

5.13 Accotink Mainstem 7

The results of the subwatershed ranking analysis showed six of the 16 subwatersheds in Mainstem 7 have low scores in water quality only; this is primarily due to the influence of industrial areas. Three subwatersheds in the northern portion of the WMA are in good condition because they are within the boundaries of the Fort Belvoir North Area. Four additional subwatersheds in the southern portion of the WMA are in good condition due to the influence of undeveloped park land. Only one subwatershed in the WMA scored among the lowest 40 percent of all the subwatersheds in Accotink Creek.

5.13.1 Structural Projects

5.13.1.1 10-Year Projects

AC9123 Stormwater Pond Retrofit

This project would retrofit the existing dry pond (DP0411) on Cinder Bed Road at Gateway 95 Business Park to provide increased water quality control. Recommendations include modifying the riser, adding plunge pools at the inflows and removing the concrete channels.

AC9126 Stormwater Pond Retrofit

The proposed project consists of retrofitting the existing dry pond (DP0338) at Alban Industrial Center off of Alban Road. The pond has almost no detention as the outlet structure is oversized. Recommendations include modifying the riser with a smaller outlet, removing concrete channels, excavating the bottom and lengthening the flow path.

AC9300 Area-Wide Drainage Improvements

Area-wide drainage improvements are recommended to treat the runoff from the medium-density residential area in the Pohick Estates neighborhood by installing tree box filters at curb inlets and rain gardens at yard inlets.

AC9509 New BMP/LID

The parking lot in Lockport Industrial Park off of Telegraph Square Drive currently drains to the floodplain with no stormwater management. This project recommends a installing a bioretention facility along the edge of the parking lot to treat runoff for water quality.

AC9510 BMP/LID Retrofit

The entire Lockport Industrial park is lacking water quality treatment. Recommend installing tree box filters at storm drain inlets to treat runoff for water quality.

AC9511 New BMP/LID

This project proposes to convert the existing grass swale at the Deer Park parking lot of Lockport Industrial Park to a bioretention facility to treat the parking lot runoff for water quality.

AC9512 New BMP/LID

This project proposes to construct a vegetated swale to provide water quality control in the area adjacent to the HRM Automotive parking lot off of Alban Road. Because of the slope of the site, the best approach is to construct it as a step pool system with check dams.

5.13.1.2 25-Year Projects

AC9124 Stormwater Pond Retrofit

This project proposes to convert existing dry pond DP0299 at Newington Commerce Center to a wet pond by installing a riser. This would promote additional water quality benefits through pollutant removal.

AC9125 Stormwater Pond Retrofit

Field assessment indicated that dry pond 0660DP in the Terra Grande neighborhood is functioning well but is accumulating sediment. Project recommendations include removing sediment and modifying the control structure to provide extended detention.

AC9127 Stormwater Pond Retrofit

This existing pond at the Alban Industrial Center is currently functioning as dry pond. Project recommendations include excavation of accumulated sediment and debris and installation of a new riser structure to provide extended detention for water quality treatment.

AC9128 Stormwater Pond Retrofit

Possible retrofits at dry pond 0582DP, between Springfield Hills Drive and Woodstown Drive in the Terra Grande neighborhood, include removing accumulated debris, modifying the riser and stabilizing the low flow channel to add water quality treatment to the existing quantity control.

AC9129 Stormwater Pond Retrofit

The existing pond at the VA 95 Industrial Park is proposed to be retrofitted to a wet pond by raising the outlet structure to provide additional water quality treatment.

AC9130 New Stormwater Pond

A car dealership on Alban Road has a large amount of untreated impervious surface. Recommendations include excavating for a new wet pond, using the existing storm drains as inflows and installing a riser to provide water quality and quantity treatment.

5.13.2 Non Structural Projects

AC9902 Inspection/Enforcement Enhancement Project - Vehicle Maintenance

This project would provide community-wide targeted enforcement of spill prevention and pollution prevention regulations for sites where vehicles are maintained. The upland reconnaissance identified two car washing areas discharging directly to a tree box filter device and a fleet washing facility discharging through a dry pond without treatment.

AC9903 Inspection/Enforcement Enhancement Project - Outdoor Materials

Materials that are stored outdoors are subjected to precipitation, making them a possible source of stormwater runoff pollution. Three sites in this WMA had an uncovered fueling area or gravel berms around gas storage tanks. This project would be a community-wide enforcement and outreach approach to check for stormwater pollution prevention plans and to educate property owners.

