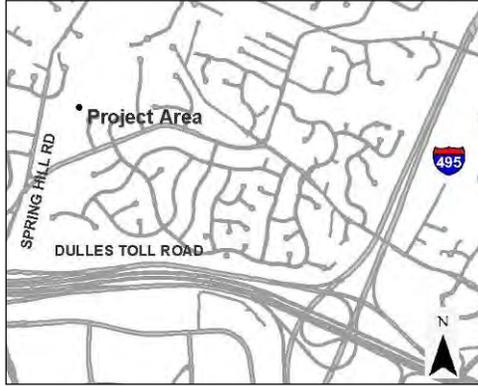


Appendix A -  
Project Fact Sheets



## Project: BN9105 BMP Retrofit Project



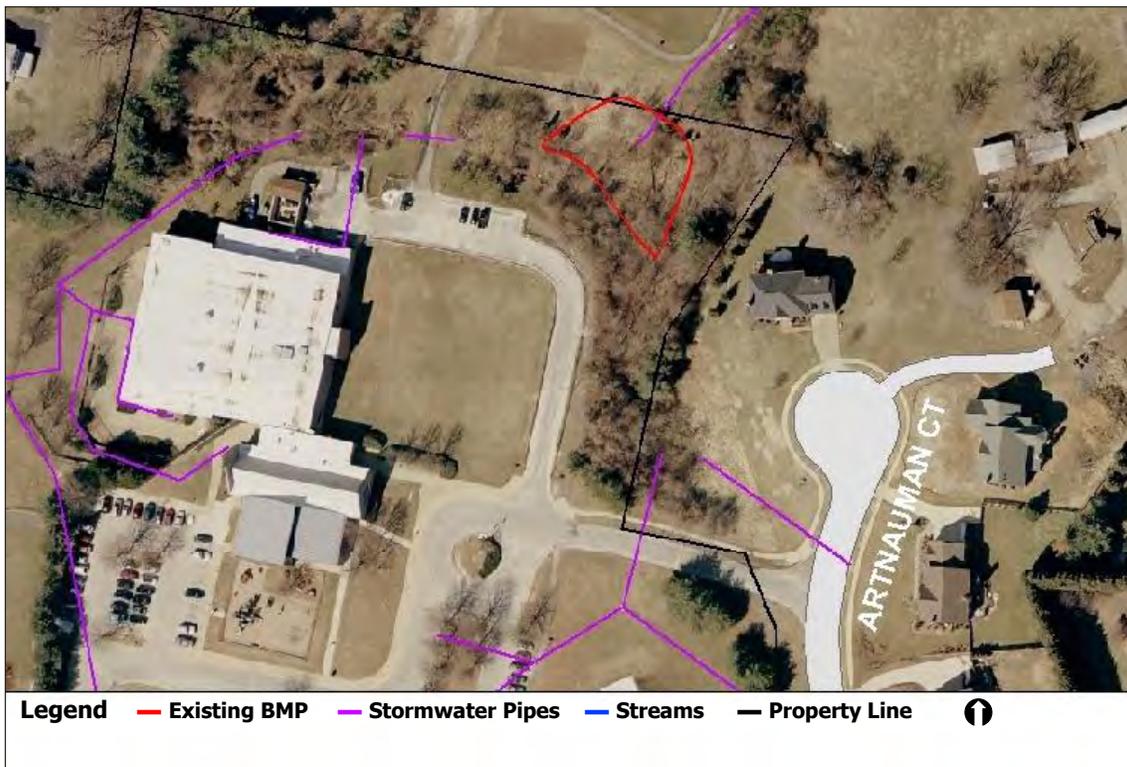
*Vicinity Map*

|                            |                               |
|----------------------------|-------------------------------|
| <b>Address:</b>            | 1239 Spring Hill Road         |
| <b>Location:</b>           | Spring Hill Recreation Center |
| <b>Land Owner:</b>         | Fairfax County Park Authority |
| <b>PIN:</b>                | 0292 01 0001C                 |
| <b>County Facility ID:</b> | DP0396                        |
| <b>Control Type:</b>       | Water Quantity                |
| <b>Drainage Area:</b>      | 24.1 Acres                    |
| <b>Stream Name:</b>        | Bull Neck Run                 |

**Description:** The existing dry pond was designed to provide water quantity control only. Retrofit the pond by modifying the outlet structure to detain a portion of the one-year storm event and adding a shallow wetland.

