

Storm Water Management Practice Maintenance Agreement

Document Number

[Owners Name], as “Owner” of the property described below, in accordance with Chapter 32 City of Waukesha Storm Water Management and Erosion Control, agrees to install and maintain storm water management practice(s) on the subject property in accordance with approved plans and Storm Water Management Plan conditions. The owner further agrees to the terms stated in this document to ensure that the storm water management practice(s) continues serving the intended functions in perpetuity. This Agreement includes the following exhibits:

Exhibit A: Legal Description of the real estate for which this Agreement applies (“Property”).

Exhibit B: Location Map(s) – shows an accurate location of each storm water management practice affected by this Agreement.

Exhibit C: Maintenance Plan – prescribes those activities that must be carried out to maintain compliance with this Agreement.

Note: After construction verification has been accepted by the City of Waukesha, for all planned storm water management practices, an addendum(s) to this agreement shall be recorded by the Owner showing design and construction details. The addendum(s) may contain several additional exhibits, including certification by City of Waukesha of Storm Water and Erosion Control Permit termination, as described below.

Name and Return Address

City of Waukesha
130 Delafield Street
Waukesha, WI 53188

Parcel Identification Number(s) – (PIN)

Through this Agreement, the Owner hereby subjects the Property to the following covenants, conditions and restrictions:

1. The Owner shall be responsible for the routine and extraordinary maintenance and repair of the storm water management practice(s) and drainage easements identified in Exhibit B until Storm Water and Erosion Control Permit termination by the City of Waukesha in accordance with Chapter 32 of the City Code of Ordinances.
2. After Storm Water and Erosion Control Permit termination under 1., the current Owner(s) shall be solely responsible for maintenance and repair of the storm water management practices and drainage easements in accordance with the maintenance plan contained in Exhibit C.
3. The Owner(s) shall, at their own cost, complete inspections of the storm water management practices at the time intervals listed in Exhibit C, and conduct the inspections by a qualified professional, file the reports with the City of Waukesha after each inspection and complete any maintenance or repair work recommended in the report. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs. After the work is completed by the Contractor, the qualified professional shall verify that the work was properly completed and submit the follow-up report to the City within 30 days.
4. In addition, and independent of the requirements under paragraph 3 above, the City of Waukesha, or its designee, is authorized to access the property as necessary to conduct inspections of the storm water management practices or drainage easements to ascertain compliance with the intent of this Agreement and the activities prescribed in Exhibit C. The City of Waukesha may require work to be done which differs from the report described in paragraph 3 above, if the City of Waukesha reasonably concludes that such work is necessary and consistent with the intent of this agreement. Upon notification by the City of Waukesha of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the City of Waukesha.
5. If the Owner(s) do not complete an inspection under 3. above or required maintenance or repairs under 4. above within the specified time period, the City of Waukesha is authorized, but not required, to perform the specified inspections, maintenance or repairs. In the case of an emergency situation, as determined by the City of Waukesha, no notice shall be required prior to the City of Waukesha performing emergency maintenance or repairs. The City of Waukesha may levy the costs and expenses of such inspections, maintenance or repair related actions as a special charge against the Property and collected as such in accordance with the procedures under s. 66.0627 Wis. Stats. or subch. VII of ch. 66 Wis. Stats.

6. This Agreement shall run with the Property and be binding upon all heirs, successors and assigns. After the Owner records the addendum noted above, the City of Waukesha shall have the sole authority to modify this agreement upon a 30-day notice to the current Owner(s).

Dated this ____ day of _____, 202_.

Owner:

(Owners Signature)

(Owners Typed Name)

Acknowledgements

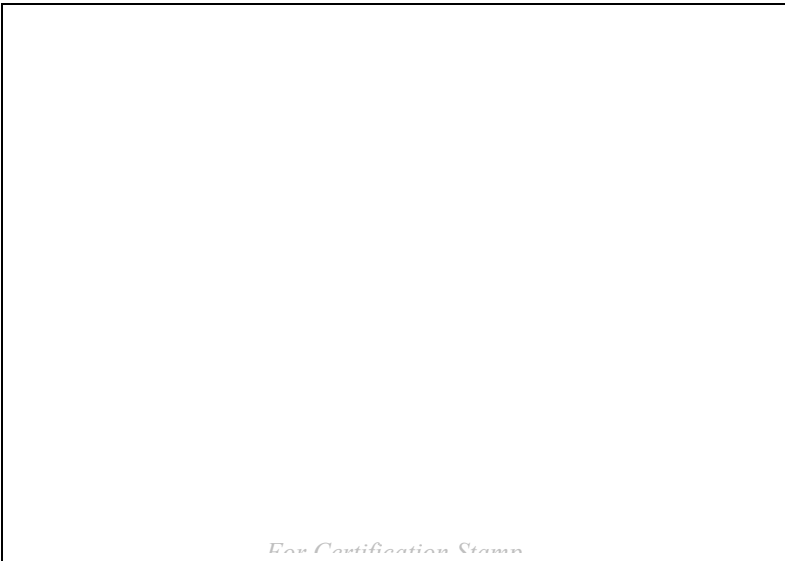
State of Wisconsin:
County of Waukesha

Personally came before me this ____ day of _____, 202_ , the above named [Owners name] to me known to be the person who executed the foregoing instrument and acknowledged the same.

[Name]
Notary Public, Waukesha County, WI
My commission expires:_____.

This document was drafted by:

[Name and address of drafter]



City of Waukesha Common Council Approval

Dated this ___ day of _____, 202_.

Shawn N. Reilly, Mayor

Gina Kozlik, City Clerk

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ___ day of _____, 202_, the above named _____ to me known to be the person who executed the foregoing instrument and acknowledged the same.

[Name]
Notary Public, Waukesha County, WI
My commission expires: _____.

