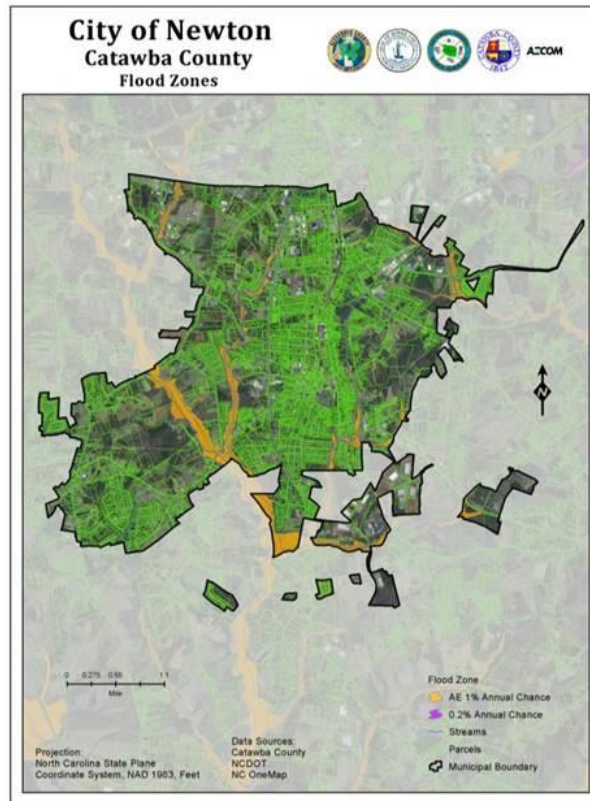
Sample
8.5x11
Portrait
County
Map –
Wildfire



Sample
8.5x11
Portrait
County –
At-Risk
Structures



Sample
8.5x11
Portrait
Municipal
Map – Flood



Capability Assessment/ Safe Growth Survey

Capability Assessment Survey

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education and outreach capability
- Political capability
- Self assessment
- Deadline



Safe Growth Survey

- Comprehensive Plan
 - Land use
 - Transportation
 - Environmental management
 - Public safety
- Zoning ordinance
- Subdivision regulations
- Capital improvement program and infrastructure policies
- Other



Vision Statement and Mitigation Goals

Vision Statement

- Captures the overall purpose of the planning process
- Expresses the outcome that the participating jurisdictions seek to accomplish as the plan is implemented
- Helps drive the planning process
- Unites the planning team around a common purpose
- Provides a foundation for the rest of the planning process
- Communicates the reason for the plan to stakeholders, elected officials and the public



Vision Statement

“Through a cohesive regional planning effort, create and implement an effective hazard mitigation plan that will identify and reduce risk to natural hazards in order to protect the health, safety, quality of life, environment and economy of the Unifour area.”



Mitigation Goals

ALEXANDER	BURKE	CALDWELL	CATAWBA
Strategy Elements		Strategies	
Mitigation Goals	Planning Goals	Community Goals	Mitigation Goals
	Plan Objectives	Hazard Mitigation Objectives	
Action Plans (similar to implementation plans)			
Detailed goals (similar to projects or actions)	Hazard mitigation activities	Mitigation Strategies (similar to actions)	Mitigation Actions

- Goals: Long-term policy type statements
- Objectives: Define specific steps needed to achieve goals
- Actions: Specific, usually short-term, projects or activities



Data Collection Progress

Data Collection Status

- Received data for Alexander, Caldwell and Catawba counties
- GIS data collection “wish list”
 - Political boundaries
 - Parcel boundaries and tax information
 - Buildings, infrastructure and critical facilities
 - Transportation
 - Land use
 - Hazard data
- Use same communication channels
- Best readily available data in usable format
- NC OneMap



