

STORMWATER MANAGEMENT SYSTEM
MAINTENANCE PLAN FOR NEW FACILITIES

Subject: INSERT DEVELOPMENT NAME HERE

SUCH PROPERTY BEING THE REAL PROPERTY NOW DULY PLATTED AS INSERT DEVELOPMENT NAME HERE, AS SUCH PLAT IS NOW RECORDED AS DOCUMENT NO. INSERT DOCUMENT NUMBER, IN THE OFFICE OF THE RECORDER OF DEEDS OF THE COUNTY OF LAKE, STATE OF ILLINOIS, HEREBY MAKES THE FOLLOWING DECLARATIONS OF MAINTENANCE RESPONSIBILITIES.

Responsibilities

Adequate provisions for maintenance of the stormwater system are an essential aspect of long-term drainage performance. Responsibility for the overall maintenance shall rest with the insert responsible party name here.

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The storm water management system was designed to help slow the rate of runoff from the development and improve the quality of the storm water leaving the site.

Interpretation as to Requirements Under This Maintenance Plan:

The requirement for this Maintenance Plan is generated by the Lake County Watershed Development Ordinance. Therefore, the interpretation of the maintenance requirements set forth in this Maintenance Plan shall be interpreted on the basis of the intent and requirements of said Ordinance.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on experience recorded over the initial period of occupancy of the subdivision.

Record Keeping:

Separate and distinct records shall be maintained by the responsible party for all tasks performed associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

_____, the owner's agent, has caused these presents to be signed and acknowledged, this _____ day of _____, 2____.

By: _____

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

Litter and debris shall be controlled.

Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.

Riprap areas shall be repaired with the addition of new riprap, as necessary, of adequate size and shape.

Roads and parking lots shall be swept or vacuumed on a periodic basis.

Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).

Fences, gates and posts shall be maintained.

Signs shall be maintained.

Dams and berms

___ Settlement. If settlement observed, hire a PE.

___ Breaks or failures. If failure observed, notify the Village immediately and hire a PE.

___ Erosion. Repair as needed.

___ Signs of leakage, seepage or wet spots. If observed, hire a PE.

___ Unwanted growth or vegetation. Remove as needed.

Shorelines

___ Erosion or rip-rap failures. Repair as needed

___ Undermining. Stabilize and repair as needed.

Outlet and inlet structure

___ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.

___ Separation of joints. Repair as needed.

___ Cracks, breaks, or deterioration of concrete. Repair as needed

___ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).

___ Condition of trash racks. Remove any collected debris.

___ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

___ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. If a

detention facility includes specific locations designed to accumulate sediment these locations should be dredged every 5-yrs or when 50% of the volume has been lost.

- _____ Wet ponds lose 0.5 - 1.0% of their volume annually. Dredging is required when accumulated volume loss reaches 15%, or approximately every 15-20 years.

Storm Sewers

- _____ System is free draining into collection channels or catch basins. If concerned, clean or repair.
- _____ Catch basins. Remove sediment when more than 50% of basin sump is filled.
- _____ SILTATION IN CULVERT. CULVERTS SHALL BE CHECKED FOR SILTATION DEPOSIT, CLEAN OUT AS NECESSARY.

Bridges

- _____ Any scouring around wing walls. Stabilize and repair as needed. If concerned, hire a PE.
- _____ Any undermining of footings. Stabilize and repair as needed. If concerned, hire a PE.

Swales –

- _____ All ditches or pipes connecting ponds in series should be checked for debris that may block flow.
- _____ Repair and replace permanent check-dams as necessary.
- _____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas –

- _____ Need for planting, reseeding or sodding of native areas. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- _____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- _____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers –

- _____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.
- _____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

- _____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.
- _____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed no more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.
- _____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

STORMWATER MANAGEMENT SYSTEM ANNUAL MAINTENANCE PLAN FOR EXISTING FACILITIES

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The existing storm water management system was designed to help slow the rate of runoff from the development and maintain the quality of the storm water leaving the site.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on inspection experience.

Record Keeping:

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Post-Construction Stormwater Management System Inspection Checklist

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Roads and parking lots shall be swept or vacuumed on a periodic basis.

Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).

Fences, gates and posts shall be maintained.

Signs shall be maintained.

Storage Facilities (Detention, Retention and Water Quality Treatment Facilities)

Dams and berms

- Settlement. If settlement observed, hire a PE.
- Breaks or failures. If failure observed, notify the Village immediately and hire a PE.
- Erosion. Repair as needed.
- Signs of leakage, seepage or wet spots. If observed, hire a PE.
- Unwanted growth or vegetation. Remove as needed.

Shorelines

- Erosion or rip-rap failures. Repair as needed
- Undermining. Stabilize and repair as needed.

Outlet and inlet structure

- Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
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- Cracks, breaks, or deterioration of concrete. Repair as needed
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