

Appendix C

Outfall Stabilization Opportunity

Fact Sheet Summaries

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Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kenwood Drive

Project ID **OUTF132** County STRUC ID **15647** (Page 1 of 2)

Ownership Public

Score 71

Rank 1 of 17

Site Description and Proposed Project

The outfall pipe is submerged and was observed with flow. The outfall channel has a headcut about 25 feet below the outfall exposing two pipes (possible utilities) and has significant erosion along the remainder of the channel to the stream. The recommended stabilization project is a regenerative stormwater conveyance as it could treat a large stormwater network and has ample room between the upper end of the channel and its confluence with the stream.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 9

Length of erosion (ft) 175

Issues for Implementation

Potential project constraints include significant impact to trees, possible utilities, and access due to the landscape and tree presence.



Submerged outfall pipe with flow present surrounded by shrubs and trees.



Densely wooded confluence with stream channel.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kenwood Drive

Project ID **OUTF132** County STRUC ID **15647** (Page 2 of 2)

Ownership Public

Score 71

Rank 1 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	102.59	Total Nitrogen (lbs/yr)	650.56
Upstream Impervious Area (acres)	37.38	Total Phosphorus (lbs/yr)	51.17
Upstream Pervious Area (acres)	65.2	TSS Reduction (lbs/yr)	47393.76

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 805

Site Name Food Lion Outfall

Project ID **OUTF140** County STRUC ID **46501** (Page 1 of 2)

Ownership Private

Score 69

Rank 2 of 17

Site Description and Proposed Project

Discharge from the outfall is the headwaters of a first order stream. The channel is armored for about 75 feet, but the armor is failing in spots and geotextile visible. Below the rip rap, erosion is heavy and continues downstream. Regenerative stormwater conveyance is the recommended stabilization project to manage and treat the discharge from the outfall.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 6

Length of erosion (ft) 300

Issues for Implementation

The area is on private property, which is a potential project constraint; however, the property owner expressed interest in improving the channel.



Outfall pipe and remaining rip rap/armor at the head of channel.



Heavily eroded channel just downstream from the outfall pipe and failing armor.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 805

Site Name Food Lion Outfall

Project ID **OUTF140** County STRUC ID **46501** (Page 2 of 2)

Ownership Private

Score 69

Rank 2 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	30.3	Total Nitrogen (lbs/yr)	199.59
Upstream Impervious Area (acres)	13.87	Total Phosphorus (lbs/yr)	17.25
Upstream Pervious Area (acres)	16.42	TSS Reduction (lbs/yr)	16339.99

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Savannah Drive

Project ID **OUTF110** County STRUC ID **1243** (Page 1 of 2)

Ownership Private

Score 68

Rank 3 of 17 (tie)

Site Description and Proposed Project

The outfall channel is severely blown out and has been eroded down to bedrock in some places. Some of the boulders from the outfall channel appear to have washed down to the confluence with the stream. The recommended outfall stabilization project is a regenerative stormwater conveyance.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 10

Length of erosion (ft) 180

Issues for Implementation

The incline of the area as well as the dense tree cover are potential project constraints. However, access as well as risk of significantly impacting the trees may make the implementation of an RSC more difficult.



Severely eroded outfall channel and dispersed boulders just downstream of the pipe.



Severely erosion in the outfall channel and steeply sloped banks surrounding the channel.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Savannah Drive

Project ID **OUTF110** County STRUC ID **1243** (Page 2 of 2)

Ownership Private

Score 68

Rank 3 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	22.6	Total Nitrogen (lbs/yr)	146.79
Upstream Impervious Area (acres)	9.56	Total Phosphorus (lbs/yr)	12.27
Upstream Pervious Area (acres)	13.04	TSS Reduction (lbs/yr)	11536.61

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Lindendale Road

Project ID **OUTF119** County STRUC ID **2573** (Page 1 of 2)

Ownership Public

Score 68

Rank 3 of 17 (tie)

Site Description and Proposed Project

The concrete deck below the outfall pipe is breaking apart into the channel. There is severe erosion downstream from the concrete deck. It is unclear if the site needs outfall or stream restoration, but the site requires attention and the contributing drainage area needs improved stormwater control. The recommended outfall stabilization project approach is regenerative stormwater conveyance.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 9

Length of erosion (ft) 412

Issues for Implementation

The area is heavily wooded with a narrow easement, private property nearby, and sanitary lines at the site, so project constraints would include access, utilities in the area, and the possibility of significant impact on trees.



