

## Project Summary

Map Marker	Mitigation Title	Using 7% Discount Rate			Using 3% Discount Rate (For FY22 BRIC and FMA only)			Costs (C)	BCR (B/C)
		Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)	Benefits (B)		
Elevation @ 34.4979560; -79.1052310	FA - Riverine Floo	\$2,680,381	\$2,873,407	0.93	\$4,997,235	\$2,977,785	1.68		
	Total	\$2,680,381	\$2,873,407	0.93	\$4,997,235	\$2,977,785	1.68		

## Property Configuration

Property Title:	Elevation @ 34.4979560; -79.1052310
Property Location:	28340, Robeson, North Carolina
Property Coordinates:	34.497956, -79.105231
Hazard Type:	Riverine Flood
Mitigation Action Type:	Elevation
Property Type:	Utilities
Analysis Method Type:	Historical Damages

## Cost Estimation

Elevation @ 34.4979560; -79.1052310

Project Useful Life (years):	50
Project Cost:	\$2,752,650
Number of Maintenance Years:	50 Use Default: Yes
Annual Maintenance Cost:	\$8,750

## Comments

Annual Maintenance Cost:	Annual maintenance costs were estimated based on the proper upkeep, testing, and expected repairs to stations that are as old as the Happy Hills and Walnut Street stations are.
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## Damage Analysis Parameters -

## Damage Frequency Assessment

Elevation @ 34.4979560; -79.1052310

Year of Analysis was Conducted:	2022
Year Property was Built:	2001
Analysis Duration:	22 Use Default: Yes

## Comments

Year Built:	Project includes two pump stations: North Walnut Pump Station was built in 2001 and Happy Hill Pump Station was built in 1988
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## Utilities Properties

Elevation @ 34.4979560; -79.1052310

Type of Service:	Wastewater
Number of Customers Served:	2,837
Value of Unit of Service (\$/person/day):	\$60 Use Default: Yes
Total Value of Service Per Day (\$/day):	\$170,220

Comments	
Number of Customers Served:	Relocation of each pump station not only affects customers in the pump station service areas, but also affect downstream customers. Total customers in the pump station service areas would total to approximately 168. However, flooding at these pump stations affect all customers within the system. The flooding at the pump stations contributes to downstream incidents, including sewage backing up into customers homes and sanitary sewer overflows into yards. The Town of Fairmont has 1,487 sewer connections according to its most recent Local Water Supply Plan. Using a multiplier of 2.5 persons per house, this brings the number of people served by the Town's sewer system to approximately 3,718 people. However, the Town of Fairmont only has a population of 2,817 people.

Historical Damages Before Mitigation											
Elevation @ 34.4979560; -79.1052310											
Damage Year	Recurrence Interval (y)	Wastewater Impact (days)	Optional Damages or Replacement	Component Category 3 (\$)	Number of Volunteer	Number of Day	Volunteer Costs	Number of Day	Damages (\$)	Current Dollars	Estimated Damages (\$)
2020	5	4.5	0	0	0	0	0	0	765,990	No	765,990
2018	75	7	0	0	0	0	0	0	1,191,540	No	1,191,540
2016	100	7	0	0	0	0	0	0	1,191,540	No	1,191,540

Comments	
Damages Before Mitigation:	After occurrences of flooding at the Happy Hills and Walnut Street lift stations, the Town of Fairmont has to pay to fix the damages to the pumps and electrical components caused by the flooding.

Annualized Damages Before Mitigation			
Elevation @ 34.4979560; -79.1052310			
Annualized Recurrence Interval (years)	Damages and Losses	Estimated Damages and Losses (\$)	
5	765,990	178,333	
75	1,191,540	3,972	
100	1,191,540	11,915	
Sum Damages and Losses		Estimated Damages and Losses (\$)	
		3,149,070	194,220

Expected Damages After Mitigation								
Elevation @ 34.4979560; -79.1052310								
Recurrence Interval (years)	Wastewater Impact (days)	Optional Damages or Replacement	Component Category 3 (\$)	Number of Volunteer	Number of Day	Volunteer Costs	Number of Day	Damages (\$)
75	0	0	0	0	0	0	0	0

Annualized Damages After Mitigation			
Elevation @ 34.4979560; -79.1052310			
Annualized Recurrence Interval (years)	Damages and Losses	Estimated Damages and Losses (\$)	
75	0	0	
Sum Damages and Losses		Estimated Damages and Losses (\$)	
		0	0

Benefits-Costs Summary	
Elevation @ 34.4979560; -79.1052310	
Total Standard Mitigation Benefits:	\$2,680,381
Total Social Benefits:	\$0
Total Mitigation Project Benefits:	\$2,680,381
Total Mitigation Project Cost:	\$2,873,407
Benefit Cost Ratio - Standard:	0.93
Benefit Cost Ratio - Standard + Social:	0.93