



# GENERAL MAINTENANCE CARD

## Stormwater Coalition of Albany County

Facility: Pond - Micropool Extended Detention (P-1)

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New York State Department of Environmental Conservation  
Environmental Protection Fund

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### MAJOR AREAS OF PRACTICE

- |                          |                       |
|--------------------------|-----------------------|
| A. Maintenance Accessway | E. Outlet Structure   |
| B. Inlet Structure       | F. Outfall            |
| C. Sediment Forebay      | G. Emergency Spillway |
| D. Micropool             |                       |

### PURPOSE AND FUNCTION

A pond that treats the majority of the water quality volume through extended detention, and incorporates a forebay at the inlet and a micropool at the outlet of the pond to prevent sediment resuspension.

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

#### Drainage Issues:

##### 1. Inspect wetland surface area.

- Remove accumulated debris/floatables manually or by other approved means, if required. Dispose of debris off-site.
- Note the existence of excessive algae, if present.

##### 2. Inspect the inlet structure (Location B) and sediment forebay (Location C).

- Remove accumulated debris/floatables near the inlet pipe/sediment forebay/rip-rap apron manually or by other approved means, if required. Dispose of debris off-site.
- Note any cracks in pipe, and headwall/concrete pipe collar.
- Note any displaced field stone.

##### 3. Inspect the outlet structure (such as riser box or weir at Location E) and micropool (Location D).

###### a. Riser Box

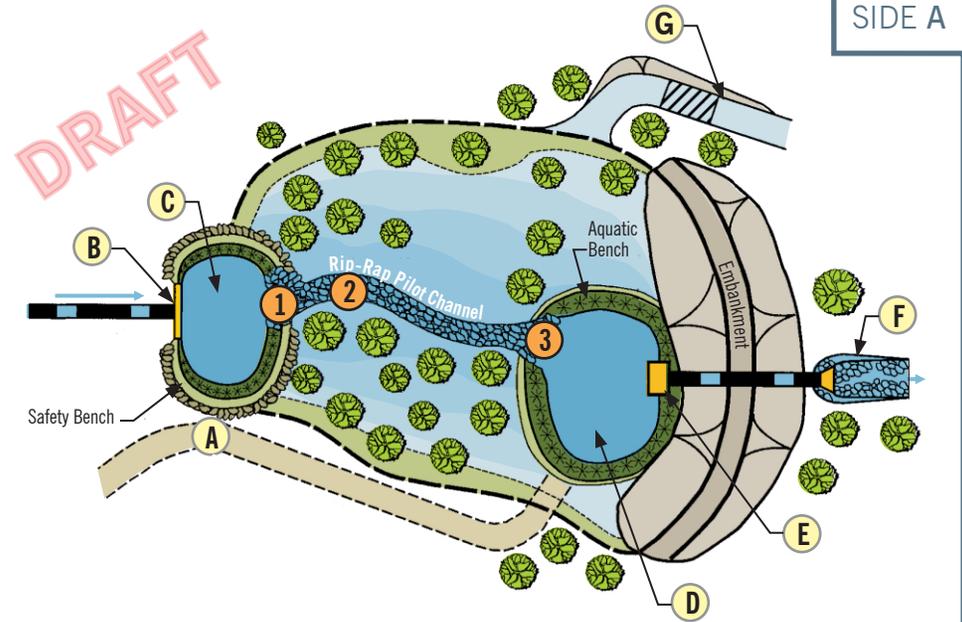
- Manually remove debris accumulated on the trash rack; dispose of debris off-site.
- Note any cracks/damage to concrete riser box.
- Manually remove debris lodged in reverse-flow pipe; dispose off-site.
- Correct any issues relating to flow short-circuiting, if present.

###### b. Weir

- Visually inspect integrity of the weir, weir wall, low-flow orifice, and baffle.
- Note any cracks/damage to weir wall and baffle.
- Manually remove debris lodged in reverse-flow pipe; dispose off-site.
- Correct any issues relating to flow short-circuiting, if present.