Outfall pipe with crumbling concrete deck, falling into the highly eroded channel.



Highly eroded channel with steep banks, surrounded by tree cover.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Lindendale Road

Project ID **OUTF119** County STRUC ID **2573** (Page 2 of 2)

Ownership Public

Score 68

Rank 3 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	53.44	Total Nitrogen (lbs/yr)	325.97
Upstream Impervious Area (acres)	14.56	Total Phosphorus (lbs/yr)	22.94
Upstream Pervious Area (acres)	38.89	TSS Reduction (lbs/yr)	20620.94

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Mahoney Drive

Project ID **OUTF117** County STRUC ID **9795** (Page 1 of 2)

Ownership Private

Score 66

Rank 5 of 17

Site Description and Proposed Project

The site features a highly eroded outfall channel leading to an eroded stream channel. The outfall structure itself is in good condition, but the channel is degraded. The stream reach at the end of the outfall channel was not part of any assessment, but should be evaluated and possibly be restored. The recommended outfall stabilization project approach is regenerative stormwater conveyance.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 9

Length of erosion (ft) 100

Issues for Implementation

The sanitary sewer manhole lies directly next to the outfall channel and could prove to be a potential project constraint. In addition, heavy tree cover nearby could mean a potentially significant impact on the trees in the area.



Highly eroded outfall channel surrounded by dense tree cover.



Sanitary manhole directly adjacent to highly eroded outfall channel.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Mahoney Drive

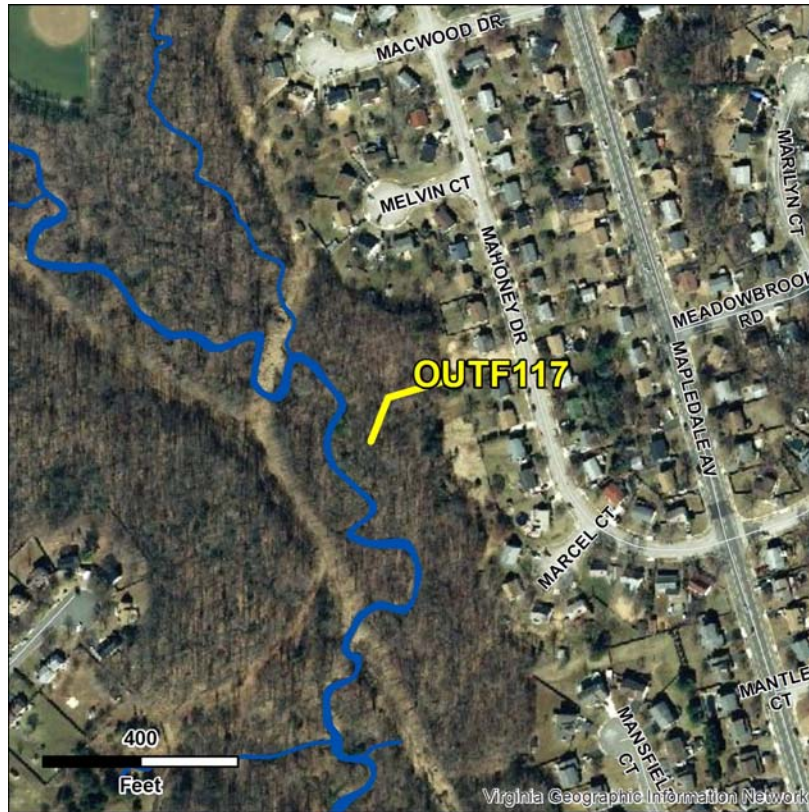
Project ID **OUTF117** County STRUC ID **9795** (Page 2 of 2)

Ownership Private

Score 66

Rank 5 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	42.82	Total Nitrogen (lbs/yr)	266.4
Upstream Impervious Area (acres)	13.65	Total Phosphorus (lbs/yr)	19.88
Upstream Pervious Area (acres)	29.17	TSS Reduction (lbs/yr)	18163.69

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Tobacco Way

Project ID **OUTF104** County STRUC ID **321** (Page 1 of 2)

Ownership Private

Score 64

Rank 6 of 17

Site Description and Proposed Project

The outfall channel is eroded and is beginning to scour around the culvert underneath the transmission right of way. The channel remains eroded downstream of the culvert and joins a second eroded outfall channel to form one severely eroded channel. The recommended stabilization project is an RSC and drop structure combination. Both channels are severely eroded and need stabilization, or even stream restoration, but flow must be controlled upstream for any project to be viable.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 10

Length of erosion (ft) 125

Issues for Implementation

The constraints on this project would be the steep slope of the landscape, sanitary lines nearby, a transmission row in the area, and dense tree cover. Construction of the project would have to be careful accessing the area, working around utilities, and preventing significant impacts on the trees.