Exhibit A – Legal Description

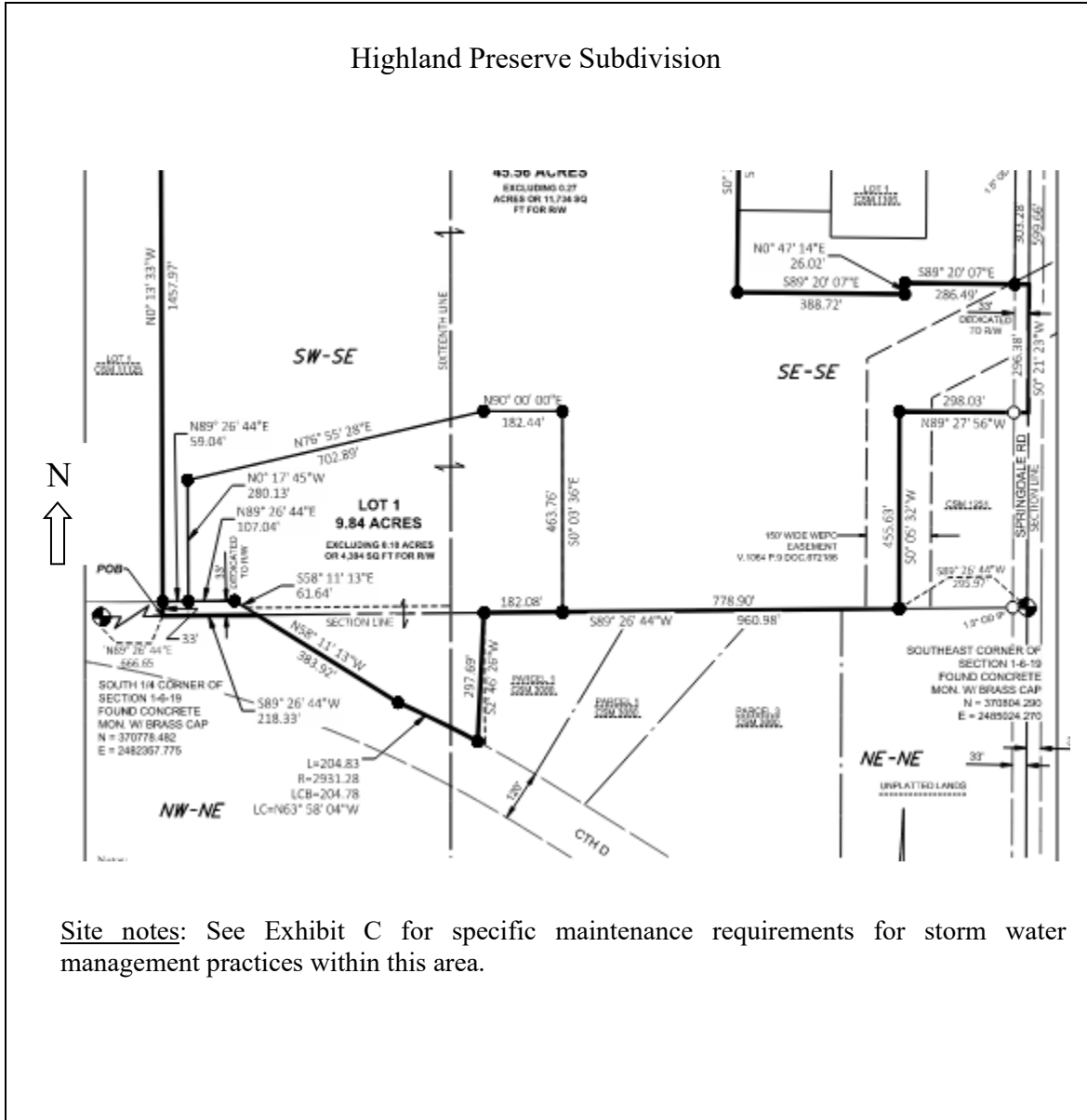
The following description and reduced copy map identify the land parcel(s) affected by this Agreement. For a larger scale view of the referenced document, contact the Waukesha County Register of Deeds office.

Project Identifier: **GWA Booster Pumping Station and Water Tower** Acres: **17.0**

Date of Recording: _____

Map Produced By: **Benjamin Larson, N17 W24222 Riverwood Dr, Suite 310, Waukesha WI 53188**

Legal Description: **Lots 1 and Lot 2 (part), located in a division of part of the northwest 1/4 of the southeast 1/4, the southwest 1/4 of the southeast 1/4, and the southeast 1/4 of the southeast 1/4 of section 1, the northwest 1/4 of the northeast 1/4 and the northeast 1/4 of the northeast 1/4 of section 12 township 6 north, range 19 east, in the City of Waukesha, Waukesha County, Wisconsin.**



Site notes: See Exhibit C for specific maintenance requirements for storm water management practices within this area.

Exhibit B - Location Map

Storm Water Management Practices Covered by this Agreement

The storm water management practices covered by this Agreement are depicted in the reduced copy of a portion of the construction plans, as shown below. The practices include one wet detention basin, one infiltration basin, one overflow relief dry basin and all associated pipes, earthen berms, rock chutes and other components of these practices.

Subdivision Name: **GWA Booster Pumping Station and Water Tower**
Storm water Practices: **Wet Detention Basin, Infiltration Basin, Overflow Relief Dry Basin**
Location of Practices: **South end of site**
Owners:

Figure 1
Plan View of Storm Water Practices

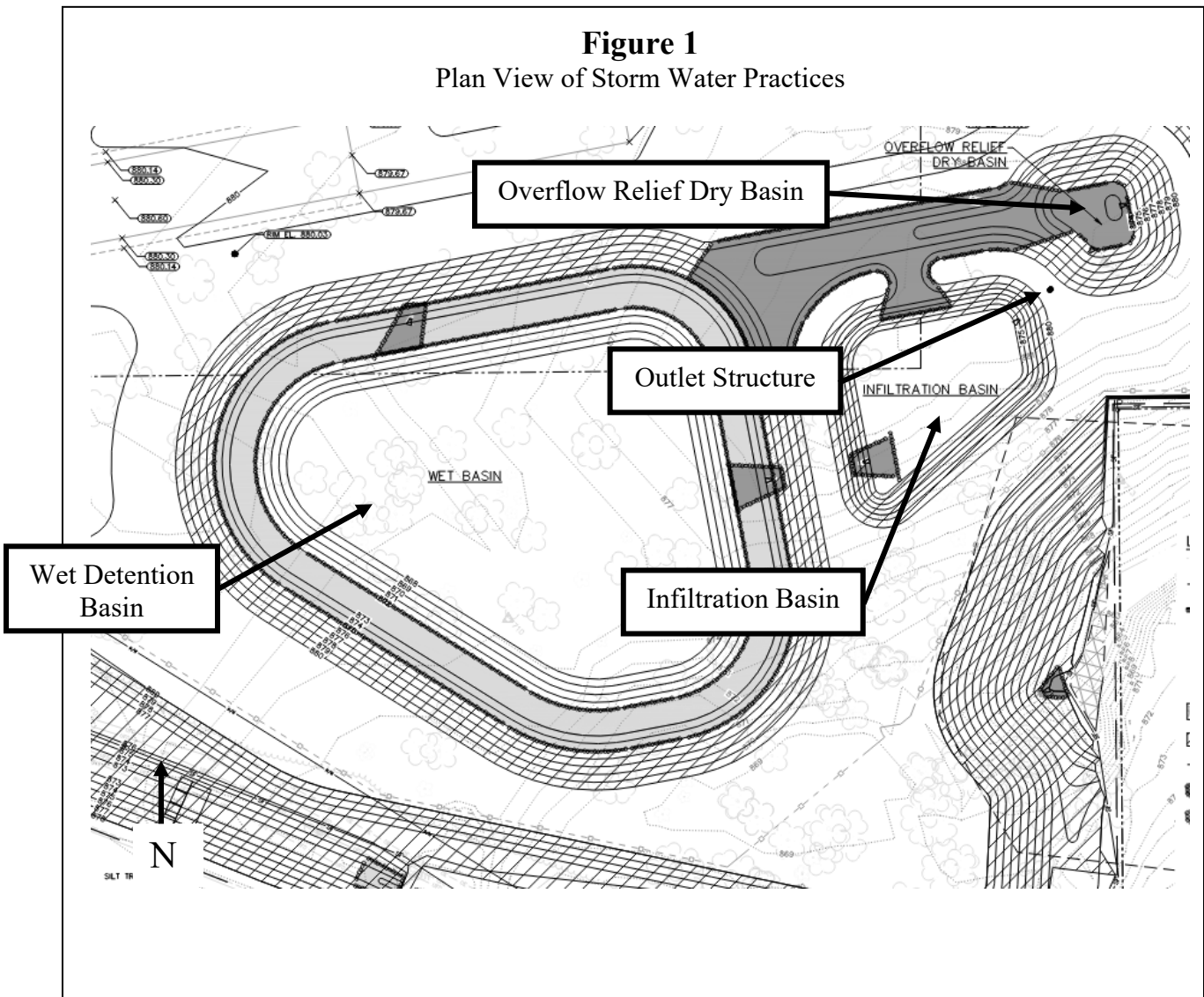


Exhibit C

Storm Water Practice Maintenance Plan

This exhibit explains the basic function of each of the storm water practices listed in Exhibit B and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. Any failure of a storm water practice that is caused by a lack of maintenance will subject the Owner(s) to enforcement of the provisions listed on page 1 of this Agreement by the City of Waukesha.

System Description:

A wet detention basin and a dry infiltration basin will be constructed on-site to control stormwater by reducing the rate of runoff and enhancing the quality of runoff flowing from the site. The Wet Detention Basin is connected to the Infiltration Basin with a 36-inch diameter round culvert. The Infiltration Basin drains into an Overflow Basin and then to the wetland through the outlet. The outlet functions as a multi-stage outlet, with a 4-inch diameter low-flow orifice outlet, and a 24-inch diameter high-flow orifice.

The proposed development consists of approximately 17 acres of developed land, delineated into two sub-basins. The proposed development will disturb approximately 13.5 acres and will result in a net increase in impervious area of approximately 2.81 acres. The Wet Detention Basin is in the Sub-Pond 1 Area and collects flow from the site via storm sewer and overland flows. As runoff enters the pond, it is held back (detained) and slowly released through the control orifices. The Wet Detention Basin, along with the Infiltration Basin, will reduce the Total Suspended Solid (TSS) concentration in runoff by 75% (the TSS resulting composite goal) and will also dissipate chlorine from clear water discharges.

For the system to operate properly, the pond size, water level and outlet structures must be maintained as specified in this Agreement (see Figures 1, 2 and 3). "As-built" construction drawings of the basin, showing actual dimensions, elevations, outlet structures, etc. will be recorded as an addendum(s) to this agreement within 60 days after City of Waukesha accepts verification of construction from the project engineer.

Minimum Maintenance Requirements for the Wet Detention Basin:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed:

1. All outlet pipes must be checked monthly to ensure there is no blockage from floating debris or ice, especially the washed stone in front of the 3-inch orifice and the trash rack on the riser in the main basin. Any blockage must be removed immediately. The washed stone must be replaced when it becomes clogged.
2. Inlets and outlets must be checked after heavy rains (minimum of annually) for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the downstream forebays or basin. Erosion matting is recommended for repairing grassed areas.
3. NO trees are to be planted or allowed to grow on the earthen berms. Tree root systems can reduce soil compaction and cause berm failure. The berms must be inspected annually, and any woody vegetation removed.
4. Invasive plant and animal species shall be managed in compliance with Wisconsin Administrative Code Chapter NR 40. This may require eradication of invasive species in some cases.
5. If the permanent pool falls below the safety shelf, a review shall be performed to determine whether the cause is liner leakage or an insufficient water budget. If the cause is leakage, the liner shall be repaired. Leakage due to muskrat burrows may require removal of the animals. If the permanent pool cannot be sustained at the design elevation, benching of the safety shelf may be necessary.
6. If floating algae or weed growth becomes a nuisance (decay odors, etc.), it must be removed from the basin or the forebay and deposited where it cannot drain back into the basin. Removal of the vegetation from the water reduces regrowth the following season (by harvesting the nutrients). Wetland vegetation must be maintained along the waters edge for safety and pollutant removal purposes.
7. When sediment in the infiltration basin and wet detention basin has accumulated to an elevation of three feet below the outlet elevation, it must be removed (see Exhibit D). All removed sediment must be placed in an appropriate upland disposal site and stabilized (grass cover) to prevent sediment from washing back

into the basin. The forebays will likely need sediment removal first. Failure to remove sediment from the forebays will cause resuspension of previously trapped sediments and increase downstream deposition.

