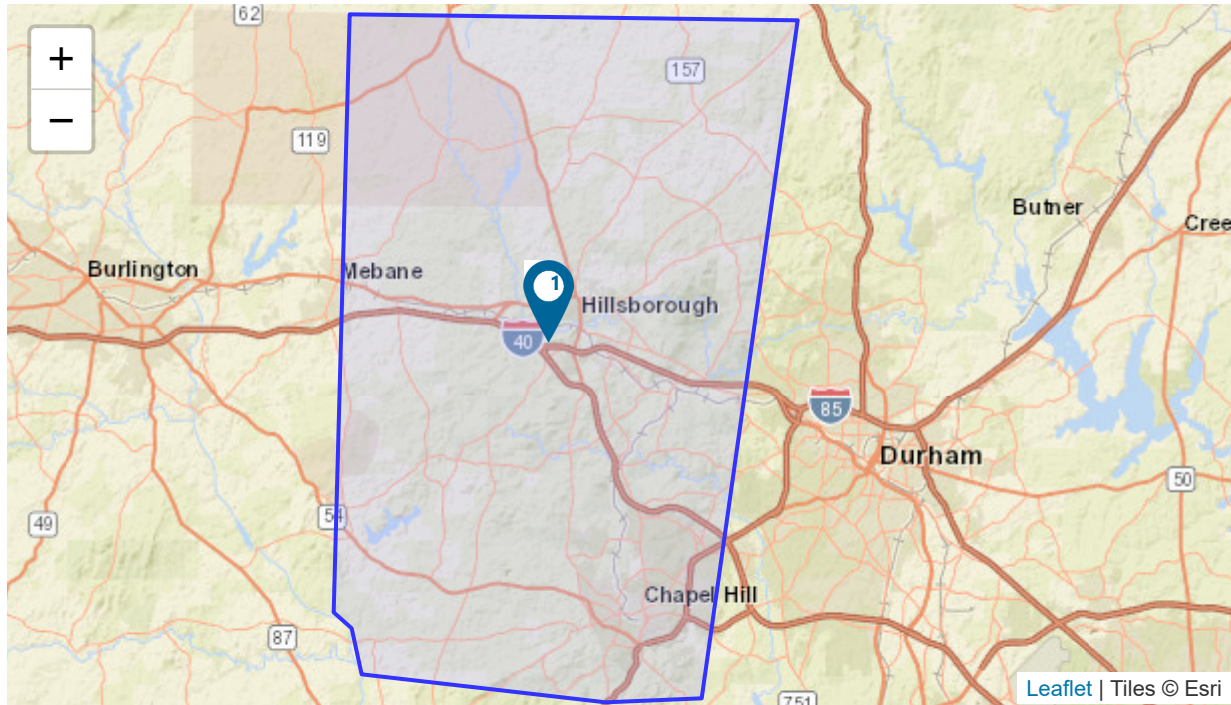




Benefit-Cost Analysis

Project Name: Hillsborough Resilient Water Supply Project



Map Marker	Mitigation Title	Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)
1	Aquifer Storage and Recovery @ Orange County, North Carolina		Drought	\$ 13,690,129	\$ 1,407,975	9.72
TOTAL (SELECTED)				\$ 13,690,129	\$ 1,407,975	9.72
TOTAL				\$ 13,690,129	\$ 1,407,975	9.72

Property Configuration

Property Title:	Aquifer Storage and Recovery @ Orange County, North Carolina
Property Location:	27278, Orange, North Carolina
Property Coordinates:	36.0613973, -79.1205954
Hazard Type:	Drought
Mitigation Action Type:	Aquifer Storage and Recovery
Property Type:	Utilities
Analysis Method Type:	Modeled Damages

Cost Estimation

Aquifer Storage and Recovery @ Orange County, North Carolina

Project Useful Life (years):	50
Project Cost:	\$1,380,373.53
Number of Maintenance Years:	50 Use Default:Yes
Annual Maintenance Cost:	\$2,000

Comments

-
- :
- See "Resilient Water Supply BCA Methodology."

Mitigation Project Cost:

See "Resilient Water Supply BCA Methodology."

Annual Maintenance Cost:

See "Resilient Water Supply BCA Methodology."

Hazard Probability Parameters - Drought

Aquifer Storage and Recovery @ Orange County, North Carolina

Recurrence Interval (years)	Water Demand (mgd)	Pre-Mitigation System Supply Yield (mgd)	Pre-Mitigation Duration of Impact (days)	Post-Mitigation System Supply Yield (mgd)	Post-Mitigation Duration of Impact (days)
6	1.46	1.46	30	3.46	30
9	1.46	1.36	30	3.36	30
24	1.46	1.28	30	3.28	30
50	1.46	1.13	30	3.13	30
68	1.46	0.68	30	2.68	30

Comments

-

Hazard Parameters:

See "Resilient Water Supply BCA Methodology."

Population Impact and Demand

Aquifer Storage and Recovery @ Orange County, North Carolina

Population Served: 15990

Comments

-

Population Served:

See "Resilient Water Supply BCA Methodology."

Damage Results

Aquifer Storage and Recovery @ Orange County, North Carolina

Recurrence Interval (years)	Damages Before Mitigation (\$)	Annual Damages Before Mitigation (\$)	Damages After Mitigation (\$)	Annual Damages After Mitigation (\$)
6	0	0	-68997945.20547944	0
9	3449897.2602739683	321425.19955678633	-65548047.945205465	0
24	6209815.068493149	182176.13592434168	-62788130.1369863	0
50	11384660.958904112	92662.5016998301	-57613284.24657533	0
68	26909198.63013698	395720.8183465881	-42088746.57534248	0

Benefits-Costs Summary

Aquifer Storage and Recovery @ Orange County, North Carolina

Total Standard Mitigation Benefits:	\$13,690,129
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$13,690,129
Total Mitigation Project Cost:	\$1,407,975
Benefit Cost Ratio - Standard:	9.72
Benefit Cost Ratio - Standard + Social:	9.72