Open Discussion

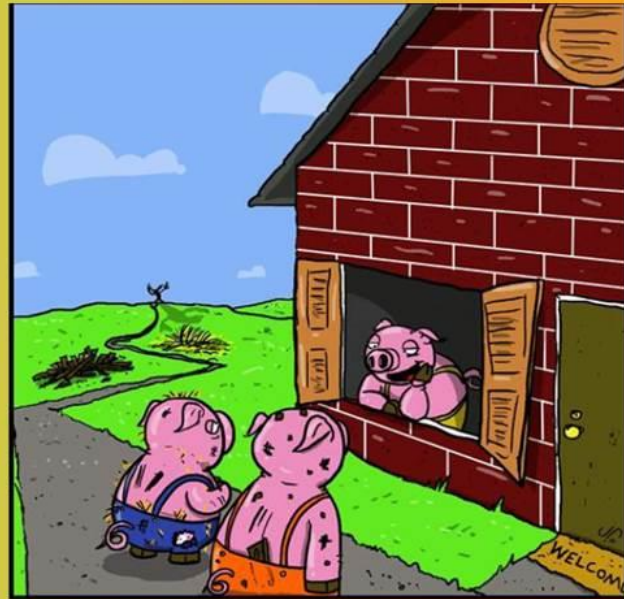
Next Steps

- Data collection (through **July 31**)
- Final draft risk assessment results
- Final draft capability assessment results
- Next meeting (Mitigation Strategy Workshop)



Thank You

mike.robinson@aecom.com
darrin.punchard@aecom.com



"Mitigation isn't so funny now, is it?"



Unifour Regional Hazard Mitigation Plan

Hazard Mitigation Planning Team Meeting

Thursday, March 14, 2019

9:00 a.m. to 12:00 p.m.

2345 Morganton Blvd SW

Lenoir, NC 28645

1. Welcome and Introductions
2. Review Mitigation Action Plans (MAPs)
3. Maintaining Momentum and Implementing the Plan
 - Update on Public Participation Survey
 - Keeping the public and stakeholders involved
 - Plan Maintenance Procedures
4. Overview of Draft Hazard Mitigation Plan
 - Status on plan sections
 - Review/comment process
 - Suggested areas of focus
5. Questions and Open Discussion
6. Next Steps
 - Final draft
 - State and FEMA review
 - Local adoption
 - Time/date/location for next meeting

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #3 – March 14, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
KENNETH A TERRELL	CAROLINA Co. EM	828-350-3977	ktgagne@carolinacountymc.org
MARTY C. WYSE	Mason Company	828-850-4222	marty@ma-frenchwood.net
CHARLES WATTS	Town of Valdese	828-443-0881	cwatts@valdesenc.gov
Cal Overy	City of Hickory	828-323-7487	coverby@hickorync.gov
Greg Wilson	Granite Falls	828-396-3131	Wilson@granitefallsnc.com
Scott Lookadoo	City of Morganton	828 5248 828 448 9609	slookadoo@ci.morgantonnc.us
Phillip Lookadoo	City of Morganton	828-938-5270	plookad@ci.morgantonnc.us
Brian Bright	Town of Maiden	828 428-5034	bbright@maidennc.gov
Jordan Crames	Cabwell UNC Healthcare	828-959-8089	jordan.crames@unchealthcare.edu
KEN HAIR	LENOIR FIRE	828-757-2191	khair@ci.lenoir.nc.us

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #3 – March 14, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
David Duncan	City Manager City of Conway, N.C.	828 217 0829	david.duncan@conwaync.gov
Brandon Edwards	Fire Captain Town of Granite Falls NC	828 503 8202	ged@granitefallsnc.com
Charles Mullis	Planner / Town of Long View	828 322 3921	charles.mullis@mail.ci.longviewnc.nc
Sohn E. Wear	WREG - Senior Planner Rep for: SummitCo, Huber, Conway, Randolph College, Vester, Dreyfus, Widdowson, Carver	828-485-4283	john.wear@wregos.org
Chad Coffey	PC/AAC Health Rep.	828-426-2461	ccoffey@caldwellcountync.org
Russell Green	Alexander County Emergency Services	828 625 5321	rsgreen@alexandercountync.org
Mark A. Howell	Alexander County Emergency Services	828-405-2008	MHowell@alexandercountync.org

Unifour Regional Hazard Mitigation Plan

HMPC Meeting #3

AECOM

Kelly Keefe, Lead Planner
Brent Edwards, Planner



Agenda

- Welcome and introductions
- Mitigation Action Plans
- Public Participation Survey results
- Plan Maintenance Procedures
- Overview of working draft
- Next steps
- Open discussion



Mitigation Action Plans

Public Participation Survey Results

Plan Maintenance Procedures

Plan Maintenance Questions

- Who will be the lead agency for future mitigation planning meetings, updates, progress reports, etc.?
- What will be the schedule for any ongoing meetings of the HMPC, prior to the next 5-year plan update?
 - Annual meetings, bi-annual meetings, “as-needed” meetings, etc.
- To what extent will you seek to integrate the regional plan with other local plans, policies and programs?
 - Comprehensive plans, land use plans, emergency operations plans, etc.
- What other implementation strategies can you use?