8. No grading or filling of the basins or berm other than for sediment removal is allowed, unless otherwise approved by the City of Waukesha.
9. Periodic mowing of the grass swales will encourage vigorous grass cover and allow better inspections for erosion. Waiting until after August 1 will avoid disturbing nesting wildlife. Mowing around the basin or the forebays may attract nuisance populations of geese to the property and is not necessary or recommended.
10. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as ordered by the City of Waukesha under the provisions listed on page 1 of this Agreement.
11. The titleholder(s) or their designee must document all inspections as specified above. Documentation shall include as a minimum: (a) Inspectors Name, Address and Telephone Number, (b) Date of Inspections, (c) Condition Report of the Storm Water Management Practice, (d) Corrective Actions to be Taken and Time Frame for Completion, (e) Follow-up Documentation after Completion of the Maintenance Activities. All documentation is to be delivered to the attention of the City Engineer at the City of Waukesha Engineering Department on January 10th and July 10th each year.

Minimum Maintenance Requirements for Infiltration Basin:

To ensure the proper function of storm water infiltration basin, the following list of maintenance activities are recommended:

1. A minimum of 70% soil cover made up of native grasses must be maintained on the basin bottom to ensure infiltration rates. Periodic burning or mowing is recommended to enhance establishment of the prairie grasses (which may take 2-3 years) and maintain the minimum native cover. To reduce competition from cool season grasses (bluegrass, fescues, quack, etc.) and other weeds:
 - o For the first year, cut to a 6” height three times – once each in June, July and early August. To prevent damage to the native grasses, do not mow below a 6” height. Remove excessive accumulation of clippings to avoid smothering next year’s seedlings.
 - o After the first year, mowing may only be needed in early June each year to help control the spread of cool season plants. The mowing should also be raised to 10-12” to avoid damage to the warm season plants.
 - o Burning may also be used to manage weeds in 2-5 years intervals. Late spring burns (mid-late May) provide maximum stimulus to warm season grasses and work well to control cool season grasses. Burn when the cool season grasses are growing and the warm season plants are just barely starting to grow to get maximum control of cool season species.
 - o Any major bare areas or areas taken over by nonnative species must be reseeded. To clear area of weeds and cool season grasses, treat with an herbicide that contains glyphosphate in accordance with manufacture’s instructions. Ensure a firm seedbed is prepared to a depth of 3 inches (a roller is recommended). Seeding should occur in early-mid June. Seed with Big Bluestem, Indian Grass, Little Blue Stem or Switchgrass (preferably an equal mix of all four types). A companion crop of oats is recommended. Seed must be placed at a depth of 1/4 – 1/2” and a minimum rate of 1/4 pound per 100 square feet. If broadcast seeding by hand, drag leaf rake over soil surface after seeding. Then roll it again and cover with a light layer of mulch and staked erosion control netting to hold it in place until germination. For other planting details, see NRCS standard 342 (Critical Area Planting).
2. Invasive plant and animal species shall be managed in compliance with Wisconsin Administrative Code Chapter NR 40. This may require eradication of invasive species in some cases.
3. The basin and all components (inlets, outlets, etc.) should be inspected after each heavy rain, but at a minimum of once per year. If the basin is not draining properly (within 72 hours), further inspection may be required by persons with expertise in storm water management and/or soils.
 - o If soil testing shows that the soil surface has become crusted, sealed or compacted, some deep tillage should be performed. Deep tillage will cut through the underlying soils at a 2-3 foot depth, loosening the soil and improving infiltration rates, with minimal disturbance of the surface vegetation. Types of tillage equipment that can be used include a subsoiler or straight, narrow-shanked chisel plow.
 - o If sedimentation is determined to be causing the failure, the accumulated sediment must be removed and the area reseeded in accordance with the notes above.
 - o If inspection of the monitoring well shows that groundwater is regularly near the surface, additional design features may need to be considered, such as subsurface drainage or conversion to a wetland treatment system.