**Potential Benefits:** An estimated 6.7 lbs/yr of phosphorus will be removed and some wetland habitat will be provided. Approximately 19 percent of the runoff from the one-year storm event will be stored to control the peak flow and help reduce erosion in the downstream channel.

**Project Design Considerations:** New LID Project PM9811 is also at the recreation center. Coordination and sequencing of these projects should be considered. There are minimal environmental permitting requirements for this project. The facility can be accessed from Artnauman Court. An Easement will not be required. Impacts to trees will be minimized.



*Project Area Map*

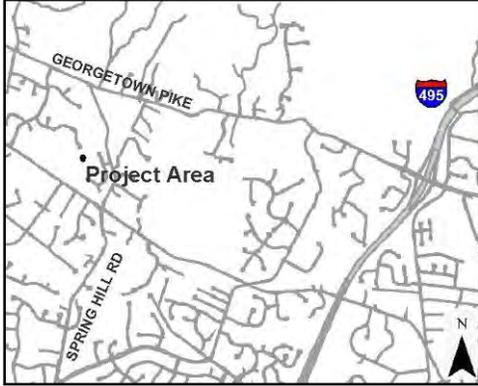


Site Photo: Existing outlet structure in center of dry pond.

**Costs:**

| ITEM                                    | QUANTITY | UNITS | UNIT COST   | TOTAL              |
|---|----------|-------|---|--------------------|
| Structural BMP Retrofit and Incidentals | 1        | LS    | \$11,000.00   | \$11,000.00        |
| Grading and Excavation                  | 650      | CY    | \$35.00   | \$22,750.00        |
| Shallow Wetland                         | 250      | SY    | \$2.00  | \$500.00           |
| Erosion and Sediment Control            | 1        | LS    | \$3,000.00  | \$3,000.00         |
| Landscaping                             | 1        | LS    | \$2,000.00  | \$2,000.00         |
|   |          |       | Base Construction Cost  | \$39,250.00        |
|   |          |       | Mobilization (5%)   | \$1,962.50         |
|   |          |       | <b>Subtotal 1</b>   | <b>\$41,212.50</b> |
|   |          |       | Contingency (25%)   | \$10,303.13        |
|   |          |       | <b>Subtotal 2</b>   | <b>\$51,515.63</b> |
|   |          |       | Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%) | \$23,182.03        |
|   |          |       | <b>Estimated Project Cost</b>   | <b>\$80,000.00</b> |

