

FACILITY: FILTERS - BIORETENTION (F-5)*



GENERAL MAINTENANCE CARD

Stormwater Coalition of Albany County

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Environmental Protection Fund

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PURPOSE AND FUNCTION

A shallow depression that treats stormwater as it flows through a soil matrix, and is returned to the storm drain system.

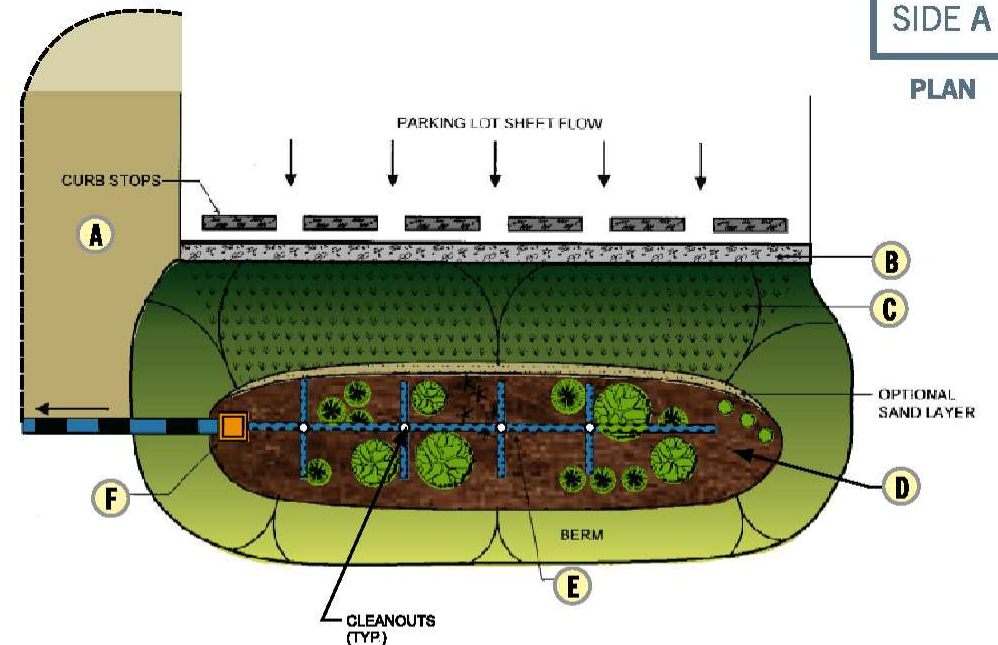
SHORT-TERM MEASURES (FREQUENCY: AT LEAST ONCE A MONTH)

Drainage Issues:

- Maintain contributing drainage area.**
 - Remove trash and debris and dispose off-site, as required.
 - Stabilize and mow area as required. Remove clippings.
 - Ensure that activities in the drainage area minimize oil/grease and sediment entry to the system.
- Inspect stone diaphragm (Location B), grass filter strip (Location C), or other pretreatment devices.**
 - Remove debris manually and dispose off-site, as required.
 - Remove stone from grass filter strip and replace in stone diaphragm.
 - Note any channels, soil exposure, or other evidence of erosion. Stabilize for further maintenance.
- Inspect bioretention area (Location D).**
 - Remove debris manually and dispose off-site, as required.
 - Note dewatering time. Bioretention area should drain completely within 24-48 hours of a storm event. If clogging occurs, remove sediment and cleanout underdrains (refer to Items 2 and 3 of Long-Term Measures).
- Inspect outlet structure (Location F).**
 - Note any cracks/damage (critical maintenance issues box).
 - Remove debris manually and dispose off-site, as required.

Landscaping:

- Inspect overall condition of vegetation onsite.**
 - Irrigate plantings two to three times a week or as needed, until well-established (two to three months post-construction).
 - Remove vegetative invasives manually, ensuring root removal, to the extent possible. Refer to Appendix 1: New York State Invasive Plants for key species. Note any significant establishment for future removal/maintenance.



MAJOR AREAS OF PRACTICE

- | | | |
|--------------------------|-----------------------|---------------------------------|
| A. Maintenance Accessway | C. Grass Filter Strip | E. Underdrain Collection System |
| B. Stone Diaphragm | D. Bioretention Area | F. Outlet Structure |

- Relocate rodents and/or provide exclusion devices, as required.
- Trim shrubs and cut grass along street frontages, as required. Dispose of clippings off-site.
- Mow grassed areas as required. Mow only when area is dry to avoid rutting. Dispose of clippings off-site.
- Replace mulch in exposed areas, as required.

Perimeter Treatment (perimeter boundaries not shown on figures):

- Inspect overall condition of the perimeter treatment items.**
 - Remove accumulated litter/debris by hand, dispose off-site.
 - Secure gates, guiderails, signs, and boulders as required.
- Inspect for significant establishment of invasives and develop an area-wide plan for removal.**
- Inspect for herbivore damage.**
 - Repair burrows/damage created by rodents, as required.
 - Introduce alternative plantings, as required.