Outfall channel just downstream of the pipe.
Severely eroded banks with large trees
surrounding the channel.



Upstream view of the outfall pipe and remnants
of rip rap and concrete deck.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Tobacco Way

Project ID **OUTF104** County STRUC ID **321** (Page 2 of 2)

Ownership Private

Score 64

Rank 6 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics

Reductions

Upstream Drainage Area (acres)	<input type="text"/> -
Upstream Impervious Area (acres)	<input type="text"/> -
Upstream Pervious Area (acres)	<input type="text"/> -

Total Nitrogen (lbs/yr)	<input type="text"/> -
Total Phosphorus (lbs/yr)	<input type="text"/> -
TSS Reduction (lbs/yr)	<input type="text"/> -

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Ralston Court and Roundtree Drive

Project ID **OUTF113** County STRUC ID **57731** (Page 1 of 2)

Ownership Public

Score 63

Rank 7 of 17

Site Description and Proposed Project

The outfall channel itself is not severely eroded, however the small stream it enters is in poor condition with serious erosion and flocculent material present. The recommended outfall stabilization project for this site is rip rap to slow the flow and control discharge into the small stream.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 4

Length of erosion (ft) 15

Issues for Implementation

The area is wooded with utilities nearby, so constraints for the project would be access, potential impact to trees, and utilities.



Stream channel downstream of outfall, flocculent heavily present and erosion visible.



Upstream view of the outfall pipe itself with visible cracking in concrete end wall.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Ralston Court and Roundtree Drive

Project ID **OUTF113** County STRUC ID **57731** (Page 2 of 2)

Ownership Public

Score 63

Rank 7 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	-	Total Nitrogen (lbs/yr)	-
Upstream Impervious Area (acres)	-	Total Phosphorus (lbs/yr)	-
Upstream Pervious Area (acres)	-	TSS Reduction (lbs/yr)	-

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Chapowhite Drive

Project ID **OUTF141** County STRUC ID **54818** (Page 1 of 2)

Ownership Private

Score 62

Rank 8 of 17

Site Description and Proposed Project

The outfall channel exhibits severe erosion just 15 feet downstream of the outfall pipe itself. The recommended outfall stabilization project is regenerative stormwater conveyance in order to control the powerful discharge from this outfall.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 7

Length of erosion (ft) 50

Issues for Implementation

The area has few constraints other than the potential for a significant impact to trees in the area since it is heavily wooded.



Upstream view of the outfall pipe itself, heavy vegetation and rip rap present.



Severely eroded channel just downstream from the outfall pipe, with near vertical banks and trees surrounding the channel.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Chapowhite Drive

Project ID **OUTF141** County STRUC ID **54818** (Page 2 of 2)

Ownership Private

Score 62

Rank 8 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	14.94	Total Nitrogen (lbs/yr)	98.44
Upstream Impervious Area (acres)	6.86	Total Phosphorus (lbs/yr)	8.52
Upstream Pervious Area (acres)	8.08	TSS Reduction (lbs/yr)	8070.19

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Lynwood Drive

Project ID **OUTF111** County STRUC ID **2645** (Page 1 of 2)

Ownership Private

Score 61

Rank 9 of 17 (tie)

Site Description and Proposed Project

The outfall channel is eroded for a short distance, but quickly becomes more stable before meeting with a small stream. The recommended outfall stabilization project is regenerative stormwater conveyance to the confluence with the stream and maybe even along the stream since it is so small.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 4

Length of erosion (ft) 155

Issues for Implementation

Access and potential impact to trees would be project constraints since the area is heavily wooded, with little room for equipment without removal of trees.



Upstream view of the outfall pipe and the eroded area immediately downstream of the pipe.