## Project: BN9106 BMP Retrofit Project



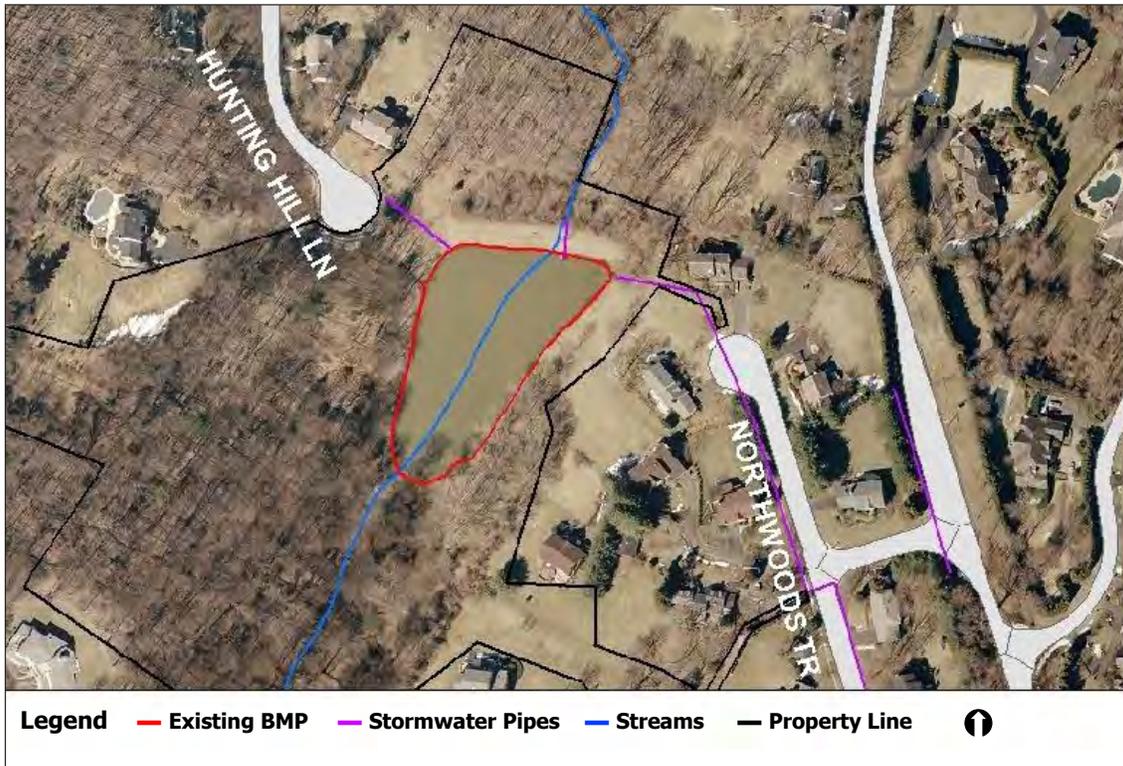
*Vicinity Map*

**Address:** Near 8198 Hunting Hill Lane  
**Location:** McLean Country Estates  
 Neighborhood  
**Land Owner:** McLean Country Estates HOA  
**PIN:** 0204 12 A  
**County Facility ID:** None  
**Control Type:** Water Quantity  
**Drainage Area:** 319.9 acres  
**Stream Name:** Unnamed tributary to Bull Neck Run

**Description:** The existing wet pond was designed to provide water quantity control only. Retrofit the pond by modifying the outlet structure to detain a portion of the one-year storm event, adding an aquatic bench, and planting buffer vegetation.

**Potential Benefits:** An estimated 37.4 lbs/yr of phosphorus will be removed and 0.4 acres of wetland habitat will be provided. Approximately 22 percent of the runoff from the one-year storm event will be stored to control the peak flow and help reduce erosion in the downstream channel.

**Project Design Considerations:** A portion of Buffer Restoration Project BN9302 is downstream of this project. Coordination and sequencing of these projects should be considered. This facility is in a floodplain and the Chesapeake Bay Resource Protection Area which have special permitting requirements. The facility can be accessed from Northwoods Trail and Hunting Hill Lane. An easement will be required. Impacts to trees will be minimized.



*Project Area Map*

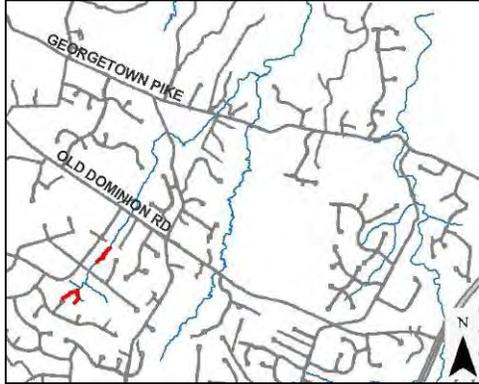


Site Photo: Facing east towards the pond.