Critical Maintenance Issues

- Risers and barrels**
 - Presence of corrosion
 - Weld joint weakness
 - Clogging of outlets

Albany County	City of Albany	Town of Bethlehem	City of Cohoes	Town of Colonie	Village of Colonie	Village of Green Island	Town of Guilderland	Village of Menands	Town of New Scotland	Village of Voorheesville	City of Watervliet	SUNY Albany
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* Facility abbreviations refer to 2003 NYSDEC Stormwater Design Manual practice labels

MEDIUM-TERM MEASURES (FREQUENCY: ONCE EVERY YEAR)

Drainage Issues:

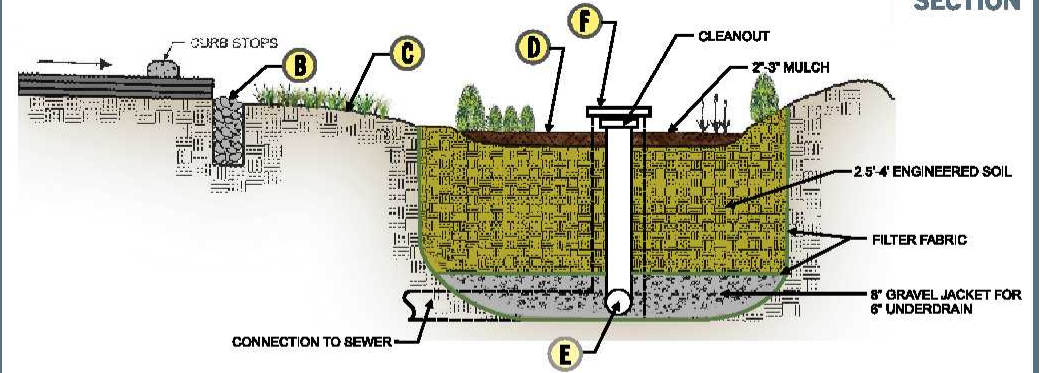
1. **Inspect stone diaphragm (Location B), grass filter strip (Location C) or other pretreatment devices.**
 - Repair/reinforce eroded areas as required.
 - Remove accumulated sediment from stone diaphragm, as required.
2. **Inspect bioretention area (Location D).**
 - Repair/reinforce eroded areas as required.
3. **Inspect outlet structure (Location F on Plan Figure).**
 - Repair cracks/damage as required.
 - Clear as necessary to maintain conveyance.

Landscaping:

4. **Inspect plant mortality.**
 - Remove dead plants by hand; dispose off-site; replant as required.
 - Note any bare areas. Cultivate soil and seed or mulch as required. Introduce alternative plantings, as required.
 - Ensure that mulch is at appropriate depth (per specifications) and replenish as required.
5. **Test soil and adjust as necessary to maintain a 5.0 to 7.2 pH range. Apply limestone for soils with pH below 5.0, and iron sulfate plus sulfur for soils with pH above 7.2.**
6. **Test P(Total Phosphorus)-Index of engineered soil.**

Perimeter Treatment (perimeter boundaries not shown on figures):

7. **Lubricate locks and hinges on gates, as required.**
8. **Refurbish or mow accessway, as required.**
9. **Inspect and repair damaged locks, gates, guiderails, and signs, as required.**



MAJOR AREAS OF PRACTICE

- | | | |
|------------------------------|--|----------------------------|
| B. Stone Diaphragm | D. Bioretention Area | F. Outlet Structure |
| C. Grass Filter Strip | E. Underdrain Collection System | |

LONG-TERM MEASURES (FREQUENCY: ONCE EVERY TWO TO THREE YEARS)

Drainage Issues:

1. **Replace stone diaphragm (Location B) as required.**
2. **Inspect surface of bioretention area (Location D) for sediment accumulation.**
 - Remove sediment manually, as required.
 - Remove mulch and identify compacted areas.
 - Core aerate or cultivate compacted areas to ensure adequate filtration, as required.
3. **Cleanout underdrain (Location E) as required.**
 - Attach a standard compressor and fitting to first cleanout and run compressed air through pipe. Repeat for all remaining connections.
 - Remove compressor hose and fitting.
4. **Replace mulch over surface of entire bioretention area (Location D).**
5. **If severe clogging occurs and the above measures are not effective,**
 - Remove and replace all media to original specification or to approved, revised specifications.
 - Underdrain pipes may be reused if in good condition.

Paperwork and Reporting
1) Refer to site specific SWPPP and regulated MS4 for reporting requirements related to maintenance 2) Report practice failures to owner-operator and relevant regulated MS4

Maintenance Considerations During Design
<ul style="list-style-type: none"> - Erosion and Sediment Control <ul style="list-style-type: none"> - Inlet/Outlet Protection - Sediment Removal - Underdrains - Landscaping - Mechanical Issues - Maintenance Access - Rizer Barrel Outlet Structure - Cold Climate Considerations