###### c. Outfall (Location F)

- Remove accumulated debris/floatables near the outfall spillway approach and discharge channels manually or by other approved means, if required. Dispose of debris off-site.
- Note any displaced field stone.



##### 4. Inspect the emergency spillway (Location G).

- Vegetated emergency spillway channels should be mowed and should not be cut to less than 6 to 8 inches in height.
- The emergency spillway approach and discharge channels should be cleared of brush and other woody growth.
- After any flow has passed through the emergency spillway, the spillway crest (control section) and exit channel should be inspected for erosion. Note location of any eroded areas.

##### 5. Inspect adjacent catch basin grates and manhole covers.

- Remove accumulated debris; dispose off-site.

#### Landscaping Issues:

##### 6. Inspect overall condition of installed vegetation.

- Remove vegetative invasives manually, ensuring root removal, to the extent possible. Note any significant establishment for future removal/maintenance.
- Relocate rodents and/or provide exclusion devices, as required.
- Trim shrubs and cut grass along street frontages, as required.

#### Perimeter Treatment:

##### 7. Inspect overall condition of the perimeter treatment items.

- Remove accumulated litter/debris by hand; dispose off-site.
- Promptly notify NYSDEC police regarding illegal dumping.
- Secure gates, guiderails, signs, and boulders, as required.

**MODERATE-TERM MEASURES (FREQUENCY: ONCE EVERY SIX MONTHS)**

**Drainage Issues:**

1. Measure the sediment depth in sediment forebay and micropool (Locations C & D).
2. Inspect the inlet structure (Location B) and sediment forebay (Location C).
  - Repair cracks/damaged stones on headwall, as required.
  - Repair cracks in pipe or concrete pipe collar using a sealant, as required.
  - Replace displaced field stone, as required.
3. Inspect the outlet structure (Location E) and micropool (Location D).
  - Repair cracks/damage to concrete riser box/weir wall and baffle, as required.
  - Replace displaced field stone, as required.
4. Inspect the emergency spillway (Location G).
  - Repair and stabilize eroded areas in the exit channel, as necessary.
5. Inspect for unstable embankments.
  - Repair/reinforce unstable embankments using field stone, plantings, etc.

**Landscaping Issues:**

6. Inspect for plant mortality.
  - Remove dead plants by hand; dispose off-site; replant as required.
  - Trim and remove specified trees, as required.
7. Inspect for significant establishment of invasives and develop an area-wide plan for removal.
8. Inspect for herbivore damage.
  - Repair burrows/damage created by rodents, as required.
  - Introduce alternative plantings, as required.

**Perimeter Treatment:**

9. Lubricate locks and hinges on gates, as required.
10. Refurbish wood chips on accessway and site perimeter, as required.
11. Inspect and repair damaged sidewalks, fencing, guiderail, and signs, as required.

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

**Drainage Issues:**

1. Remove sediment from sediment forebay/micropool and adjacent catch basins; vactoring recommended.

**DEWATERING PROCEDURE AT FOREBAY/MICROPOOL**

The forebay/micropool must be dewatered before proceeding with vactoring operations. A NYSDEC-approved technique must be adopted to isolate the forebay/micropool prior to dewatering.