AC9904 Rain Barrel Programs - Rain Barrels

Rain barrels provide the first step for residents to disconnect their downspout. This project would be a community-wide outreach program to encourage their use. One neighborhood, Springfield Oaks, was identified during the upland reconnaissance with roof drainage that would be suitable for this approach.

AC9907 Community Outreach/Public Education - Lawn Care

This project would provide community-wide education and guidance to homeowners on lawn care practices that would potentially reduce pollutants in stormwater runoff. In this WMA, Pohick Estates, Terra Grande and Springfield Oaks were identified as a potential outreach sites.

AC9909 Rain Barrel Programs - Downspout Disconnect

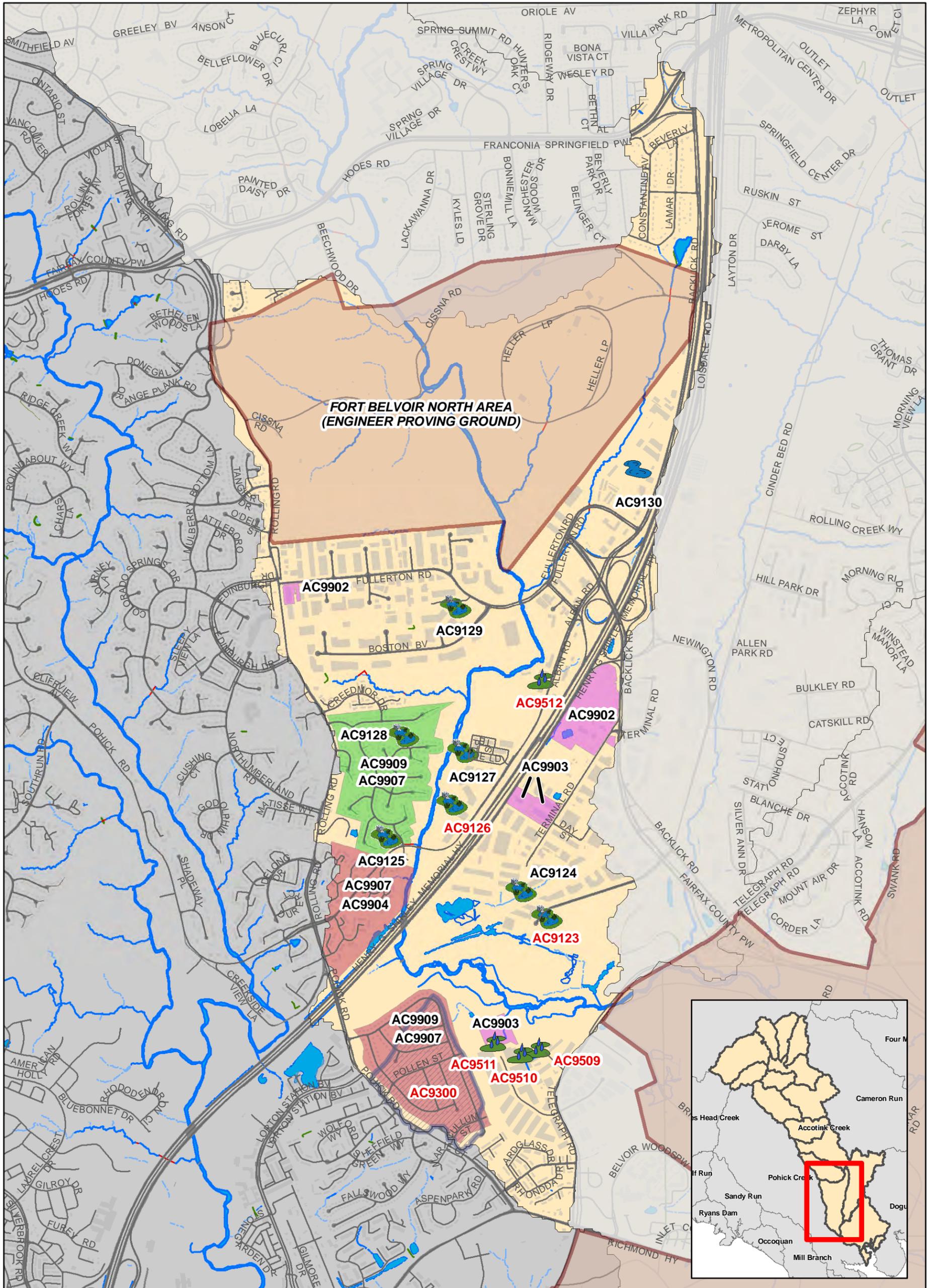
The upland reconnaissance identified several sites where downspouts were directly connected to storm drains. A watershed-wide outreach program could be beneficial in reducing runoff volume or peak flows. In this WMA, they included Pohick Estates and Terra Estates.

