

5.7 Accotink Mainstem 1

The results of the subwatershed ranking analysis showed a significant number of subwatersheds in Mainstem 1 that were impaired in some form. Three subwatersheds were in good condition, primarily due to good forest cover and the undeveloped parcels of Towers Park and Ranger Road Park. Thirteen of the 23 subwatersheds in the Mainstem 1 WMA are within the boundaries of Fairfax City and were not assessed for retrofits or improvements.

5.7.1 Structural Projects

5.7.1.1 10-Year Projects

AC9195 Stormwater Pond Retrofit

This project proposes to convert an existing dry pond (0100DP), which treats stormwater runoff from Oakton Village neighborhood, to an extended detention facility. A new riser structure, removal of the concrete channels and the addition of a plunge pool will improve the water quality treatment of this facility.

AC9196 Stormwater Pond Retrofit

This project proposes to retrofit existing wet pond WP0271 into a wetland facility at Four Winds at Oakton Condominium. Recommendations include stabilizing the outfall, adding a new riser structure, excavating for additional storage, tree removal and adding a micropool and plunge pool at the riser and inflow.

AC9199 Stormwater Pond Retrofit

An existing dry pond (1235DP) along Buckley Street in Rosehaven Estates is proposed to be retrofitted to provide greater water quality volume and peak flow reduction. Recommendations include modifying the existing riser structure, installing a plunge pool and a micropool and plantings.

AC9316 Area-Wide Drainage Improvements

Area-wide drainage improvements are recommended to treat the runoff from the Hawthorne Village Apartments, Five Oaks Place and Cedar Grove Park neighborhoods by installing tree box filters at curb and street inlets and rain gardens adjacent to yard inlets.

AC9409 Culvert Retrofit

Runoff from Oakton High School is proposed to be treated by retrofitting the road culvert under Sutton Road. This would involve adding a control structure upstream of the culvert to regulate the discharge from small, frequent storms.

AC9558 New BMP/LID

Parking lot runoff at Mosby Woods Elementary School is proposed to be treated by implementation of two bioretention facilities. These facilities would be located in the parking and bus loop medians.

AC9562 New BMP/LID

A series of bioretention filters and basins is proposed to treat runoff from the AT&T building and parking lot on Chain Bridge Road. Currently, the parking area drains through three outfalls to a

dry pond with a concrete channel located in an open grass field at the south end of the parking lot. There is sufficient space at the inflows to the pond to create bioretention facilities to pre-treat runoff for water quality and maintain the existing detention characteristics of the pond.

5.7.1.2 25-Year Projects

AC9187 Stormwater Pond Retrofit

Field assessment indicated the existing dry pond (0714DP) behind Blake Park Court is not functioning well due to a shortened flow path through the facility. The proposed project is to retrofit the existing dry pond with bioretention facilities to improve water quality and quantity control.

AC9188 Stormwater Pond Retrofit

Dry pond 0527DP treats the stormwater runoff from a multi-family residential area in the Country Creek neighborhood is proposed to be converted to bioretention to improve water quality before it enters the downstream channel.

AC9189 New Stormwater Pond

There is potential to create a wetland in a riparian area of East Blake Lane Park to treat high storm surges from the stream. This project would treat runoff from the Randall Valley and Five Oaks neighborhoods.

AC9190 Stormwater Pond Retrofit

The existing pond behind Oakton Pond Court could be retrofitted for increased water quality control by installing a forebay and a riser structure.

AC9191 Stormwater Pond Retrofit

Excavation of an existing dry pond behind Cyrandall Place is proposed to provide a permanent pool and aquatic bench for improved water quality treatment.

AC9192 Stormwater Pond Retrofit

Existing dry pond 0908DP behind Lochalsh Lane in the Edgemoore neighborhood is proposed to be retrofitted by removing the existing headwall and replacing it with a new riser, removing the concrete channels and replacing them with a meandering low flow channel and excavating for extended detention for to add water quality treatment to the existing quantity control.

AC9193 Stormwater Pond Retrofit

The project proposes to convert an existing dry pond that treats stormwater runoff from Oakdale Woods Court to a bioretention facility for increased water quality treatment by replacing the outlet structure, repairing inflow concrete flumes or replacing it with a natural channel within the facility.

AC9194 Stormwater Pond Retrofit

Two pond retrofits (1313DP and 0041DP) are proposed behind Miles Stone Court and along Courthouse Road. Recommendations include replacing the risers and adding storage volume for water quality treatment.