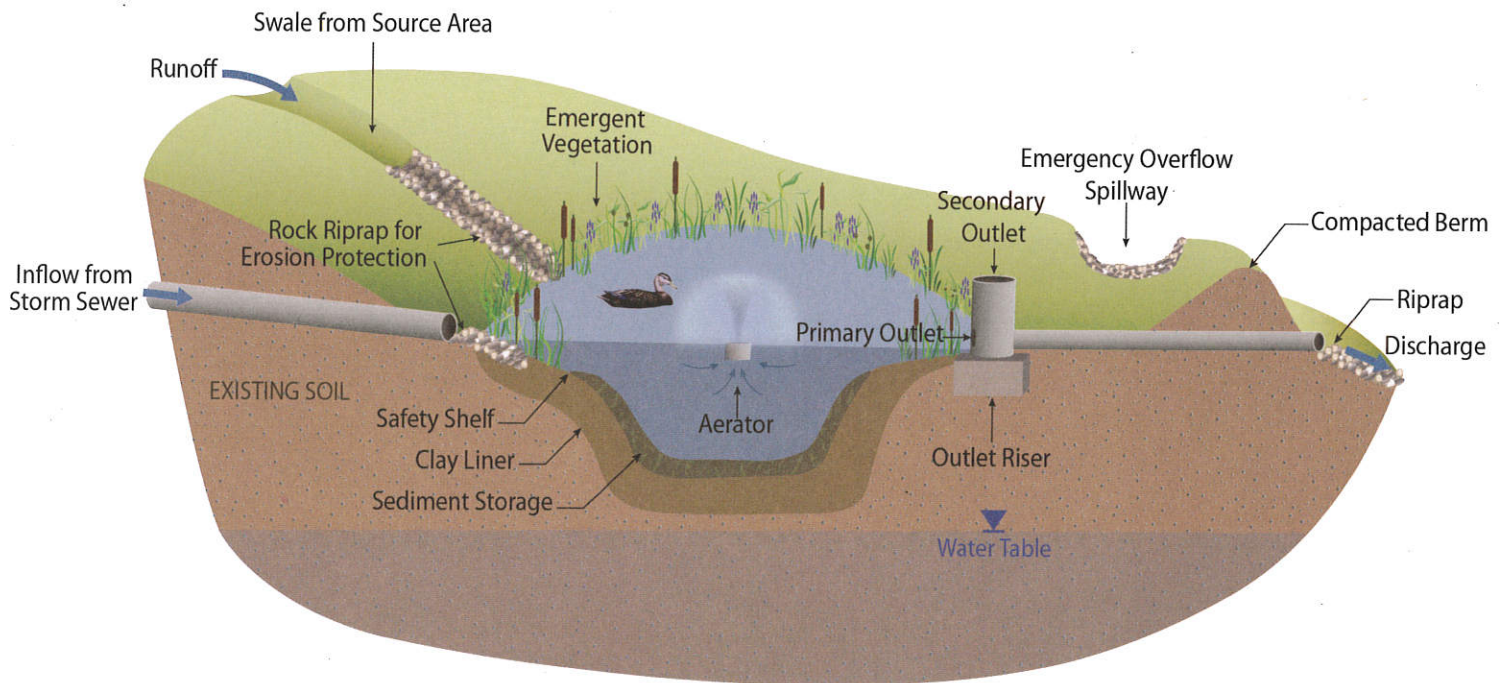
- If the washed stone trench has become clogged, the stone – and possibly the soil immediately around the stone - must be replaced.
- 4. All outlet pipes, stone trenches and other flow control devices must be kept free of debris. Any blockage must be removed immediately.
- 5. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the system. Erosion matting is recommended for repairing grassed areas.
- 6. Heavy equipment and vehicles must be kept off of the bottom and side slopes of infiltration basins to prevent soil compaction. Soil compaction will reduce infiltration rates and may cause failure of the basin, resulting in ponding and possible growth of wetland plants.
- 7. No trees are to be planted or allowed to grow on the earthen berms of the bottom of the basin. On the berms, tree root systems can reduce soil compaction and cause berm failure. On the basin bottom, trees may shade out the native grasses. The basin must be inspected annually and any woody vegetation removed.
- 8. Grass swales leading to the basin shall be preserved to allow free flowing of surface runoff in accordance with approved grading plans. No buildings or other structures are allowed in these areas. No grading or filling is allowed that may interrupt flows in any way.
- 9. If floating algae or weed growth becomes a nuisance in the forebay (decay odors, etc.), it must be removed and deposited where it cannot drain back into the basin or forebay. Removal of the vegetation from the water reduces regrowth the following season (by harvesting the nutrients). Wetland vegetation must be maintained along the waters edge for safety and pollutant removal purposes.
- 10. When sediment in the forebay has accumulated to an elevation of three feet below the outlet elevation, it must be removed (refer to figure). All removed sediment must be placed in an appropriate upland disposal site and stabilized (grass cover) to prevent sediment from washing back into the basin. Failure to remove sediment from the forebays will cause resuspension of previously trapped sediments and increase deposition in the infiltration basin.
- 11. No grading or filling of the basin or berms other than for sediment removal is allowed.
- 12. Periodic mowing of the grass swales will encourage rigorous grass cover and allow better inspections for erosion. Waiting until after August 1 will avoid disturbing nesting wildlife. Mowing around forebay may attract nuisance populations of geese to the property and is not necessary or recommended.
- 13. Any other repair or maintenance needed to ensure the continued function of the infiltration basin as ordered by the [City of Waukesha](#) under the provisions listed on page 1 of this Agreement.
- 14. The titleholder(s) or their designee must document all inspections as specified above. Documentation shall include as a minimum: (a) Inspectors Name, Address and Telephone Number, (b) Date of Inspections, (c) Condition Report of the Storm Water Management Practice, (d) Corrective Actions to be Taken and Time Frame for Completion, (e) Follow-up Documentation after Completion of the Maintenance Activities. All documentation is to be delivered to the attention of the City Engineer at the City of Waukesha Engineering Department on January 10th and July 10th each year.

STORMWATER PONDS

Guidelines for Maintenance

A **stormwater pond** is a best management practice (BMP) that collects and holds storm runoff to remove pollutants carried by the water before they enter our rivers and lakes. Water reaches the stormwater pond through a combination of underground pipes, ditches and overland flow. Once the runoff enters the stormwater pond, sediment and other pollutants settle to the bottom. The water that entered as polluted runoff leaves the pond gradually, resulting in cleaner water draining into our lakes and streams and reduced flooding problems downstream.

Stormwater ponds are carefully designed to hold and treat runoff. Over time, the pond fills in with sediments and begins to lose its ability to remove pollutants. A smaller “forebay” may be present, which may fill up with sediment first. Maintenance is needed for the pond to continue to function the way it was designed, to protect our lakes and streams. Maintenance is also required by an agreement on file with the municipality.



ANNUAL MAINTENANCE FOR STORMWATER PONDS

DO-IT-YOURSELF

There are some maintenance jobs that can—and should—be regularly attended to by the owner of the stormwater pond. This includes:

- Remove vegetation/debris obstructions around the outlet pipes and trash rack. Outlets come in a variety of shapes and designs and may look different from the drawing on page 1.
- Check the sediment depth—most easily done through hole in ice when frozen. Many ponds will have a forebay where the runoff flows in, intended to trap the bulk of the sediment and which will fill up first. (See page 3.)
- Record water levels including depth along the safety shelf. This is best done by reading a depth gauge that is permanently mounted in the pond.
- Visually assess water quality and estimate percent weed/algae cover in early and late summer.
- Remove trash, litter and invasive plants. Cattails or reeds around the edge of the pond (safety shelf) help deter children and geese from entering the water and should be left uncut.
- Remove trees sprouting along the embankments. Left to grow, tree roots threaten the structural integrity of the embankments.
- Be sure to check the engineering design before doing any digging. Ponds often have a clay or synthetic lining that could be punctured or damaged resulting in a pond that no longer holds water.
- Inspect any fencing or signage for damage.
- Replace spent mosquito control devices.
- Invite bats to the area by installing bat houses to provide natural mosquito control.
- Aeration is sometimes added for algae control. While it helps with the aesthetics of a pond, it detracts from the sediment trapping abilities. Turn off aerators during rain or snow melt periods to allow settling of sediment.