**Costs:**

| ITEM                                    | QUANTITY | UNITS | UNIT COST   | TOTAL               |
|---|----------|-------|---|---------------------|
| Structural BMP Retrofit and Incidentals | 1        | LS    | \$11,000.00   | \$11,000.00         |
| Grading and Excavation                  | 4,300    | CY    | \$35.00   | \$151,550.00        |
| Aquatic Bench                           | 1,630    | SY    | \$2.00  | \$3,260.00          |
| Buffer Vegetation                       | 175      | LF    | \$25.00   | \$4,375.00          |
| Erosion and Sediment Control            | 1        | LS    | \$3,000.00  | \$3,000.00          |
| Landscaping                             | 1        | LS    | \$2,000.00  | \$2,000.00          |
|   |          |       | <b>Base Construction Cost</b>   | <b>\$175,185.00</b> |
|   |          |       | Mobilization (5%)   | \$8,759.25          |
|   |          |       | <b>Subtotal 1</b>   | <b>\$183,944.25</b> |
|   |          |       | Contingency (25%)   | \$45,986.06         |
|   |          |       | <b>Subtotal 2</b>   | <b>\$229,930.31</b> |
|   |          |       | Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%) | \$103,468.64        |
|   |          |       | <b>Estimated Project Cost</b>   | <b>\$340,000.00</b> |

## Project: BN9203 Stream Restoration Project



*Vicinity Map* north of Ina Lane.

|                          |  |
|--------------------------|--|
| <b>Location:</b>         | Woodhaven Neighborhood                 |
| <b>Land Owner:</b>       | Private Residential and Dogwoods       |
| <b>Tax Map:</b>          | Addition to Woodhaven Association 20-3 |
| <b>Potential Length:</b> | 1,500 linear feet                      |
| <b>Stream Name:</b>      | Unnamed tributary to Bull Neck Run     |

**Description:** Evaluate three sections of a tributary to Bull Neck Run to determine where stream restoration is necessary. The stream locations to be assessed are located between Sparger and Alvord Streets and two minor branches

**Potential Benefits:** Provide habitat, filters pollutants and minimize erosion of stream banks.

**Project Design Considerations:** Portions of this project are in a floodplain and the Chesapeake Bay Resource Protection Area which have special permitting requirements. The project may also require some clearing of trees or impacts to jurisdictional wetlands. Easements will be required.

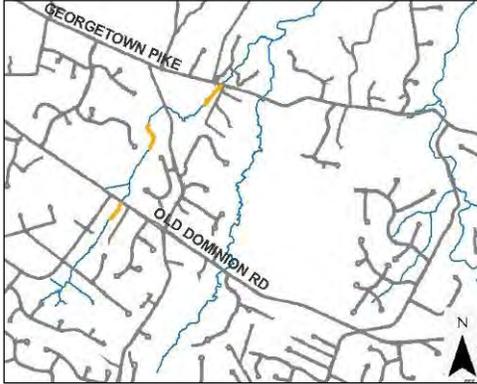


*Project Area Map*

**Costs:**

| <b>ITEM</b>   | <b>QUANTITY</b> | <b>UNITS</b> | <b>UNIT COST</b>              | <b>TOTAL</b>        |
|---|-----------------|--------------|-------------------------------|---------------------|
| Reconstruct New Pattern and Profile   | 1,000           | LF           | \$250.00                      | \$250,000.00        |
| First 500 Linear Feet   | 500             | LF           | \$450.00                      | \$225,000.00        |
|   |                 |              | Base Construction Cost        | \$475,000.00        |
|   |                 |              | Mobilization (5%)             | \$23,750.00         |
|   |                 |              | <b>Subtotal 1</b>             | \$498,750.00        |
|   |                 |              | Contingency (25%)             | \$124,687.50        |
|   |                 |              | <b>Subtotal 2</b>             | \$623,437.50        |
| Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%) |                 |              |                               | \$280,546.88        |
|   |                 |              | <b>Estimated Project Cost</b> | <b>\$910,000.00</b> |