AC9197 Stormwater Pond Retrofit

This project recommends two neighboring ponds to be retrofitted to provide maximum water quality benefits. Pond 0147DP behind Borge Street treating neighborhood runoff is proposed to be retrofitted to include bioretention facilities. The pond retrofit behind Oakton Meadows Court (0173DP) would include excavating near the riser to create a small micropool, raising the embankment to reduce channel erosion and modifying the riser.

AC9198 Stormwater Pond Retrofit

The proposed project recommends retrofitting the existing pond behind Silver Stone Court (DP0505) and the existing dry pond behind White Flint Court (0073DP) by removing the concrete channel, adding forebays and increasing storage.

AC9559 New BMP/LID

Implementation of a bioretention facility at the outfall behind Bickley Court is recommended to improve the water quality of the roadway runoff before it enters the stream.

AC9560 New BMP/LID

Proposed recommendations are to retrofit dry pond 0015DP behind Courthouse Wood Court by converting it to a bioretention filter for water quality treatment.

AC9561 New BMP/LID

A bioretention facility is proposed to treat the Vistas Condominium parking lot runoff at Valentine Street. This would involve installing a curb cut and retrofitting a storm drain inlet to improve water quality control.

5.7.2 Non Structural Projects

AC9900 Community Outreach/Public Education - Stenciling

This community-wide project involves marking the storm drains within the Hawthorne Village, Beech Park, Fairfax Acres, Dudley Heights and Rosehaven Estates communities. The stencil marking can educate the public, reduce dumping and reduce the amount of litter and pollutants that enter the storm drain system.

AC9909 Rain Barrel Programs - Downspout Disconnect

The upland reconnaissance identified several sites where downspouts were directly connected to storm drains. A watershed-wide outreach program could be beneficial in reducing runoff volume or peak flows. In this WMA, it includes the area around Hawthorne Village Apartments.

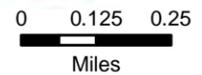
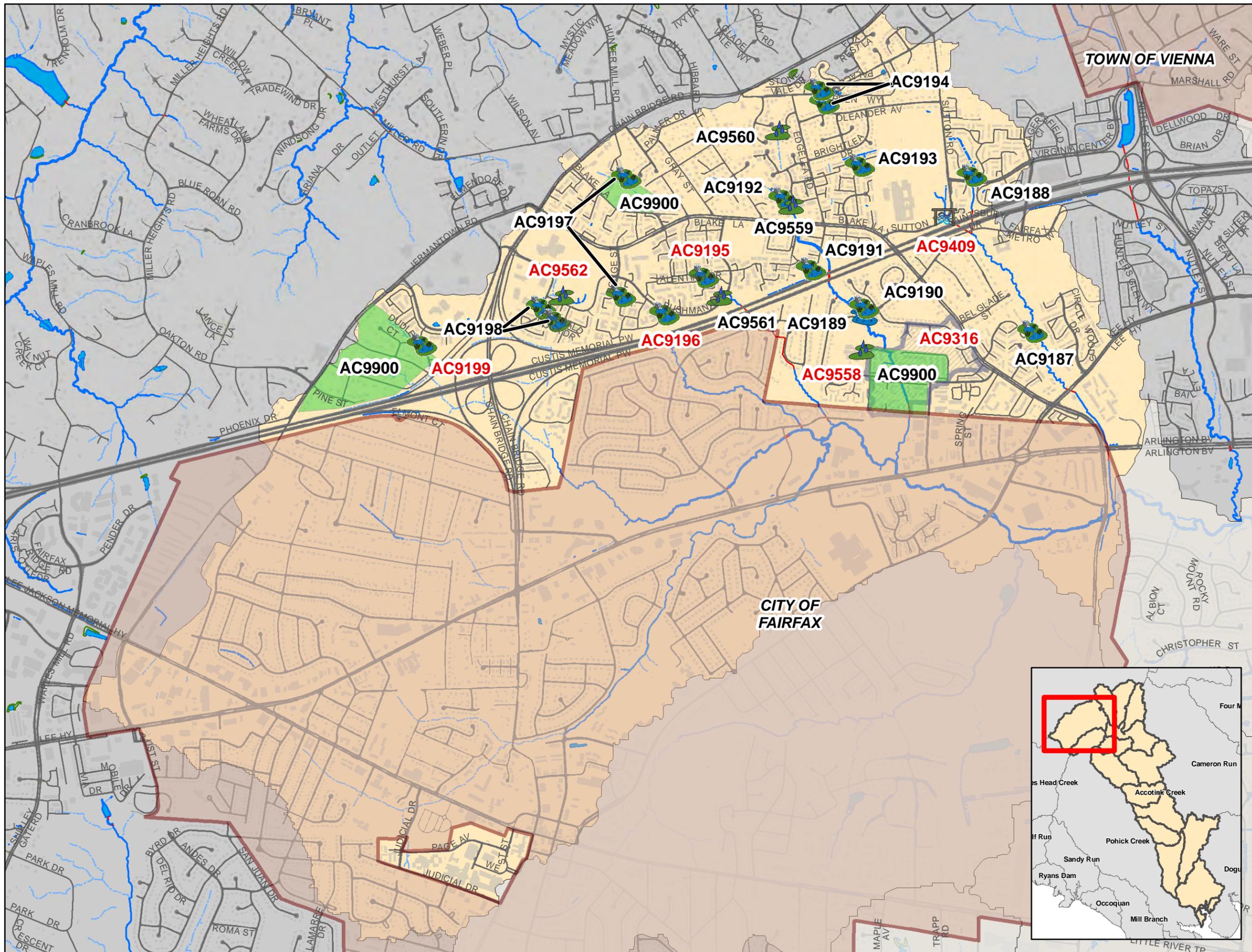
Table 5-7: Mainstem 1 Projects