Plan Maintenance Questions

- What kind(s) of reporting procedures would you like to adopt?
 - Just what is included in the next 5-year plan update?
 - Annual progress reports?
 - Who would they be submitted to and by whom?
 - Interim progress report halfway to the next 5-year plan update?
 - Who would it be submitted to and by whom?
- How will you keep the public involved?
- How will you keep stakeholders involved?



Next Steps

- Review/comment period
- Final draft
- State and FEMA review
- Local adoption

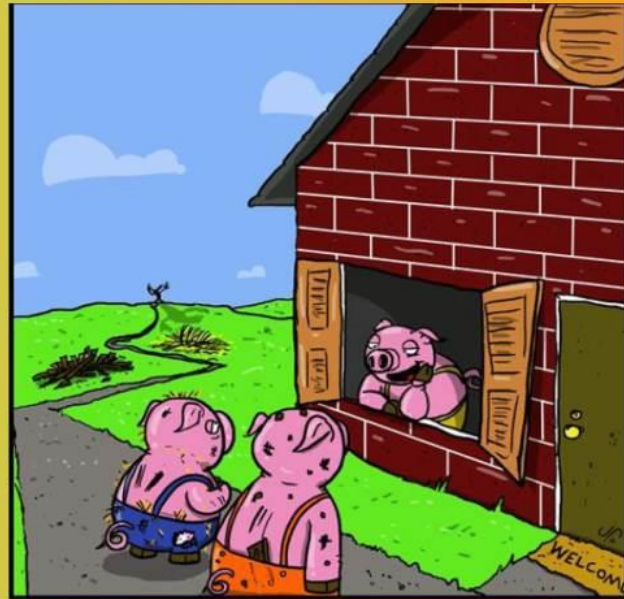


Open Discussion

Thank You

Kelly.keefe@aecom.com

Brent.edwards@aecom.com



"Mitigation isn't so funny now, is it?"



Unifour Regional Hazard Mitigation Plan

Hazard Mitigation Planning Team Meeting

Thursday, April 18, 2019

9:00 a.m. to 12:00 p.m.

2345 Morganton Blvd SW

Lenoir, NC 28645

1. Welcome and Introductions
2. Review Capability Assessments
3. Review Mitigation Action Plans (MAPs)
4. Reviewing the Final Draft
 - Status on plan sections
 - Review/comment process
 - Suggested areas of focus
5. Local Adoption Process
6. Resiliency Assessment
7. Questions and Open Discussion
8. Next Steps
 - Final draft
 - State and FEMA review
 - Local adoption
 - Time/date/location for next meeting

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #4 - April 18, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Alex Ferguson	NC EM	(919) 925-2565	christopher.ferguson@ncdps.gov
Kenneth Teague	Catawba Co. EM	828-757-1419	kteague@catlow/county.org
Chris Timberlake	Cat. Co.	828-465-8382	ctimberlake@catwabcounync.gov
Karyn Yaussy	Catawba Co. EM	828-465-8989	KYaussy@CatawbaCountyNC.gov
Seth Harris	Alexander County Planning	828-632-1000	sharris@alexandercountync.gov
Mike Willis	Burke County	828-724-9321	micthael.willis@burkenc.org
Jerry Church	Town of Granite Falls	828 396 3131	churchj@GRANITEFALLSNC.COM
Karen Hampton	NC EM	828-726-4620	Karen.Hampton@ncdps.gov
HAZEL VADES	Town of Valdese	828-879-2110	avades@valdese.nc.gov

