

# A HOMEOWNER GUIDE TO STORMWATER DETENTION POND MAINTENANCE



## IF YOU HAVE SOMETHING LIKE THIS ON YOUR PROPERTY, OR IN YOUR SUBDIVISION, THIS GUIDE IS FOR YOU!

Stormwater detention areas are built to safely hold stormwater that runs off from impervious surfaces during heavy rain events. This reduces the flow into rivers and streams during storms, and decreases flooding.

Unfortunately, if these structures are not inspected, maintained, and managed correctly, they can actually increase flooding, cause a safety hazard, and negatively affect property values.

As a homeowner or member of a Home Owners Association (HOA)/ Property Owners Association (POA) you have a responsibility to keep your pond in good working condition.

This guide and checklist will help you to ensure that your stormwater structure is able to handle our rainy Gulf Coast seasons.

## INDEX OF DEFINITIONS

**Storm Water:** any water that runs over the surface before it reaches a waterway. This can be runoff from parking lots, streets, roofs, and other impervious surfaces.

**Impervious surface:** any material that does not allow rain to enter into the soil.

**Wet detention pond:** a pond designed to have a permanent pool of water during normal conditions. The pond only releases water during heavy rainfall events.

**Dry detention pond:** a pond that will normally not have standing water, except for a short time after a large storm event.

**Inlet:** the mechanism that allows water into the stormwater basin or pond. Usually a pipe, ditch, or swale.

**Outlet:** the structure that controls the rate of release from the pond and the water depth and storage volume in the pond.

**Outfall:** the point where collected stormwater reenters a natural waterway.

**Rip rap:** Rock material typically used to stabilize conveyance channels.

**Emergency spillway:** discharges excess stormwater during substantial runoff events.

**O&M:** Operations and Maintenance.

## WHY SHOULD YOU BOTHER TO MAINTAIN YOUR POND?

- When rainfall runs over impervious surfaces it does not have time to soak into the ground, so it ends up entering our waterways in large quantities. This often results in increased flooding that can damage homes, businesses, and roads.
- Stormwater runoff is a big source of water pollution in our area. Everything that sits on our roads and parking lots, eventually runs into our streams and rivers with rainfall. Stormwater ponds allow some of these pollutants to settle out and filter through the ground.
- Well maintained ponds can actually be an aesthetically pleasing addition to a neighborhood. In addition, they can provide habitat for native species of birds, reptiles, and amphibians. Poorly maintained ponds can be a breeding ground of mosquitos and other nuisance animals.
- There can be legal consequences of not properly maintaining your stormwater detention facility.

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## ROUTINE MAINTENANCE

**Inspections:** Periodic scheduled inspections with the attached checklist, and inspections after major rainfall events, to check for damage & to remove debris/ trash.

**Vegetation Management:** Mowing on a regular basis to prevent erosion or aesthetic problems. Trees and shrubs should not be allowed to grow in the pond basin. Limit use of fertilizers and pesticides in and around the ponds to minimize leaching into pond and subsequent downstream waters.

**Erosion:** Appropriate mowing equipment and machinery should be used on pond structure to avoid erosion.

**Trash, debris and litter removal:** Removal of any debris causing obstructions and especially after every runoff producing rainfall event. General pickup of debris in and around the pond during all inspections.

**Mechanical Equipment check:** Inspection of any valves, pumps, fence gates, locks or mechanical components during periodic inspections. Plans for appropriate replacement/repair should be made at the time of documentation.

**Structural Component check:** Inspection of the inlet, outlet, and other structural features on a regular basis for additions to the annual Non-Routine Maintenance list.

## NON-ROUTINE MAINTENANCE

**Bank erosion/stabilization:** It is critical to keep effective ground cover on the exposed pond areas to ensure that loose sediment does not fill up the pond. In addition, vegetation increases infiltration of runoff, and effectively filters pollutants. All areas not vegetated should be re-vegetated and stabilized immediately

**Sediment removal:** The sediment accumulation should be monitored and the pond depths checked at several points. If the depth of the accumulated sediment is greater than 25% of the original design depth, sediment should be removed.

**Structural Repair/Replacement:** Over time, even excellent stormwater structures get damaged and need repair and replacement. Plan for expenses related to general wear and tear at yearly intervals.

### SO HOW DO YOU PAY FOR ALL THIS WORK?

The property owner or the HOA/POA should consider establishing an O&M fund and assess annual fees for maintenance.

After several years of operation with these set fees, it may be necessary to re-evaluate maintenance costs for the actual operation of the pond.

The fund should also contain funds for emergency repairs related to hurricanes or other storm events.

**Remember:** *Functioning stormwater systems benefit everyone in the community with improved water quality, better aesthetics, and decreased flooding and pollution.*



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## INSPECTION CHECKLIST

*Checklist used should be specific to your site, such as the one provided in your subdivision's Operation and Maintenance Plan*

**Date:** \_\_\_\_\_ **Detention Facility:** \_\_\_\_\_ **Inspected by:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Type of Facility:**  Dry Pond  Wet Pond

**Type of Inspection:**  Routine  Post – Storm

ISSUE	PROBLEM NOTED? YES or NO	STEPS TO BE TAKEN	DATE OF COMPLETION
Are all structural components (inlet, outfall, weir) working properly?			
Is water flowing out of the outfall pipe?			
Are there any cracks or damaged areas on inlet/outfall pipes? Spillway? Outlet?			
Does the grass need to be cut?			
Has unwanted vegetation grown over the outfall or inlet pipes?			
Overgrowth of algae noted?			
Areas that need to be reseeded/replanted?			
Are there signs of erosion?			
Is there noticeable sedimentation in the basin? In the inlet/outfall?			
Signs of pollution? (Oily sheen, foam, etc.)			
Signs of vandalism?			
Signs of pests? (Burrowing, nesting, fire ant hills)			

**Other Comments/Observations:**

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## MUNICIPALITY RESOURCES FOR STORMWATER QUESTIONS

### Your Town Info Here

#### **Online**

EPA Stormwater Program

<https://www.epa.gov/npdes/npdes-stormwater-program>

ADEM Stormwater

<http://www.adem.state.al.us/programs/water/default.cnt>

NOAA

<http://www.noaa.gov/resource-collections/watersheds-flooding-pollution>

Portions of the content of this document are based on existing information from other stormwater programs. Special thanks goes to the following:

Canon City Stormwater Program “Maintaining Detention Ponds”

Oregon Department of Transportation, “Maintenance Requirements for Water Quality Features”

City of Portland Oregon, “Stormwater Management Facilities Operation and Maintenance for Private Property Owners”



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