Downstream view of the outfall channel leading to the stream channel; erosion is less severe further downstream.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Lynwood Drive

Project ID **OUTF111** County STRUC ID **2645** (Page 2 of 2)

Ownership Private

Score 61

Rank 9 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	9.97	Total Nitrogen (lbs/yr)	63.77
Upstream Impervious Area (acres)	3.85	Total Phosphorus (lbs/yr)	5.13
Upstream Pervious Area (acres)	6.12	TSS Reduction (lbs/yr)	4781.19

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kidewell Drive and Kingsley Road

Project ID **OUTF139** County STRUC ID **15547** (Page 1 of 2)

Ownership Private

Score 61

Rank 9 of 17 (tie)

Site Description and Proposed Project

There is a clearly-defined plunge pool directly in front of the outfall pipe, followed by a pile of rip rap leading to the stream. The recommended outfall stabilization project is to add rip rap to the existing pile to increase the effectiveness.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 5

Length of erosion (ft) 15

Issues for Implementation

Fences and private property could create possible access constraints for the project.



Upstream view of the outfall pipe with plunge pool directly downstream of pipe opening.



Pile of rip rap just downstream from the plunge pool and opening of outfall pipe.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kidwell Drive and Kingsley Road

Project ID **OUTF139** County STRUC ID **15547** (Page 2 of 2)

Ownership Private

Score 61

Rank 9 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	<input type="text" value="-"/>	Total Nitrogen (lbs/yr)	<input type="text" value="-"/>
Upstream Impervious Area (acres)	<input type="text" value="-"/>	Total Phosphorus (lbs/yr)	<input type="text" value="-"/>
Upstream Pervious Area (acres)	<input type="text" value="-"/>	TSS Reduction (lbs/yr)	<input type="text" value="-"/>

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 825

Site Name Tarpon Court

Project ID **OUTF115** County STRUC ID **3471** (Page 1 of 2)

Ownership Private

Score 56

Rank 11 of 17

Site Description and Proposed Project

The outfall channel and stream channel are significantly eroded. The stream is a candidate for restoration. The best approach for outfall stabilization is unclear, but some form of stabilization must take place. However, the pipe deck is almost completely blasted away by the outfall and the crew was unsure what form could withstand this level of discharge.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 8

Length of erosion (ft) 50

Issues for Implementation

The nearby homeowner built a fence blocking the easement and the area is forested, so access and potential impact to trees would be constraints for implementation of a stabilization project.



Upstream view of the outfall pipe and remaining pieces of the pipe deck. High levels of degradation are visible from the discharge



Outfall channel just downstream of the pipe opening, highly eroded banks and tree cover is visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 825

Site Name Tarpon Court

Project ID **OUTF115** County STRUC ID **3471** (Page 2 of 2)

Ownership Private

Score 56

Rank 11 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics

Reductions

Upstream Drainage Area (acres)	<input type="text"/> -
Upstream Impervious Area (acres)	<input type="text"/> -
Upstream Pervious Area (acres)	<input type="text"/> -

Total Nitrogen (lbs/yr)	<input type="text"/> -
Total Phosphorus (lbs/yr)	<input type="text"/> -
TSS Reduction (lbs/yr)	<input type="text"/> -

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 825

Site Name Glendale Road and Gustus Drive

Project ID **OUTF114** County STRUC ID **9965** (Page 1 of 2)

Ownership Private

Score 52

Rank 12 of 17 (tie)

Site Description and Proposed Project

Some erosion in the stream channel occurs above and below outfall the channel but increases in severity downstream of the outfall confluence. This site is recommended for both stabilization and stream restoration. The pipe deck is completely destroyed and the discharge drops five feet directly into the channel. The recommended outfall stabilization project is a drop structure.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 10

Length of erosion (ft) 20

Issues for Implementation

The site is nearby private property, wooded, a small area, and the headwall of the outfall is at risk of collapse. Project constraints would be safety, access, area to implement the project, and potential impact to trees.



Upstream view of the outfall pipe, pipe deck completely gone and erosion visible in the receiving channel.