## Project: BN9302 Buffer Restoration Project



*Vicinity Map*

|                          |  |
|--------------------------|--|
| <b>Location:</b>         | Various Locations                                  |
| <b>Land Owner:</b>       | Private Residential and McLean Country Estates HOA |
| <b>Tax Map:</b>          | 20-2, 20-3 and 20-4                                |
| <b>Potential Length:</b> | 1,550 linear feet                                  |
| <b>Stream Name:</b>      | Unnamed tributary to Bull Neck Run                 |

**Description:** Evaluate the buffer vegetation adjacent to an unnamed tributary to Bull Neck Run at three locations and determine the locations where buffer restoration is necessary. The three sections associated with this project are located south of Old Dominion Road, west of Spring Hill Road, and south of Georgetown Pike.

**Potential Benefits:** Provide habitat, filters pollutants and minimize erosion of stream banks.

**Project Design Considerations:** Portions of this project are in a floodplain and the Chesapeake Bay Resource Protection Area which have special permitting requirements. This project may also require some clearing of trees or impacts to jurisdictional wetlands. Easements will be required.

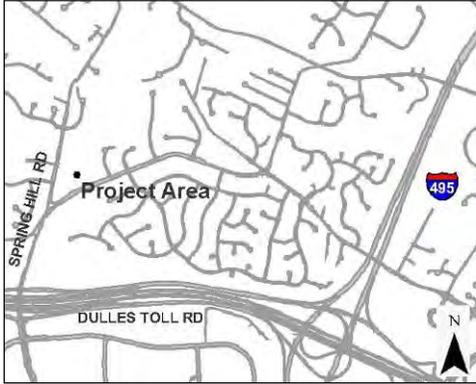


*Project Area Map*

**Costs:**

| <b>ITEM</b>   | <b>QUANTITY</b> | <b>UNITS</b>                  | <b>UNIT COST</b> | <b>TOTAL</b>       |
|---|-----------------|-------------------------------|------------------|--------------------|
| Buffer Restoration  | 1,550           | LF                            | \$25.00          | \$38,750.00        |
|   |                 | <b>Base Construction Cost</b> |                  | \$38,750.00        |
|   |                 | Mobilization (5%)             |                  | \$1,937.50         |
|   |                 | <b>Subtotal 1</b>             |                  | \$40,687.50        |
|   |                 | Contingency (25%)             |                  | \$10,171.88        |
|   |                 | <b>Subtotal 2</b>             |                  | \$50,859.38        |
| Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%) |                 |                               |                  | \$22,886.72        |
|   |                 | <b>Estimated Project Cost</b> |                  | <b>\$80,000.00</b> |