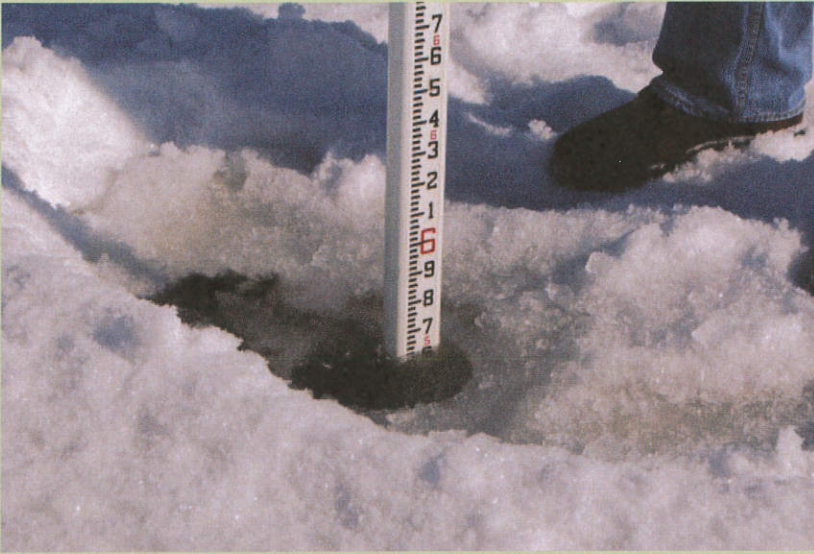
ENLIST A PROFESSIONAL

Besides the maintenance that owners can do, a qualified inspector should be hired to annually inspect the pond and check for the following:

- The condition of the pipes, swales or structures where water flows into and out of the basin.
- Erosion of sideslopes, embankments, inlet/outlet, and emergency spillway, including the condition of rock riprap and underlying fabric.
- The condition of the pond liner (if present). Patch holes and remove burrowing animals, if necessary.
- The presence of invasive species. Develop a plan for their removal if necessary.
- The permanent pool elevation and sediment depth by surveying and referencing to a vertical benchmark (known elevation).
- Soft spots or settling that may have occurred in the embankment.

For a sample inspection report, visit the Waukesha County website at www.waukeshacounty.gov/cleanwater.

CHECKING SEDIMENT DEPTH



Simply use an ice auger to drill a hole and insert a measuring pole or rod into the hole to get the total depth. If distance from water surface to top of sediment is less than 3 feet, refer to a professional for advice on possible sediment removal. A reference to as-built surveys and design water levels is necessary. You may have less than 3 feet if water levels are low, so record water from the depth gauge levels at the same time. (See page 2.)

MANAGING THE WATERSHED: WHAT HOMEOWNERS CAN DO

Many stormwater ponds are owned by a group of landowners and maintained through a homeowner association within a subdivision. In addition to maintaining the ponds, there are actions that each homeowner can take to manage the land that drains to the ponds. The following will help extend the life of the ponds and reduce water pollution at the same time:

- Regularly sweep litter and grass clippings off sidewalks, driveways, streets and parking lots.
- Test the soil in landscaped areas, and follow recommended application rates for fertilizers and pesticides.
- Pick up after pets. This also helps keep excess nutrients and bacteria out of the pond.
- Minimize salt application to impervious areas. Salt generally passes through the pond soils, damaging the plants and polluting the receiving surface and groundwater resources.
- Prevent sediment from leaving construction sites. The more sediment that enters the pond, the sooner it will require expensive soil restoration or replanting.

Ponds that fill up with sediment over time will have to be cleaned out, requiring expensive maintenance like dredging. Proper care and maintenance of your pond will extend its life.



Enforcement of Stormwater Pond Maintenance

Maintenance responsibilities for stormwater ponds are usually documented as a deed restriction or a maintenance agreement that was recorded on the property when the pond was built. Maintenance can also be required through a local ordinance to meet clean water laws. The local municipality or stormwater utility district is the likely regulatory agency for maintenance. Either way, the regulatory agency can require the owner(s) of a stormwater pond to perform and report inspections and to complete repairs and maintenance activities as needed. If the owner(s) fails to comply, the regulatory agency may resort to citations or other enforcement measures, or may perform the maintenance activities itself and recover the costs through special charges on the property tax bill.