Downstream view of the outfall channel, wooded banks and severe erosion visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 825

Site Name Glendale Road and Gustus Drive

Project ID **OUTF114** County STRUC ID **9965** (Page 2 of 2)

Ownership Private

Score 52

Rank 12 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	<input type="text" value="-"/>	Total Nitrogen (lbs/yr)	<input type="text" value="-"/>
Upstream Impervious Area (acres)	<input type="text" value="-"/>	Total Phosphorus (lbs/yr)	<input type="text" value="-"/>
Upstream Pervious Area (acres)	<input type="text" value="-"/>	TSS Reduction (lbs/yr)	<input type="text" value="-"/>

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kerrydale Road and Hendricks Drive

Project ID **OUTF124** County STRUC ID **15764** (Page 1 of 2)

Ownership Private

Score 52

Rank 12 of 17 (tie)

Site Description and Proposed Project

The stream channel is 2 feet below the outfall and the outfall's headwall is undercut and dangerous. Old, exposed pipes are visible in the short outfall channel. The recommended outfall stabilization project is a drop structure to control the discharge from the outfall pipe. The site is wooded, with a dangerous drop off at the edge of the property.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 8

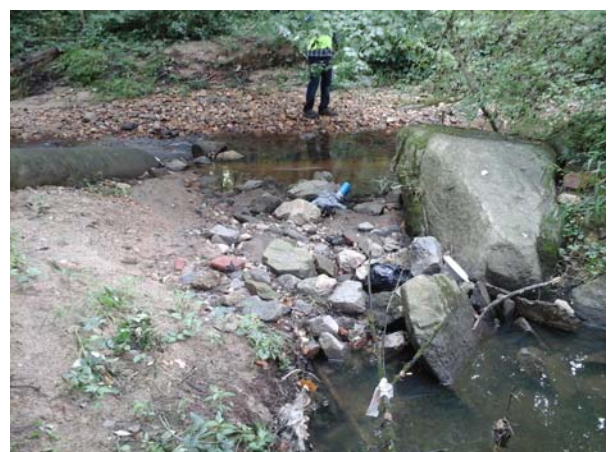
Length of erosion (ft) 20

Issues for Implementation

Possible project constraints would be access, space to implement and construct the structure, and potential impact to existing trees.



Upstream view of the outfall pipe, drop into channel is visible as well as the steep drop off on the property.



Downstream view of the short outfall channel with exposed pipes visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Kerrydale Road and Hendricks Drive

Project ID **OUTF124** County STRUC ID **15764** (Page 2 of 2)

Ownership Private

Score 52

Rank 12 of 17 (tie)

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics

Reductions

Upstream Drainage Area (acres)	<input type="text"/>	-
Upstream Impervious Area (acres)	<input type="text"/>	-
Upstream Pervious Area (acres)	<input type="text"/>	-

Total Nitrogen (lbs/yr)	<input type="text"/>	-
Total Phosphorus (lbs/yr)	<input type="text"/>	-
TSS Reduction (lbs/yr)	<input type="text"/>	-

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name General Washington Drive

Project ID **OUTF108** County STRUC ID **50169** (Page 1 of 2)

Ownership Private

Score 47

Rank 14 of 17

Site Description and Proposed Project

The landscape appears to be acting as a natural level spreader coming out of outfall with some skunk cabbage present. Approximately 30 feet away is a headcut with 15 feet of minor to moderate erosion in the stream. The recommended outfall stabilization process is added rip rap to the remaining pile.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 4

Length of erosion (ft) 20

Issues for Implementation

There is a guard rail blocking the site and the area is heavily wooded, so the project constraints would be access and potential impact to existing trees.



Downstream view of the stream channel, heavily wooded area is visible and minor erosion present.



Upstream view of the outfall pipe and remaining rip rap at the opening.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name General Washington Drive

Project ID **OUTF108** County STRUC ID **50169** (Page 2 of 2)

Ownership Private

Score 47

Rank 14 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	-	Total Nitrogen (lbs/yr)	-
Upstream Impervious Area (acres)	-	Total Phosphorus (lbs/yr)	-
Upstream Pervious Area (acres)	-	TSS Reduction (lbs/yr)	-

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Quate Lane

Project ID **OUTF135** County STRUC ID **48641** (Page 1 of 2)

Ownership Private

Score 45

Rank 15 of 17

Site Description and Proposed Project

The outfall itself is in okay physical condition, but the outfall channel has a steep slope and is significantly higher than the stream. Erosion into stream appears to be attributable to the steep slope of the channel. The recommended outfall stabilization project is a drop structure to reduce the impact of the water from the steep slope.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 2

Length of erosion (ft) 40

Issues for Implementation

The area is wooded, steep, and there is a fence blocking the site, so access and potential impact to trees would be project constraints.



Downstream view of the stream channel, wooded and eroded banks visible.