Table 5-13: Mainstem 7 Projects

| Structural Projects | | | | | | |
|--------------------------------|--|----------------|-----------------------------|----------------------------|-----------------------|--------------|
| Project # | Project Type | Subshed | Location | Watershed Benefit | Land Owner | Phase |
| AC9123 | Stormwater Pond Retrofit | AC-AC-0075 | Gateway 95 Business Park | Water Quality | Private - Commercial | 1 - 10 |
| AC9126 | Stormwater Pond Retrofit | AC-AC-0095 | Alban Industrial Center | Water Quality and Quantity | Private - Commercial | 1 - 10 |
| AC9300 | Area-Wide Drainage Improvements | AC-AC-0080 | Pohick Estates neighborhood | Water Quality | Private | 1 - 10 |
| AC9509 | BMP/LID | AC-AC-0070 | Lockport Industrial Park | Water Quality | Private - Industrial | 1 - 10 |
| AC9510 | BMP/LID | AC-AC-0070 | Lockport Industrial Park | Water Quality | Private - Industrial | 1 - 10 |
| AC9511 | BMP/LID | AC-AC-0080 | Deer Park parking lot | Water Quality | Private - Industrial | 1 - 10 |
| AC9512 | BMP/LID | AC-AC-0105 | HRM Automotive | Water Quality | Private - Industrial | 1 - 10 |
| AC9124 | Stormwater Pond Retrofit | AC-AC-0085 | Newington Commerce Center | Water Quality | Private - Industrial | 11 - 25 |
| AC9125 | Stormwater Pond Retrofit | AC-AC-0090 | Terra Grande neighborhood | Water Quality and Quantity | Private - Residential | 11 - 25 |
| AC9127 | Stormwater Pond Retrofit | AC-AC-0095 | Alban Industrial Center | Water Quality and Quantity | Private - Commercial | 11 - 25 |
| AC9128 | Stormwater Pond Retrofit | AC-AC-0095 | Terra Grande | Water Quality and Quantity | Private - Residential | 11 - 25 |
| AC9129 | Stormwater Pond Retrofit | AC-AC-0105 | VA 95 Industrial Park | Water Quality | Private - Industrial | 11 - 25 |
| AC9130 | New Stormwater Pond | AC-FL-0005 | Alban Road | Water Quality and Quantity | Private - Commercial | 11 - 25 |
| Non-Structural Projects | | | | | | |
| Project # | Project Type | Subshed | Location | Watershed Benefit | Land Owner | |
| AC9902 | Inspection/Enforcement Enhancement Project | Multiple | Multiple | Water Quality | Multiple | |
| AC9903 | Inspection/Enforcement Enhancement Project | Multiple | Multiple | Water Quality | Multiple | |
| AC9904 | Rain Barrels | Multiple | Multiple | Water Quality and Quantity | Multiple | |

| Non-Structural Projects | | | | | |
|-------------------------|-------------------------------------|----------|----------|----------------------------|------------|
| Project # | Project Type | Subshed | Location | Watershed Benefit | Land Owner |
| AC9909 | Rain Barrels | Multiple | Multiple | Water Quality and Quantity | Multiple |
| AC9914 | Community Outreach/Public Education | Multiple | Multiple | Water Quality | Multiple |

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| | Buffer Restoration | New Stormwater Pond | Community Outreach/Public Education |
| | Stream Restoration | Outfall Improvement | Area-wide Drainage Improvement |
| BMP/LID | Stormwater Pond Retrofit | Land Conservation Project | |
| Culvert Retrofit | Other | Flood Protection/Mitigation | |
| Dumpsite/Obstruction Removal | | Inspection/Enforcement Enhancement | |
| | | Rain Barrel Program | |
| | | Street Sweeping Program | |
| | | Studies, Surveys and Assessments | |

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

Map 5.13

WMA: Mainstem 7
Proposed Projects

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5.14 Accotink Mainstem 8

Almost all the subwatersheds of Mainstem 8 are either completely or partially within the boundaries of Fort Belvoir. Retrofits or improvement projects were assessed at sites which were outside of the fort and under the jurisdiction of Fairfax County.