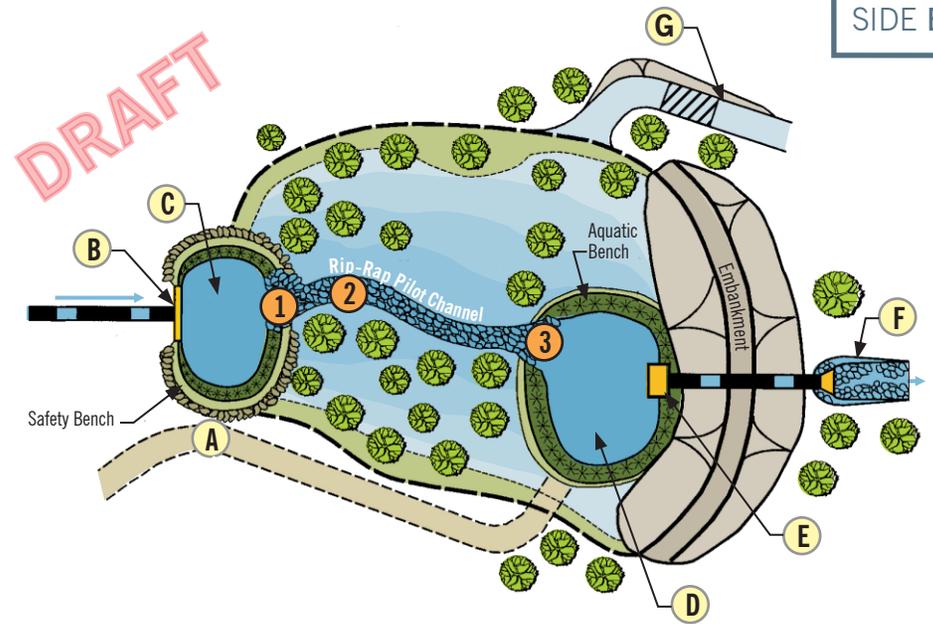
**Methodology:**

1. Park the vactor truck along the maintenance accessway near the inlet (Location A). The boom should be extended in the direction of the forebay/micropool.
2. Ensure clear access for a two-person crew down the slope near the forebay/micropool (Locations C & D).
3. Using a NYSDEC-approved technique/tool, such as a sand bag wall, isolate the forebay/micropool by erecting the sand bag wall perpendicular to the direction of flow at Locations 1 & 3.
4. The sand bag wall should extend up the slopes of the aquatic bench beyond the edge of water to ensure no flow conveyance.
5. Pump out water from the forebay to the riprap channel downstream (Location 2) or in the case of the micropool, to a sediment tank on the other side of the embankment.
6. Proceed with vactoring operations.
7. On completion of vactoring work, disassemble the sand bag wall manually and remove from site.

**VACTORING PROCEDURE AT FOREBAY/MICROPOOL**

**Methodology:**

1. Connect the vactor truck to an approved nearby source of clean water for vactoring purposes.



2. Place water jet hose down the slope of the forebay/micropool (Locations C & D). Use hose to loosen accumulated sediment.
3. Place the flexible suction hose into the forebay/micropool (Locations C & D).
4. Perform vactoring operations by simultaneously using the suction arm and water jet hose to remove slurry until the rip-rap base is reached.
5. Continue slurry removal until capacity of vactor truck is reached.
6. Stop vactoring work. Dispose of slurry off-site.
7. Repeat Steps 1-6 until all the sediment has been removed.
8. After vactoring work is complete, carefully remove the flexible suction hose and the water jet hose from the forebay/micropool, and transport them back to the truck.
9. Inspect the accessway and adjacent area for damage, such as dislodged field stone, wood chips, etc., and refurbish as required.

**Note:** Secure locks on gates as necessary prior to exiting site.

Required Maintenance Permits	
Issuing Agency	Regulated Parameters
1. U.S. Army Corps of Engineers	- Sediment Removal and Placement of fill within wetlands
2. NYSDEC	- Temporary dewatering of wetland - Revegetation - Herbicide application

Maintenance Considerations During Design
- Erosion and Sediment Control <ul style="list-style-type: none"> <li>▪ Inlet/Outlet Protection</li> <li>▪ Sediment Removal</li> </ul>
- Landscaping
- Mechanical Issues <ul style="list-style-type: none"> <li>▪ Pipe Considerations</li> <li>▪ Adjustable Gate Valve</li> </ul>
- Pond Drain
- Maintenance Access
- Cold Climate Considerations