Structural Projects						
Project #	Project Type	Subshed	Location	Watershed Benefit	Land Owner	Phase
AC9195	Stormwater Pond Retrofit	AC-AC-0465	Oakton Village neighborhood	Water Quality and Quantity	Private - Residential	1 - 10
AC9196	Stormwater Pond Retrofit	AC-AC-0475	Four Winds at Oakton Condominium	Water Quality and Quantity	Private - Residential	1 - 10
AC9199	Stormwater Pond Retrofit	AC-AC-0510	Rosehaven Estates	Water Quality and Quantity	Private - Residential	1 - 10
AC9316	Area-Wide Drainage Improvements	AC-AC-0425	Hawthorne Village Apts, Five Oaks Place and Cedar Grove Park neighborhoods	Water Quality	Private	1 - 10
AC9409	Culvert Retrofit	AC-AC-0415	Oakton High School	Water Quality	State - VDOT	1 - 10
AC9558	BMP/LID	AC-AC-0425	Mosby Woods Elementary School	Water Quality	County - FCPS	1 - 10
AC9562	BMP/LID	AC-AC-0500	AT&T office building	Water Quality	Private - Commercial	1 - 10
AC9187	Stormwater Pond Retrofit	AC-AC-0410	Behind Blake Park Ct	Water Quality	Private - Residential	11 - 25
AC9188	Stormwater Pond Retrofit	AC-AC-0415	Country Creek neighborhood	Water Quality	Private - Residential	11 - 25
AC9189	New Stormwater Pond	AC-AC-0425	East Blake Lane Park	Water Quality	County - FCPA	11 - 25
AC9190	Stormwater Pond Retrofit	AC-AC-0425	Behind Oakton Pond Ct	Water Quality and Quantity	Private - Residential	11 - 25
AC9191	Stormwater Pond Retrofit	AC-AC-0430	Behind Cyrandall Pl	Water Quality and Quantity	Private - Residential	11 - 25
AC9192	Stormwater Pond Retrofit	AC-AC-0430	Edgemoore neighborhood	Water Quality and Quantity	Private - Residential	11 - 25
AC9193	Stormwater Pond Retrofit	AC-AC-0430	Oakdale Woods Ct	Water Quality	Private - Residential	11 - 25
AC9194	Stormwater Pond Retrofit	AC-AC-0430	Behind Miles Stone Ct	Water Quality	Private - Residential	11 - 25
AC9197	Stormwater Pond Retrofit	AC-AC-0475	Borge St and Oakton Meadows	Water Quality	Private - Residential	11 - 25
AC9198	Stormwater Pond Retrofit	AC-AC-0500	Silver Stone Ct and While Flint Ct	Water Quality and Quantity	Private - Residential	11 - 25

Structural Projects						
Project #	Project Type	Subshed	Location	Watershed Benefit	Land Owner	Phase
AC9559	BMP/LID	AC-AC-0430	End of Bickley Ct	Water Quality	Private	11 - 25
AC9560	BMP/LID	AC-AC-0430	Behind Courthouse Wood Ct	Water Quality	Private	11 - 25
AC9561	BMP/LID	AC-AC-0465	Vistas Condominiums	Water Quality	Private - Residential	11 - 25

