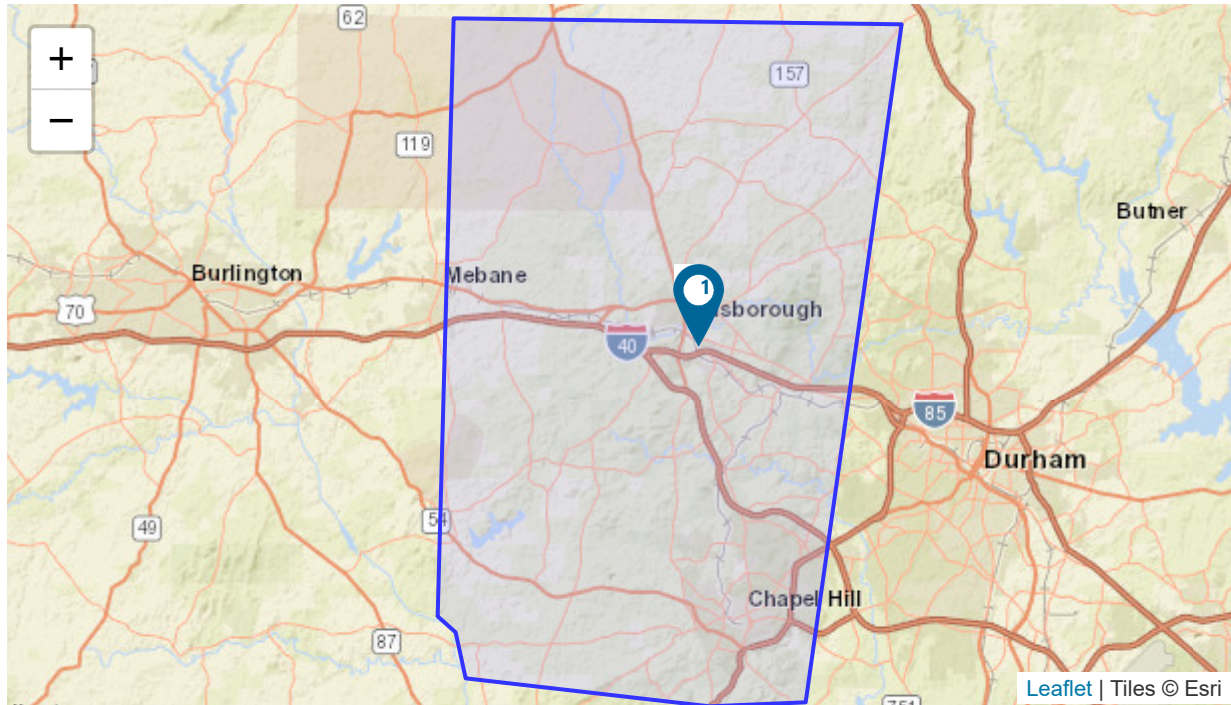





## Benefit-Cost Analysis

**Project Name:** Town of Hillsborough, River Pump Station Relocation



Map Marker	Mitigation Title	Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)
▲ 1	Other @ 36.0613973; -79.0892200		DFA - Riverine Flood	\$ 8,982,319	\$ 8,289,270	1.08
<b>TOTAL (SELECTED)</b>				<b>\$ 8,982,319</b>	<b>\$ 8,289,270</b>	<b>1.08</b>
<b>TOTAL</b>				<b>\$ 8,982,319</b>	<b>\$ 8,289,270</b>	<b>1.08</b>

## Property Configuration

Property Title:	Other @ 36.0613973; -79.0892200
Property Location:	27278, Orange, North Carolina
Property Coordinates:	36.0613973, -79.08922
Hazard Type:	Riverine Flood
Mitigation Action Type:	Other
Property Type:	Utilities
Analysis Method Type:	Professional Expected Damages

## Cost Estimation

Other @ 36.0613973; -79.0892200

Project Useful Life (years):	50
Project Cost:	\$8,220,266
Number of Maintenance Years:	50 Use Default:Yes
Annual Maintenance Cost:	\$5,000

## Comments

- 

### Project Useful Life:

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

### Mitigation Project Cost:

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

### Annual Maintenance Cost:

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

## Damage Analysis Parameters - Damage Frequency Assessment

Other @ 36.0613973; -79.0892200

Year of Analysis Conducted:	2021
Year Property was Built:	1978
Analysis Duration:	44 Use Default:Yes

Comments

- 

**Analysis Year:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Year Built:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

Utilities Properties

Other @ 36.0613973; -79.0892200

Type of Service:	Wastewater
Number of Customers Served:	12,300
Value of Unit of Service (\$/person/day):	\$58 Use Default:Yes
Total Value of Service Per Day (\$/day):	\$713,400

Comments

- 

**Type of Service:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Number of Customers Served:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

Professional Expected Damages Before Mitigation

Other @ 36.0613973; -79.0892200

Recurrence Interval (years)	WASTEWATER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Impact (days)	Building Damages (\$)	Contents Damages (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
25	1	4,028.39	11,039.33	0	0	0	728,468
50	5	6,507.4	18,011.54	0	0	0	3,591,519
100	61	10,032.24	30,212.91	0	0	0	43,557,645
500	61	10,032.24	30,212.91	0	0	0	43,557,645

Comments

- 

**Damages Before Mitigation:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

### Annualized Damages Before Mitigation

Other @ 36.0613973; -79.0892200

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
25	728,468	32,350
50	3,591,519	125,075
100	43,557,645	348,461
500	43,557,645	87,111
Sum Damages and Losses (\$)		Sum Annualized Damages and Losses (\$)
	91,435,277	592,997

### Professional Expected Damages After Mitigation

Other @ 36.0613973; -79.0892200

Recurrence Interval (years)	WASTEWATER	OPTIONAL DAMAGES			VOLUNTEER COSTS		TOTAL
	Impact (days)	Building Damages (\$)	Contents Damages (\$)	Category 3 (\$)	Number of Volunteers	Number of Days	Damages (\$)
500.1	1	4,028.39	11,039.33	0	0	0	728,468

### Comments

- 

### Damages After Mitigation:

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

### Annualized Damages After Mitigation

Other @ 36.0613973; -79.0892200

Annualized Recurrence Interval (years)	Damages and Losses (\$)	Annualized Damages and Losses (\$)
500.1	728,468	1,457
Sum Damages and Losses (\$)		Sum Annualized Damages and Losses (\$)
	728,468	1,457

### Standard Benefits - Ecosystem Services

Other @ 36.0613973; -79.0892200

Total Project Area (acres):	1.5
Percentage of Green Open Space:	0.00%
Percentage of Riparian:	100.00%
Percentage of Wetlands:	0.00%
Percentage of Forests:	0.00%
Percentage of Marine Estuary:	0.00%
Expected Annual Ecosystem Services Benefits:	\$59,317.5

Comments

- 

**Percent Green Open Space:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Percent Riparian:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Percent Wetlands:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Percent Forests:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Percent Marine and Estuary:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

- 

**Total Project Area:**

See "Attachment 16 - RPS BCA Methodology Technical Memorandum."

Benefits-Costs Summary

Other @ 36.0613973; -79.0892200

Total Standard Mitigation Benefits: \$8,982,319

Total Social Benefits: \$0

Total Mitigation Project Benefits: \$8,982,319

Total Mitigation Project Cost: \$8,289,270

Benefit Cost Ratio - Standard: 1.08

Benefit Cost Ratio - Standard + Social: 1.08