5.14.1 Structural Projects

5.14.1.1 10-Year Projects

AC9101 Stormwater Pond Retrofit

This existing dry pond, 0629DP, is on the upstream side of the road culvert underneath Mount Air Drive near Telegraph Road in the Village of Mount Air neighborhood. The pond is located within a forested area where a perennial stream channel flows through the road culvert. There is significant erosion on the downstream side of this culvert. The proposed retrofit consists of installing a weir wall control structure to modify the outflow characteristics to provide water quality treatment. The receiving stream on the downstream side of the road culvert will be stabilized to prevent further erosion.

5.14.1.2 25-Year Projects

AC9100 Stormwater Pond Retrofit

This project proposes converting dry pond DP0401 along Morning Meadow Drive in the Landsdowne neighborhood to a wet pond by removing the low flow outlet to provide additional water quality treatment and stabilizing the downstream channel with step pools or check dams.

AC9500 New BMP/LID

The project recommends converting the unused portions of the parking lot in Pohick Industrial Park to bioretention facilities to increase stormwater treatment and to remove some impervious surface. Reconfiguration of the storm drains may be required for implementation.

5.14.2 Non Structural Projects

AC9900 Community Outreach/Public Education - Stenciling

This community-wide project involves marking the storm drains within the Cook Inlet community. The stencil marking can educate the public, reduce dumping, and reduce the amount of litter and pollutants that enter the storm drain system.

AC9902 Inspection/Enforcement Enhancement Project - Vehicle Maintenance

This project would provide community-wide targeted enforcement of spill prevention and pollution prevention regulations for sites where vehicles are maintained. The upland reconnaissance identified a car wash discharging directly to a storm drain and two outdoor truck repair/maintenance/storage facilities.

AC9903 Inspection/Enforcement Enhancement Project - Outdoor Materials

Materials that are stored outdoors are subjected to precipitation, making them a possible source of stormwater runoff pollution. One site in this WMA had construction rubble stored without cover. This project would be a community-wide enforcement and outreach approach to check for stormwater pollution prevention plans and to educate property owners.

AC9904 Rain Barrel Programs - Rain Barrels

Rain barrels provide the first step for residents to disconnect their downspout. This project would be a community-wide outreach program to encourage their use. A retirement community (The Fairfax) was identified during the upland reconnaissance with roof drainage that would be suitable for this approach.

