

MAINTAINING STORMWATER CONTROL MEASURES

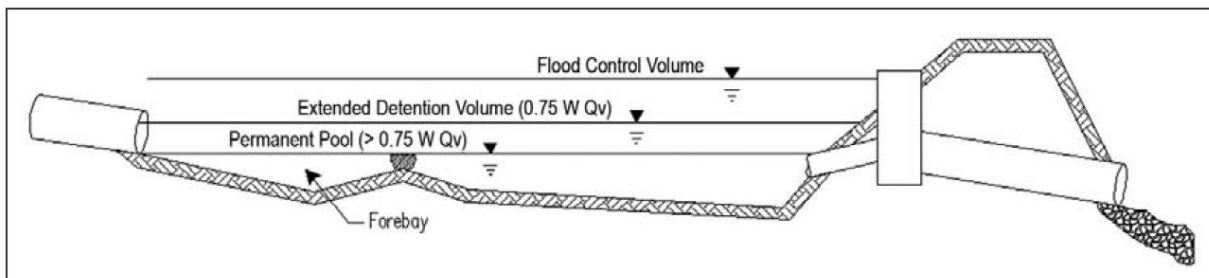
Guidance for Private Owners & Operators

STORMWATER CONTROL MEASURES

Wet Pond or Wet Extended Detention Basin

Wet ponds or wet extended detention basins are designed to hold water in a permanent pool. Stormwater runoff generated during storm events is stored above the permanent pool surface providing flood control protection while affording some ability to settle out sediments and contaminants from the stormwater before releasing it downstream or into a local sewer system.

Wet ponds typically contain a principle outlet structure or pipe and an emergency spillway. Wet ponds can either be dug out ponds or created by building a small dam or embankment to hold stormwater runoff. Principle outlet structures or pipes and emergency spillways should be inspected frequently to ensure they are not blocked and are operational. Vegetation along the dam, embankment and emergency spillway should be maintained in a mowed grass condition.



Typical Wet Pond cross-section view showing different levels of ponding control during storm events and permanent pool level. Credit: Ohio Rainwater & Land Development Manual

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Wet pond with maintained shoreline containing **aquatic bench** for wetland vegetation to improve pollutant removal. Credit: Ohio Department of Natural Resources Division of Soil & Water Resources.



Wet pond containing a **forebay pool** to capture sediment entering the wet pond from the storm sewer inlet pipe visible in the background. Captured sediment is periodically removed from the forebay area. Credit: Summit Soil & Water Conservation District

MAINTENANCE REQUIRED WHEN:

- Outlet is blocked by trash, debris or vegetation.
- The emergency spillway is blocked by debris or has signs of erosion.
- Erosion of dam, embankment or side slopes of pond.
- Low flow orifice, forebay, and micro pool are blocked by trash, debris, or sediment.
- Dam or embankment shows signs of visible water seepage.
- There are animal burrows within dam, embankment or side slopes of pond.
- Woody vegetation is growing on the dam.
- Foul odors present.
- Pond depths have been significantly reduced due to sediment accumulation.
- Algae blooms covering over 1/3 of pond surface area occur in the summer.
- Beavers are present in the basin.

NOTE: If your wet pond is protected by perimeter fencing, periodic inspections of its integrity should be conducted.

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ROUTINE AND NON-ROUTINE MAINTENANCE

Wet Pond or Wet Extended Detention Basin

Routine Maintenance:

- Outlet Structures: Keep outlets such as principal spillway pipe, water quality orifice pipe and emergency spillway free from blockage by sediment, debris, or trash.
- Dam/Embankment: Mow grassed dam and embankment of wet pond to prevent establishment of woody vegetation.
- Erosion and Scour: Repair soil erosion or scouring on the side slopes leading into the wet pond.
- Vegetation Management: Remove vegetation from at least 10 feet away from the outlet structure.
- Sediment and Debris: Remove accumulated sediment, debris and trash from the wet pond forebay and ponding area. Remove sediments when the pool volume has become significantly reduced or the pond begins to become eutrophic.

Non-Routine Maintenance:

- Excessive Sediment: Remove sediment accumulation from the forebay and ponding area prior to 25 percent of the ponding storage volume being lost within the wet pond.
- Invasive Vegetation: Treat and remove invasive vegetation from ponding area, side slopes and emergency spillway.
- Outlet Structure: Repair or replace damaged outlet structure.
- Erosion Protection: Repair or replace riprap or stone protection at pipe inlets, pipe outlets or emergency spillway.
- Dam/Embankment: Seek professional consultation if seepage, leaks or erosion is discovered on the dam or embankment of the wet pond.

Vegetated Infiltration Swale

Routine Maintenance:

- Sediment and Debris: Remove accumulated sediment and debris from the mulch or grass surface area of the vegetated infiltration swale.

Wet Pond or Wet Extended Detention Basin Inspection and Maintenance Checklist

Facility:			
Location/Address:			
Date:	Time:	Weather Conditions:	Date of Last Inspection:
Inspector:		Title:	
Rain in Last 48 Hours <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list amount and timing:			
Pretreatment: <input type="checkbox"/> vegetated filter strip <input type="checkbox"/> swale <input type="checkbox"/> forebay <input type="checkbox"/> other, specify:			
Site Plan or As-Built Plan Available: <input type="checkbox"/> Yes <input type="checkbox"/> No			

Inspection Item		Comment	Action Needed
1. PRETREATMENT			
Sediment has accumulated.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Trash and debris have accumulated.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
2. DEWATERING			
The water quality orifice is visible.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
3. INLETS			
Inlets are in poor structural condition.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Sediment has accumulated and/or is blocking the inlets.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Erosion is occurring around the inlets.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
3. EMBANKMENT			
Sinkholes, cracks or seeps are visible in the embankment.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Trees or woody vegetation present on the dam or embankment.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
4. BASIN PERMANENT POOL			
Trash and debris have accumulated.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Sediment has accumulated and reduced pool volume.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Invasive plants are present.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Erosion is present at shoreline.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Excessive algae blooms are present.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
5. SIDE SLOPES AND EMBANKMENT			
Erosion is evident.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Sinkholes, animal borrows or instability is present.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
6. OUTLETS AND OVERFLOW STRUCTURE			
Outlets or overflow structures in poor structural condition.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Sediment, trash or debris is blocking the outlets, trash racks or overflow structure.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Erosion is occurring around the outlets or outlet structure.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No
Joints are water tight and no leaks are visible.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<input type="checkbox"/> Yes <input type="checkbox"/> No

Additional Notes

Wet weather inspection needed ☐ Yes ☐ No**Site Sketch:**