



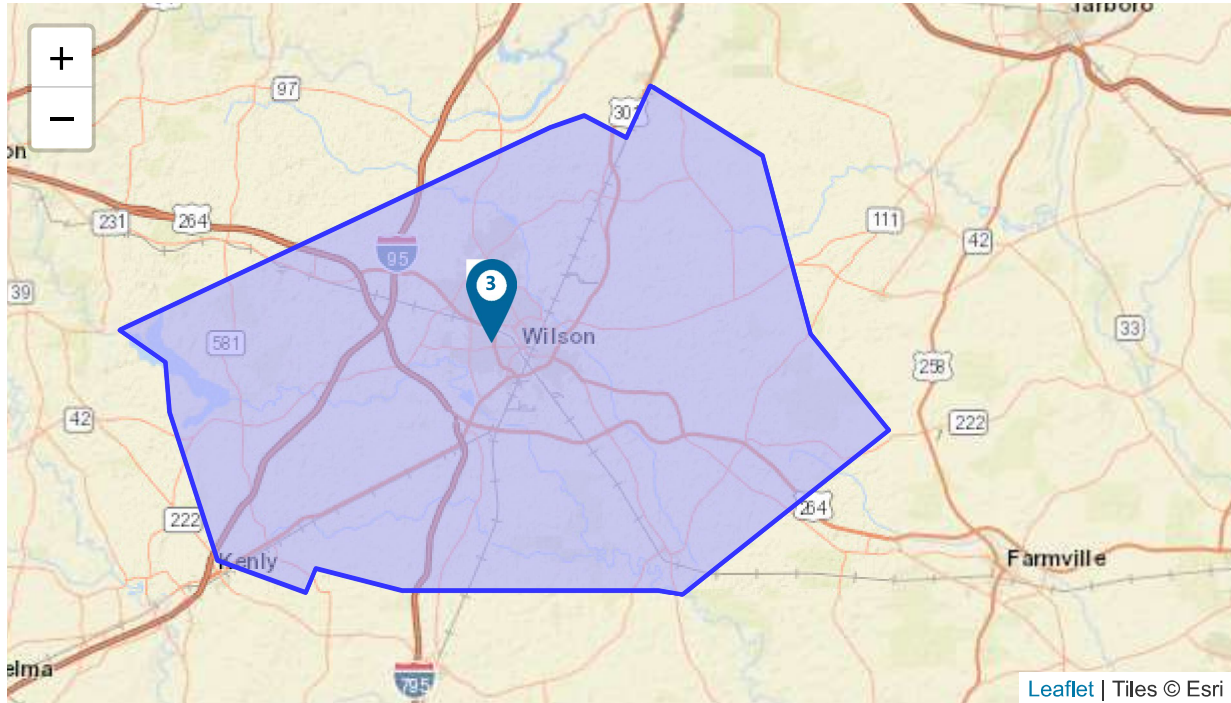
FEMA

Benefit-Cost Calculator

V.6.0 (Build 20230103.1822 | Release Notes)

Benefit-Cost Analysis

Project Name: Hominy Swamp Stormwater Park



Map Marker	Mitigation Title	Property Type	Hazard	Using 7% Discount Rate			Using 3% Discount Rate (For FY22 BRIC and FMA only)		
				Benefits (B)	Costs (C)	BCR (B/C)	Benefits (B)	Costs (C)	BCR (B/C)
1	Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893		DFA - Uncategorized	\$ 0	\$ 3,972,074	0.00	\$ 0	\$ 3,972,074	0.00
2	Urban Trees @ 1501 Ward Blvd, Wilson, North Carolina, 27893		Uncategorized	\$ 2,459,349	\$ 316,536	7.77	\$ 3,674,836	\$ 374,131	9.82
3	Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893		DFA - Riverine Flood	\$ 7,841,848	\$ 4,653,697	1.69	\$ 12,386,428	\$ 4,725,611	2.62
TOTAL (SELECTED)				\$ 10,301,197	\$ 8,942,307	1.15	\$ 16,061,264	\$ 9,071,816	1.77
TOTAL				\$ 10,301,197	\$ 8,942,307	1.15	\$ 16,061,264	\$ 9,071,816	1.77

Property Configuration

Property Title: Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Property Location: 27893, Wilson, North Carolina

Property Coordinates: 35.72442801004482, -77.93759899117872

Hazard Type: Uncategorized

Mitigation Action Type: Other

Property Type: Non-Residential Building

Analysis Method Type: Professional Expected Damages

Cost Estimation
Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Project Useful Life (years): 50

Project Cost: \$3,972,074

Number of Maintenance Years: 50 Use Default:Yes

Annual Maintenance Cost: \$0

Comments

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Mitigation Project Cost:

Phase 1 Demolition = \$3,546,250 (refer to DH Griffin estimate and OPCC) Phase 1 Subrecipient Management Costs = \$214,250 (5% of Phase 1 project costs refer to OPCC) Phase 2 Subrecipient Management Costs = \$211,574.16 (5% of Phase 2 project costs refer to OPCC)

Damage Analysis Parameters - Damage Frequency Assessment
Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Year of Analysis was Conducted: 2022

Year Property was Built: 1964

Analysis Duration: 59 Use Default:Yes

Professional Expected Damages Before Mitigation
Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
0	0	0	0	0	0	0	0