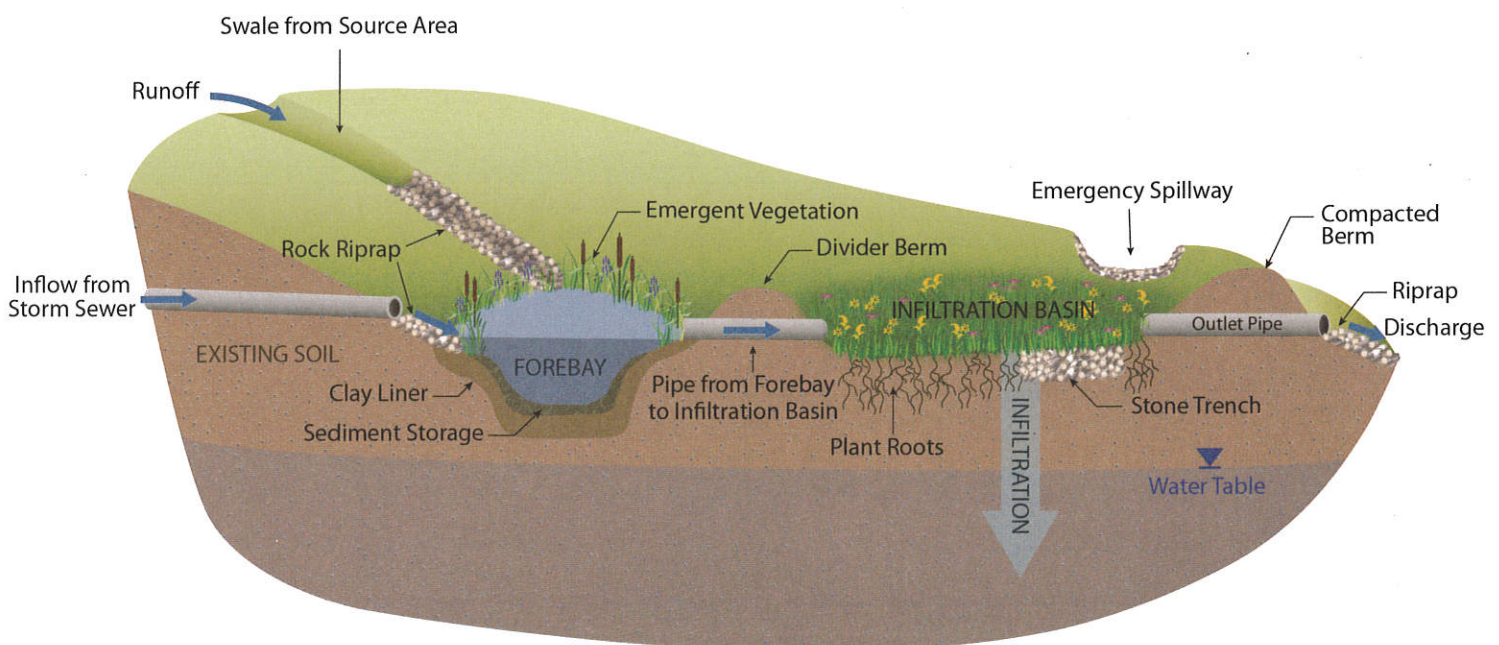
INFILTRATION BASINS

Guidelines for Maintenance

An **infiltration basin** is a storm water best management practice (BMP) designed to capture runoff and let it soak into the ground—a process called infiltration. The basin is carefully engineered to infiltrate runoff volumes from the specific land area, or watershed that drains to the basin. Runoff will enter the infiltration basin through a combination of underground pipes, ditches and overland flow. A small pond, or forebay, is usually constructed at the inflow area to trap sediment and attached pollutants before entering the infiltration basin. This can help prevent plugging the soils in the infiltration basin.

The bottom of the infiltration basin is flat, wide and planted with vegetation specifically designed to encourage infiltration (see page 2). There may be a stone-filled trench constructed within the basin bottom or near the perimeter to further enhance infiltration, especially during frozen ground periods. The basin will usually have an overflow pipe and an emergency spillway to handle runoff events that exceed the design capacity. The infiltration basin is generally designed not to pond runoff in the basin for more than a few days at a time.

An infiltration basin may act like a leaky pond, but they are very effective at protecting local lakes, rivers and downstream properties from water pollution and flooding caused by urban runoff. Infiltrating runoff also helps replenish the groundwater, the source of drinking water for 80% of Wisconsin residents. Groundwater also supports water levels in local lakes and base flows in streams, especially during periods of dry weather.



Note: Rain gardens are essentially small infiltration basins. They are designed to capture and infiltrate runoff from small watersheds such as a rooftop, driveway or small parking lot. Some roadside or backyard swales are also designed as small infiltration practices.

NOT TO SCALE

Illustrations by Geosyntec Consultants, Inc.

THE NATIVE LANDSCAPE

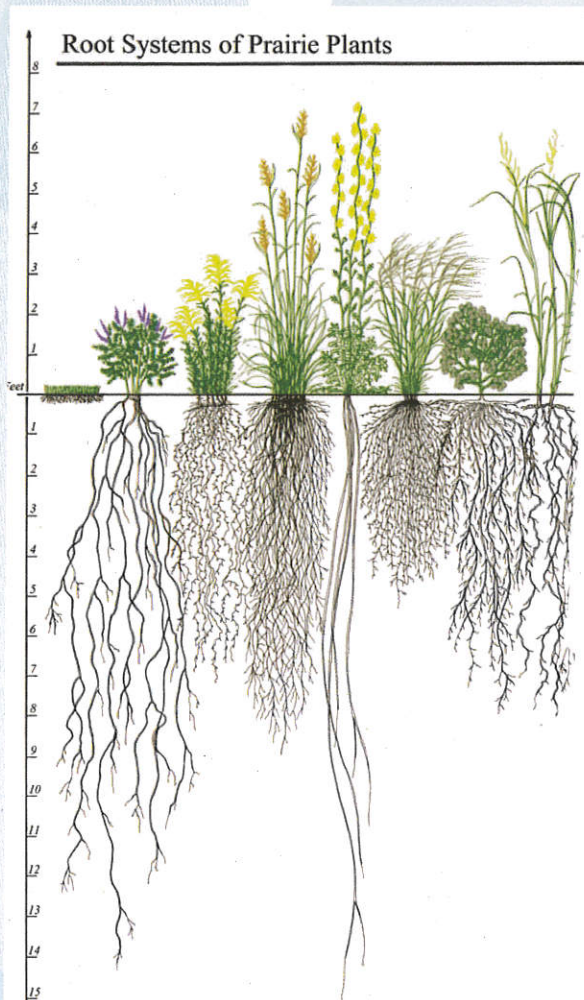


Image Source: Conservation Resource Institute

Before our landscape was developed, very little rainfall actually ran off the ground. Most of it soaked into the soil, where it was either used by plants or became part of the groundwater system. Native plants are used in infiltration basins to help replicate some of these conditions. Native plants have very deep root systems with as much as two-thirds of the plant being underground. This massive root system improves the soil, creating more pathways for infiltration, and making the basin more effective at soaking up runoff and filtering pollutants. By comparison, turf grass (pictured at far left in the illustration) only has a few inches of root mass. Other benefits of using native plants include:

- Creating habitat and food sources for birds, butterflies, bees and other wildlife.
- Absorbing more nutrients in runoff like phosphorous and nitrogen, which cause algae blooms and excessive weed growth in lakes and streams.
- Improving aesthetics of the infiltration basin, providing year round interest and color with a mix of wildflowers and grasses.
- Reducing maintenance needs (once established), such as mowing, watering (plants are drought resistant), or use of fertilizer or pesticide.