Non-Structural Projects					
Project #	Project Type	Subshed	Location	Watershed Benefit	Land Owner
AC9900	Community Outreach/Public Education	Multiple	Multiple	Water Quality	Multiple
AC9909	Rain Barrels	Multiple	Multiple	Water Quality and Quantity	Multiple

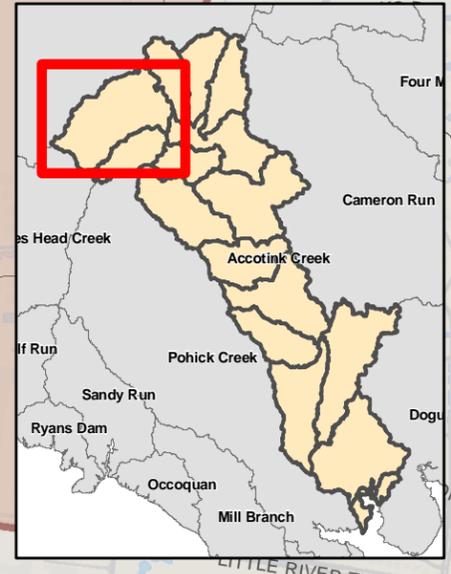
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-  **Buffer Restoration**
-  **Stream Restoration**
-  **BMP/LID**
-  **Culvert Retrofit**
-  **Dumpsite/Obstruction Removal**
-  **New Stormwater Pond**
-  **Outfall Improvement**
-  **Stormwater Pond Retrofit**
-  **Other**

-  **Community Outreach/Public Education**
-  **Area-wide Drainage Improvements**
-  **Land Conservation Project**
-  **Flood Protection/Mitigation**
-  **Inspection/Enforcement Enhancement Project**
-  **Rain Barrel Programs**
-  **Street Sweeping Program**
-  **Studies, Surveys and Assessments**

Implementation timeframe denoted by project label color. Red = 0-10 years
Black = 11-25 years.



Map 5.7

WMA: Mainstem 1
Proposed Projects

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5.8 Accotink Mainstem 2

The results of the subwatershed ranking analysis showed four subwatersheds in the Mainstem 2 WMA to be in good condition due to the influence of undeveloped parcels in Mill Creek Park, Accotink Stream Valley Park and Eakin Park. The remaining 10 subwatersheds are impaired in some form. In terms of overall ranking, Mainstem 2 had 10 of the highest priority subwatersheds for the overall Accotink Creek watershed.

5.8.1 Structural Projects

5.8.1.1 10-Year Projects

AC9172 New Stormwater Pond

An extended detention facility is proposed to provide water quality and water quantity treatment for the runoff from the residential area along Wheatwheel Lane and Libeau Lane.

AC9178 Stormwater Pond Retrofit

An existing dry pond (0169DP), that treats the runoff from a residential area in the Prosperity Heights neighborhood, is proposed to be retrofitted into a wetland facility to provide additional water quality and quantity control by removing the headwall and putting in a riser and channel stabilization.

AC9219 Stream Restoration

This project would restore two existing stream channels and a ditch located within Pine Ridge Park as well as a third stream channel within Accotink Stream Valley Park. There is also a potential sewer utility being exposed at the Collins Street road culvert. Restoration efforts will include reducing channel dimensions and raising bed elevations to reconnect each channel to its original floodplain, as well as stabilization of severe erosion.

AC9223 Stream Restoration

A large restoration project is recommended for the stream between Monarch Lane and Highland Lane. Currently this channel is mostly straight, incised, over-widened and is lacking a riparian buffer in several areas along the right bank facing downstream. Restoration of this channel will include regrading and stabilizing eroded stream banks. Buffer restoration on the right bank facing downstream in various locations will be necessary to further improve restored areas and to restore ecological function.

AC9545 New BMP/LID

This project proposed two separate bioretention facilities to treat the parking lot runoff at Eakin Park and from the Byzantine Church parking lot located along Woodburn Road.

5.8.1.2 25-Year Projects

AC9171 Stormwater Pond Retrofit

Dry pond 0106DP treating runoff from the Holmes Run neighborhood is proposed to be converted to a wetland by adding a micropool, a forebay, raising the embankment for water quality volume storage and reduce downstream channel erosion and lengthening the flow path to a meandering channel.