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #4 - April 18, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Jeff Churn	Associate Superintendent Caldwell Schools	801-312-2051 (w)	jeff.churn@caldwellschools.com
Madi Howell	Alexander County EM Planner	828-405-2008 828-632-9336	mhowell@alexandercountync.gov
Russell Geyer	Alexander County EM	828-632-9336	Rgyer@alexandercountync.gov

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #4 - April 18, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Blake Wright	Town of Maiden	828-428-5034	bwright@maidennc.gov

Unifour Regional Hazard Mitigation Plan

HMPC Meeting #4

AECOM

Kelly Keefe, Lead Planner
Brent Edwards, Planner



Agenda

- Welcome and introductions
- Review Capability Assessments
- Mitigation Action Plans
- Draft Review
- Local Adoption Process
- Resiliency Assessment
- Next steps
- Open discussion



Review Capability Assessments

Mitigation Action Plans

Draft Review

Adoption Process

Resiliency Assessment

Next Steps

- Review/comment period
- Final draft
- State and FEMA review
- Local adoption

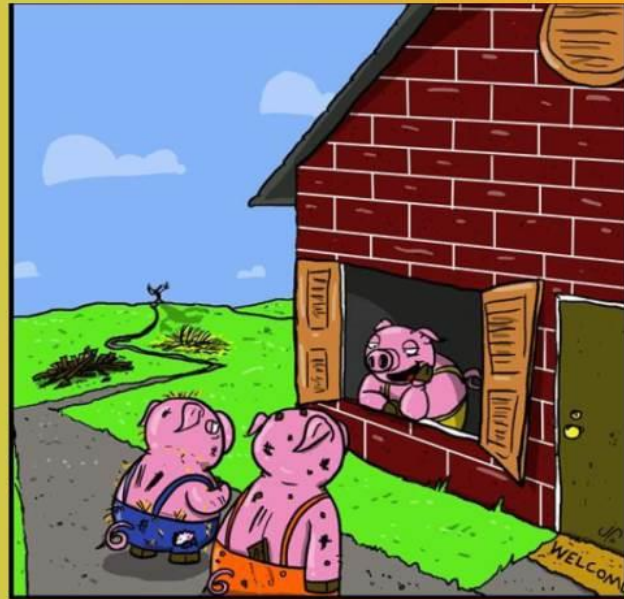


Open Discussion

Thank You

Kelly.keefe@aecom.com

Brent.edwards@aecom.com



"Mitigation isn't so funny now, is it?"



Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #5 - May 15, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Chris Timberlake	Planner - Cat. Co	828-465-8382	ctimberlake@catcountynec.gov
Alex Fulbright	Planner - Newton	828-695-4326	afulbright@newtonnc.gov
Karyn Yaussy	Catawba Co E/M	828-465-8989	KYaussy@CatawbaCountyNC.gov
Chris Tesson	NCM	919-825-2569	christopher.tesson@ncdps.gov
Chris CREW	NCM	919-825-2305	john.crew@ncdps.gov
Ken Hair	Fire Chief - City of Kenor	828-757-2191	Ken.Hair@kenor.nc.us
Seth Harris	Alexander Cnty. Planning	701-632-1122	sharris@alexandercounty.nc.gov
Greg Wilson	Granite Falls	828 396-3131	wilsonag@granitefallsnc.com
Amber Watts	Valdese	828 443-0881	cwatts@valdese.nc.gov
Vic Mischenheimer	Cabarrus Co. E/M	828 850-0995	vmischenheimer@cabarruscountync.org

Unifour Regional Hazard Mitigation Plan
 HMPC Meeting #5 - May 15, 2019

NAME	TITLE / AFFILIATION	PHONE	E-MAIL
Mike Willis	EM Director Bunke Co	888-764-9521	mike.willis@bunke.com
Russell Green	Atty Gen	848 632-5321	rsgreen@nc.gov
Phillip Lookadoo	City of Morganton	828-438-5270	lookadoo@cityofmorganton.nc.us
Jenny Wheelock	City of Lenoir	828-850-0620	jwheelock@lenoir-nc.gov
Blake Wright	Maiden	828-428-5034	bwright@maiden.gov
Zett Churn	Caldwell Schools	828-312-2051	zetchurn@caldwellschools.com
Taylor Hobbes	CC Health Dept.	828-426-8462	thobbes@caldwellcountync.org