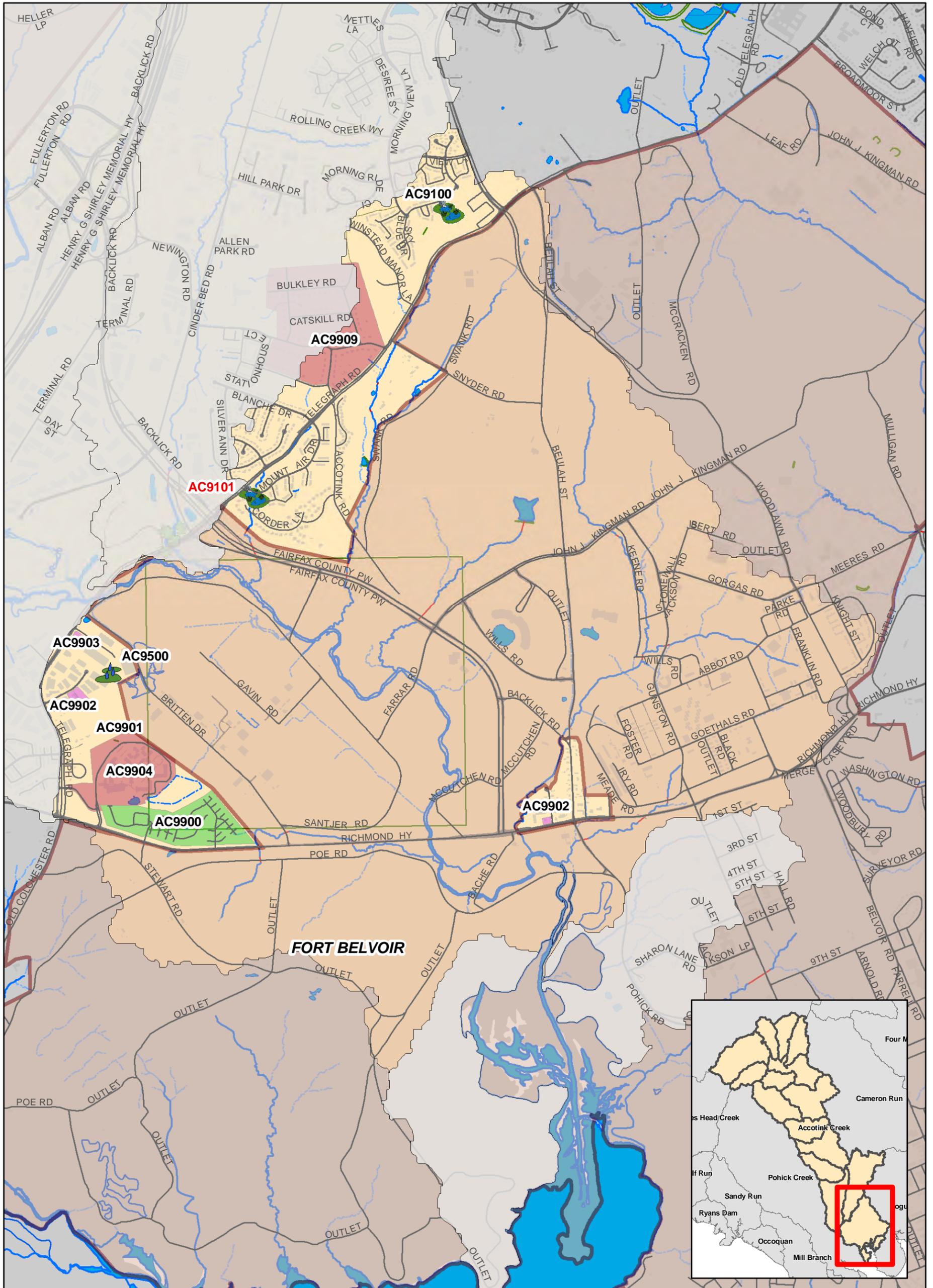
AC9909 Rain Barrel Programs - Downspout Disconnect

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, they included the area around Hunter Estates and Newberry Station.

Table 5-14: Mainstem 8 Projects

| Structural Projects | | | | | | |
|--------------------------------|--|----------------|-----------------------------------|----------------------------|-----------------------|--------------|
| Project # | Project Type | Subshed | Location | Watershed Benefit | Land Owner | Phase |
| AC9101 | Stormwater Pond Retrofit | AC-AC-0065 | Village of Mount Air neighborhood | Water Quality | Private - Residential | 1 - 10 |
| AC9100 | Stormwater Pond Retrofit | AC-KR-0005 | Landsdowne neighborhood | Water Quality and Quantity | Private - Residential | 11 - 25 |
| AC9500 | BMP/LID | AC-AC-0050 | Pohick Industrial Park | Water Quality | Private | 11 - 25 |
| Non-Structural Projects | | | | | | |
| Project # | Project Type | Subshed | Location | Watershed Benefit | Land Owner | |
| AC9900 | Community Outreach/Public Education | Multiple | Multiple | Water Quality | Multiple | |
| AC9902 | Inspection/Enforcement Enhancement Project | Multiple | Multiple | Water Quality | Multiple | |
| AC9903 | Inspection/Enforcement Enhancement Project | Multiple | Multiple | Water Quality | Multiple | |
| AC9904 | Rain Barrels | Multiple | Multiple | Water Quality and Quantity | Multiple | |
| AC9909 | Rain Barrels | Multiple | Multiple | Water Quality and Quantity | Multiple | |

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|  <p>0 0.125 0.25 Miles</p> | <ul style="list-style-type: none">  Buffer Restoration  Stream Restoration  BMP/LID  Culvert Retrofit  Dumpsite/Obstruction Removal | <ul style="list-style-type: none">  New Stormwater Pond  Outfall Improvement  Stormwater Pond Retrofit  Other | <ul style="list-style-type: none">  Community Outreach/Public Education  Area-wide Drainage Improvement  Land Conservation Project  Flood Protection/Mitigation  Inspection/Enforcement Enhancement  Rain Barrel Program  Street Sweeping Program  Studies, Surveys and Assessments | <p>Map 5.14</p> <p>WMA: Mainstem 8 Proposed Projects</p> <p>5-111</p> |
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Implementation timeframe denoted by project label color. Red = 0-10 years Black = 11-25 years.

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