AC9173 Stormwater Pond Retrofit

The existing dry pond (DP0204), which treats the stormwater runoff from the Silk Vision and Surgery Center, is proposed to be retrofitted by removing the concrete channel, adding forebays at inlets and modifying the outlet for water quality volume storage.

AC9543 New BMP/LID

This project proposes two separate facilities to control water quality from parking lots. Installation of bioretention or infiltration at parking islands is proposed to treat the parking lot runoff at Camelot Elementary School while installation of a bioretention basin to treat the runoff from a gravel parking lot is proposed in Pine Ridge Park.

AC9544 New BMP/LID

The parking lot runoff at the Silk Vision and Surgery Center is proposed to be treated by retrofitting the storm drain inlets with tree box filters for water quality control.

AC9549 New BMP/LID

Installation of two sand filters is proposed to improve the water quality of the parking lot runoff at commercial business along Arlington Boulevard and Williams Drive.

5.8.2 Non Structural Projects

AC9802 Buffer Restoration

This project, located along Launcelot Way in the Accotink Stream Valley Park, involves the restoration of the degraded stream riparian buffer.

AC9805 Buffer Restoration

This project, located near Prosperity Avenue and Highland Lane in Eakin Community Park, involves the restoration of the degraded stream riparian buffer.

AC9900 Community Outreach/Public Education - Stenciling

This community-wide project involves marking the storm drains within the Camelot, Winterset Section 4, Camelot Heights, Mill Creek Park, Woodburn Village, Mantua, Langhorne Acres, Pine Ridge, Sutton Place and Strathmeade Square communities. The stencil marking can educate the public, reduce dumping and reduce the amount of litter and pollutants that enter the storm drain system.

AC9913 Dumpsite/Obstruction Removal - Dumpsite/Obstruction

Ten sites were identified with significant obstructions or dumpsites during the stream assessment. This project would be a community-wide program to remove trees and debris blocking fish passage and trees and yard waste within the stream.

AC9935 Community Outreach/Public Education - Tree Planting

Four communities assessed during the upland reconnaissance could be sites for a watershed-wide outreach program to encourage tree planting and urban reforestation. These include Holmes Run Heights, Shamrock Heights, Chaconas Estates and Gallows Estates.

Table 5-8: Mainstem 2 Projects

Structural Projects						
Project #	Project Type	Subshed	Location	Watershed Benefit	Land Owner	Phase
AC9172	New Stormwater Pond	AC-AC-0335	End of Libeau Ln	Water Quality and Quantity	Private - Residential	1 - 10
AC9178	Stormwater Pond Retrofit	AC-AC-0370	Prosperity Heights neighborhood	Water Quality and Quantity	Private - Residential	1 - 10
AC9219	Stream Restoration	AC-AC-0350	Pine Ridge Park	Water Quality	County - FCPA	1 - 10
AC9223	Stream Restoration	AC-AC-0370	Pine Ridge neighborhood	Water Quality	Private - Residential	1 - 10
AC9545	BMP/LID	AC-AC-0360	Eakin Park and Byzantine Church parking lot	Water Quality	County - FCPA / Private	1 - 10
AC9171	Stormwater Pond Retrofit	AC-AC-0335	Holmes Run Village neighborhood	Water Quality and Quantity	Private - Residential	11 - 25
AC9173	Stormwater Pond Retrofit	AC-AC-0350	Silk Vision and Surgery Center	Water Quality	Private - Commercial	11 - 25
AC9543	BMP/LID	AC-AC-0350	Camelot Elementary School / Pine Ridge Park	Water Quality	County - FCPS / County - FCPA	11 - 25
AC9544	BMP/LID	AC-AC-0350	Silk Vision and Surgery Center	Water Quality	Private - Commercial	11 - 25
AC9549	BMP/LID	AC-AC-0375	Arlington Blvd & Williams Dr	Water Quality	Private - Commercial	11 - 25
Non-Structural Projects						
Project #	Project Type	Subshed	Location	Watershed Benefit	Land Owner	
AC9802	Buffer Restoration	AC-AC-0350	Accotink Stream Valley Park	Water Quality	County - FCPA	
AC9805	Buffer Restoration	AC-AC-0370	Eakin Community Park	Water Quality	County - FCPA	
AC9900	Community Outreach/Public Education	Multiple	Multiple	Water Quality	Multiple	
AC9913	Dumpsite/Obstruction Removal	Multiple	Multiple	Water Quality	Multiple	
AC9935	Community Outreach/Public Education	Multiple	Multiple	Water Quality and Quantity	Multiple	

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