Annualized Damages Before Mitigation

Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
0	0	0

Professional Expected Damages After Mitigation

Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
0	0	0	0	0	0	0	0

Annualized Damages After Mitigation

Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
	Sum Damages and Losses (\$)	Sum Annualized Damages and Losses (\$)
0	0	0

Benefits-Costs Summary

Other @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Total Standard Mitigation Benefits:	\$0
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$0
Total Mitigation Project Cost:	\$3,972,074
Benefit Cost Ratio - Standard:	0.00
Benefit Cost Ratio - Standard + Social:	0.00

Property Configuration	
Property Title:	Urban Trees @ 1501 Ward Blvd, Wilson, North Carolina, 27893
Property Location:	27893, Wilson, North Carolina
Property Coordinates:	35.72442801004482, -77.93759899117872
Hazard Type:	Uncategorized
Mitigation Action Type:	Urban Trees
Property Type:	Green Infrastructure
Analysis Method Type:	Modeled Damages

Cost Estimation	
Urban Trees @ 1501 Ward Blvd, Wilson, North Carolina, 27893	
Project Useful Life (years):	25
Project Cost:	\$200,000
Number of Maintenance Years:	25 Use Default:Yes
Annual Maintenance Cost:	\$10,000

Comments

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Mitigation Project Cost:

200 Urban Trees at \$1,000/tree (refer to OPCC)

Standard Benefits - Green Infrastructure	
Urban Trees @ 1501 Ward Blvd, Wilson, North Carolina, 27893	
Number of Trees:	200
Expected Annual Green Infrastructure Benefits:	\$211,038

Benefits-Costs Summary	
Urban Trees @ 1501 Ward Blvd, Wilson, North Carolina, 27893	
Total Standard Mitigation Benefits:	\$2,459,349
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$2,459,349
Total Mitigation Project Cost:	\$316,536
Benefit Cost Ratio - Standard:	7.77
Benefit Cost Ratio - Standard + Social:	7.77

Property Configuration

Property Title: Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Property Location: 27893, Wilson, North Carolina

Property Coordinates: 35.72442801004482, -77.93759899117872

Hazard Type: Riverine Flood

Mitigation Action Type: Drainage Improvement

Property Type: Other

Analysis Method Type: Professional Expected Damages

Cost Estimation
 Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Project Useful Life (years): 30

Project Cost: \$4,529,607

Number of Maintenance Years: 30 Use Default:Yes

Annual Maintenance Cost: \$10,000

Comments

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Mitigation Project Cost:

Phase 1 Design + Permitting of Nature-based Stormwater Control Measure = \$738,750 Phase 2 Construction Administration = \$125,625 Phase 2 Construction of Stormwater Control Measure and Elizabeth Road Outfall Stabilization = \$3,665,231.63 (less SCM Annual Maintenance Cost)

Damage Analysis Parameters - Damage Frequency Assessment
 Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Year of Analysis was Conducted: 2022

Year Property was Built: 1964

Analysis Duration: 59 Use Default:Yes

Professional Expected Damages Before Mitigation
 Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
1	10,630.34	0	0	0	0	0	10,630
2	163,843.2	0	0	0	0	0	163,843
5	384,829.1	0	0	0	0	0	384,829
10	795,986.61	0	0	0	0	0	795,987

Comments

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Damages Before Mitigation:

Damages reported are shown in greater detail in the Structure Inventory and Damage Estimates section of the BCA Methodology attachment.

Annualized Damages Before Mitigation
Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	10,630	20,867
2	163,843	75,330
5	384,829	55,346
10	795,987	79,599
Sum Damages and Losses (\$)		Sum Annualized Damages and Losses (\$)
	1,355,289	231,142

Professional Expected Damages After Mitigation
Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Recurrence Interval (years)	OTHER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Damages (\$)	Category 1 (\$)	Category 2 (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
10	26,400.63	0	0	0	0	0	26,401

Comments

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Damages After Mitigation:

Damages reported are shown in greater detail in the Structure Inventory and Damage Estimates section of the BCA Methodology attachment.

Annualized Damages After Mitigation

Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
1	0	0
2	0	0
5	0	0
10	26,401	2,640
Sum Damages and Losses (\$)		Sum Annualized Damages and Losses (\$)
	26,401	2,640

Standard Benefits - Ecosystem Services

Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Total Project Area (acres):	44
Percentage of Urban Green Open Space:	59.00%
Percentage of Rural Green Open Space:	0.00%
Percentage of Riparian:	0.00%
Percentage of Coastal Wetlands:	0.00%
Percentage of Inland Wetlands:	0.00%
Percentage of Forests:	0.00%
Percentage of Coral Reefs:	0.00%
Percentage of Shellfish Reefs:	0.00%
Percentage of Beaches and Dunes:	0.00%
Expected Annual Ecosystem Services Benefits:	\$403,444

Benefits-Costs Summary

Drainage Improvement @ 1501 Ward Blvd, Wilson, North Carolina, 27893

Total Standard Mitigation Benefits:	\$7,841,848
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$7,841,848
Total Mitigation Project Cost:	\$4,653,697
Benefit Cost Ratio - Standard:	1.69
Benefit Cost Ratio - Standard + Social:	1.69