Upstream view of the outfall pipe, surrounding vegetation and beginning of the steep channel are visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 820

Site Name Quate Lane

Project ID **OUTF135** County STRUC ID **48641** (Page 2 of 2)

Ownership Private

Score 45

Rank 15 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	-	Total Nitrogen (lbs/yr)	-
Upstream Impervious Area (acres)	-	Total Phosphorus (lbs/yr)	-
Upstream Pervious Area (acres)	-	TSS Reduction (lbs/yr)	-

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Charles Ewell Lane

Project ID **OUTF102** County STRUC ID **50063** (Page 1 of 2)

Ownership Private

Score 35

Rank 16 of 17

Site Description and Proposed Project

The outfall has a slight drop off into an armored channel, stream is moderately eroded at confluence with outfall channel. The outfall channel is steep and rip rap seems to be getting dispersed. The recommended outfall stabilization project is regenerative stormwater conveyance to reduce the effects of the discharge down the steep slope. The area is surrounded by private properties, wooded, and is on a steep slope.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 5

Length of erosion (ft) 40

Issues for Implementation

Project constraints would be potential impact to existing trees and access.



Upstream view of the outfall pipe, steep slope and drop into the channel visible.



Downstream view of confluence of outfall and stream channel. Moderate erosion and steep slope visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 815

Site Name Charles Ewell Lane

Project ID **OUTF102** County STRUC ID **50063** (Page 2 of 2)

Ownership Private

Score 35

Rank 16 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	14.69	Total Nitrogen (lbs/yr)	90.12
Upstream Impervious Area (acres)	4.21	Total Phosphorus (lbs/yr)	6.46
Upstream Pervious Area (acres)	10.48	TSS Reduction (lbs/yr)	5837

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 805

Site Name Trentdale Drive

Project ID **OUTF133** County STRUC ID **47918** (Page 1 of 2)

Ownership Private

Score 32

Rank 17 of 17

Site Description and Proposed Project

The site features a large outfall in a densely vegetated edge of a transmission right of way. The outfall is at least 3 feet higher than the channel over a 45-foot distance, and is eroding the outfall channel despite riprap present. The recommended outfall stabilization project is a drop structure to reduce the impact of the discharge through the channel.

Is maintenance needed? No

Evidence of erosion? Yes

Severity of erosion score 7

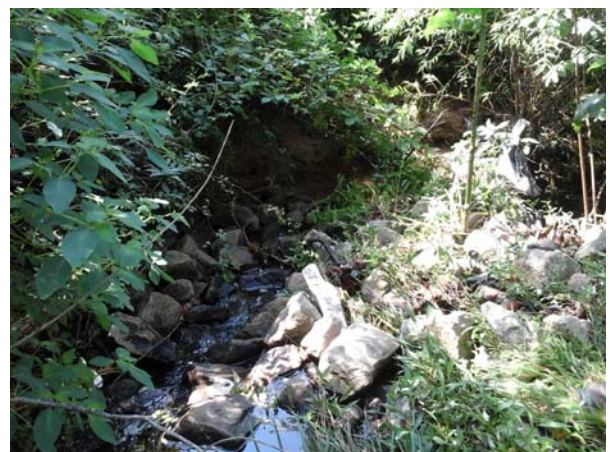
Length of erosion (ft) 45

Issues for Implementation

With nearby wetlands, dense vegetation, private property, and a steep slope, access and potential wetlands impacts would be project constraints.



Dense vegetation surrounding the site in the transmission right-of-way.



Downstream view of the outfall channel, steep slope and remaining riprap visible.

Neabsco Creek Watershed Study Outfall Stabilization Project Opportunity

Subwatershed 805

Site Name Trentdale Drive

Project ID **OUTF133** County STRUC ID **47918** (Page 2 of 2)

Ownership Private

Score 32

Rank 17 of 17

Locator Map



Estimated Pollutant Load Reductions

Outfall Characteristics		Reductions	
Upstream Drainage Area (acres)	<input type="text" value="-"/>	Total Nitrogen (lbs/yr)	<input type="text" value="-"/>
Upstream Impervious Area (acres)	<input type="text" value="-"/>	Total Phosphorus (lbs/yr)	<input type="text" value="-"/>
Upstream Pervious Area (acres)	<input type="text" value="-"/>	TSS Reduction (lbs/yr)	<input type="text" value="-"/>