## Project: BN9811 New LID Project



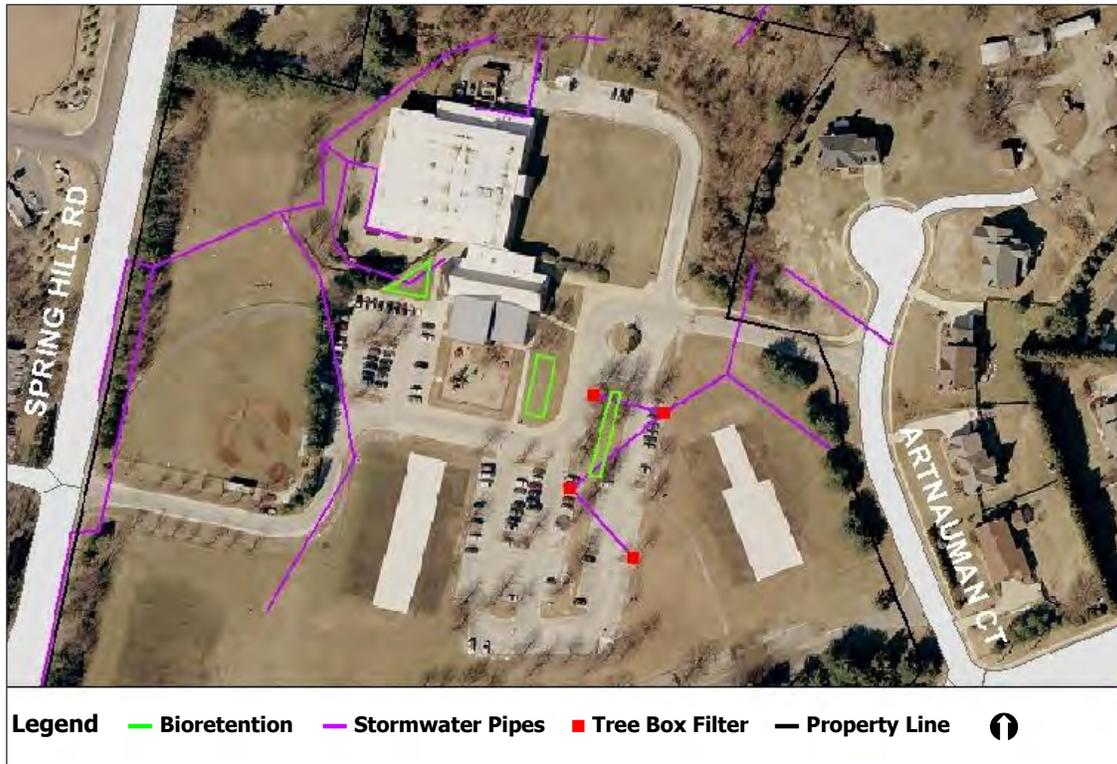
Vicinity Map

**Address:** 1239 Spring Hill Road  
**Location:** Spring Hill Recreation Center  
**Land Owner:** Fairfax County Park Authority  
**PIN:** 0292 01 0001C  
**Drainage Area:** 4.5 acres  
**Stream Name:** Bull Neck Run

**Description:** Install four tree box filters in existing curb drop inlets in the main parking lot and add bioretention areas in the parking median and landscaped areas at the Spring Hill Recreation Center. According to the Fairfax County Master Plan, the recreation center and park will be expanded in the future, so the LID features should be installed at that time.

**Potential Benefits:** An estimated 4.2 lbs/yr of phosphorus will be removed. This project will also provide stormwater runoff flow reduction for small storm events.

**Project Design Considerations:** BMP Retrofit Project BN9105 is also at the recreation center. Coordination and sequencing of these projects should be considered. There are minimal environmental permitting requirements for this project. The facility can be accessed from Spring Hill Road and Arnauman Court. No easements will be required. There are no significant construction issues found on this site. Impacts to trees will be minimized.



Project Area Map: Conceptual plan showing potential locations of LID measures



Site Photo: Looking at the northeast corner of the recreation center.

**Costs:**

| ITEM                         | QUANTITY | UNITS   | UNIT COST  | TOTAL               |
|------------------------------|----------|---|------------|---------------------|
| Bioretention Area            | 410      | SY  | \$250.00   | \$102,500.00        |
| Tree Box Filters             | 4        | EA  | \$5,000.00 | \$20,000.00         |
| Landscaping                  | 1        | LS  | \$2,000.00 | \$2,000.00          |
| Erosion and Sediment Control | 1        | LS  | \$3,000.00 | \$3,000.00          |
|                              |          | <b>Base Construction Cost</b>   |            | \$127,500.00        |
|                              |          | Mobilization (5%)   |            | \$6,375.00          |
|                              |          | <b>Subtotal 1</b>   |            | \$133,875.00        |
|                              |          | Contingency (25%)   |            | \$33,468.75         |
|                              |          | <b>Subtotal 2</b>   |            | \$167,343.75        |
|                              |          | Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%) |            | \$75,304.69         |
|                              |          | <b>Estimated Project Cost</b>   |            | <b>\$250,000.00</b> |