MANAGING THE WATERSHED: WHAT HOMEOWNERS CAN DO

Many infiltration basins are owned by a group of landowners and maintained through a homeowner association within a subdivision. In addition to maintaining the basin, there are actions that each homeowner can take to manage the land that drains to the basin. The following will help extend the life of the basin and reduce water pollution at the same time:

- Regularly sweep litter and grass clippings off sidewalks, driveways, streets and parking lots.
- Test the soil in landscaped areas, and follow recommended application rates for fertilizers and pesticides.
- Pick up after pets. This also helps keep excess nutrients and bacteria out of the basin.
- Minimize salt application to impervious areas. Salt generally passes through the basin soils, damaging the plants and polluting the receiving surface and groundwater resources.
- Prevent sediment from leaving construction sites. The more sediment that enters the basin, the sooner it will require expensive soil restoration or replanting.

MAINTENANCE FOR INFILTRATION BASINS

DO-IT-YOURSELF

There are some maintenance jobs that can—and should—be regularly attended to by the owner of the infiltration basin. This includes:

- Inspect and remove debris in the forebay, or near the inflow or outlet pipes, stone trench and spillway.
- Remove weeds by carefully spot-applying herbicide rather than by pulling. This is because pulling weeds disturbs the soil and provides an opening for invasive species to grow.
- Remove excessive dead plant material in the early spring.
- Replant with different species if an original plant dies out. The original plant may have been unsuitable for the soil type or degree of wetness.
- Water native plants during establishment only. Once established, watering won't be necessary.

ENLIST A PROFESSIONAL

Besides the maintenance that an owner can do, a qualified inspector should be hired annually to inspect and repair the following, as needed:

- The condition of the forebay, including the amount of sediment build-up or liner damage. Take soil cores if needed to evaluate liner. Patch holes and remove burrowing animals, if necessary.
- The condition of the pipes, swales or structures where water flows into and out of the basin.
- Erosion of side slopes, embankments, inlet/outlet, and emergency spillway, including the condition of rock riprap and underlying filter fabric.
- Detect the presence of invasive species. Develop a plan for their removal if necessary.
- Soft spots or settling that may have occurred in the embankment.
- Diagnose any reported prolonged ponding (more than three days). Evaluate the condition of the soils, taking core samples and testing infiltration rates, if needed.
- Burn every-other-year in April where feasible. Otherwise, mow in late spring or very early summer to a height of 4 to 6 inches. The purpose is to cut the weeds before they can go to seed, and do it before the native plants start to really shoot up. This cutting height generally requires a brush hog or similar device. A normal lawn mower will cut it too short.
- Remove any large trees growing in the embankment and re-compact the soil as needed.
- Develop plans to repair damaged structures, plantings or forebay liners, to remove sediment or enhance soil infiltration rates (aeration, tillage, etc.), if necessary.

For a sample inspection report, visit:
www.waukeshacounty.gov/cleanwater.

Enforcement of Infiltration Basin Maintenance

Maintenance responsibilities for infiltration basins are usually documented as a deed restriction or a maintenance agreement that was recorded on the property when the basin was built. Maintenance can also be required through a local ordinance to meet clean water laws. The local municipality or storm water utility district is the likely regulatory agency for maintenance. Either way, the regulatory agency can require the owner(s) of an infiltration basin to perform and report inspections and to complete repairs and maintenance activities as needed. If the owner(s) fails to comply, the regulatory agency may resort to citations or other enforcement measures, or may perform the maintenance activities itself and recover the costs through special charges on the property tax bill.



Developed by Waukesha County Department of Parks & Land Use with funding from the Wisconsin Department of Natural Resources (2015).



Send Inspection Reports to:

City of Waukesha
 ATTN: Velvet Weier
 130 Delafield Street
 Waukesha, WI 53188

BMP Inspection Report

(Rev 11/12/18)

OWNER/REPRESENTATIVE INFORMATION

Name:	Representative (Y/N)
Address:	
Email:	
Phone:	

INSPECTOR INFORMATION

Name:
Company:
Contact:

BMP INFORMATION

Location:	
BMP Type:	Year of Installation:
ID#/Tax Key:	Record Drawing Available

INSPECTION

Date:	Date of Last Precipitation:
Weather:	Amount of Precipitation (inches):

ITEM	Okay	Modify	N/A	NOTES
1) Access - 3' wide Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) Access - 12' wide Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Slopes - Fully vegetated, no bare soil/erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) Trees - None present in basin or on slopes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5) Safety Shelf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6) Emergency Spillway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7) Inlet(s) - No obstruction/no erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8) Inlet(s) - Quantity inspected	_____			
9) Outlet(s) - No obstruction/no erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10) Outlet(s) - Quantity inspected	_____			
11) Control Structure - Functional and secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12) All Rip Rap - Clear of debris and vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13) Sedimentation - No major accumulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14) Permanent Pool Level - Per plan/weir	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15) Evidence of pollutant (e.g. oily sheen, trash)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16) Evidence of invasive species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17) Evidence of burrowing animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18) * Permanent Pool Level - Elevation	_____			
19) * Depth from sediment to water surface	_____			

INSPECTION SUMMARY/ADDITIONAL NOTES

PHOTOS

Include at least 3 photos with descriptions

- 1) Overall BMP condition
- 2) Condition of Control Structure
- 3) Condition of Inlet, Outlet, Spillway(s)

Other: *Items requiring significant maintenance, hazards, questionable findings*

RESOLUTION OF MODIFICATIONS

ACTION # KEY: (1) Monitor Condition (2) Routine Maintenance (3) Urgent Modification Required

ITEM #	DESCRIPTION OF WORK REQUIRED	ACTION #

COMPANY SCHEDULED TO PERFORM REQUIRED MODIFICATIONS

Name:
 Company:
 Contact:



GREELEY AND HANSEN

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