

StormPrism EQ Inspection Procedures and Form

Inspection and maintenance of the underground detention, retention, or infiltration system is vital for the performance and life cycle of the stormwater management system. Many agencies publish inspection and maintenance regulations for stormwater BMPs to ensure they operate as designed to protect downstream water bodies from pollution and hydromodification. Inspection and maintenance professionals should familiarize themselves with the applicable regulations and requirements before undertaking activities in the field. One important thing to consider is that most underground stormwater storage systems, including StormPrism EQ (SPEQ), are considered confined spaces and entering such spaces requires highly trained personnel and specialized equipment.

Foley Products recommends that new systems be inspected after the first significant rainfall event and then multiple times during the first year to assess the site specific conditions. This is recommended because pollutant loading and characteristics can vary greatly from site to site. Once the performance of a given system is understood, inspections should continue at set intervals. For example, quarterly, semi annually, annually, at the beginning and/or end of an annual rainy season, etc. Without regular inspections, the need for maintenance can easily be overlooked, which can allow a system to become clogged or damaged and that will affect its performance and longevity.

Inspection Equipment

The following list of items are suggested for a successful inspection:

- Inspection Form
- Flashlight
- Camera
- Digital O₂ meter
- Communication device
- Manhole hook or appropriate tools to access hatches and covers
- Appropriate traffic control signage, cones, barricades, etc.
- Measuring pole and/or tape measure
- Protective clothing and eye protection



Note: Entering a confined space requires appropriate safety equipment and personnel certification. Though entry is generally not required during a routine inspection, you should be prepared to enter by having the proper staff and equipment.

Inspection Steps

The key to any successful stormwater BMP maintenance program is routine inspections. The inspection steps required on the underground detention, retention, or infiltration system are quick and easy. During the first year, plan to inspect the system more frequently to gather data about the upstream watershed and how trash, debris, and sediment affects the system. This information, which may vary greatly between project sites, will be used to establish an appropriate inspection and maintenance program.

Oftentimes and especially during routine visits, the underground system can be inspected through visual observation without having to enter. In any case, all necessary pre-inspection steps must be completed prior to beginning the inspection, especially traffic control and other safety measures. Deploying these measures properly protects the inspector and nearby pedestrians from any dangers associated with open access hatches or manholes. Once the atmosphere inside the system has been tested and deemed safe, remove the access covers and begin the inspection process:

- Prepare the inspection form by completing the necessary information including project name, location, date & time, unit number, and other information (see inspection form).
- Observe the upstream drainage area. Identify and note such things as sources of pollution, sediment, trash, debris, staining, high water marks, inlet clogging, etc.
- Peer into each access opening to observe the inside of the system. Utilize a flashlight or other light source as needed to see inside the system.
- Note and photograph items such as:
 - Obstructions or clogging in the inflow and outflow pipes.
 - Accumulation of trash and debris.
 - Condition of modules – dirty, clean, staining, cracking, spalling, misalignment, etc.
- For detention and retention systems look for signs that stormwater is leaking from the system.
- For infiltration systems look for signs of clogging and/or heavy accumulation of sediment.
- Some other items to note on the form:
 - Estimated amount of floatable debris accumulated in the system.
 - Depth of accumulated sediment.
- Use inspection observations and measurements to determine if maintenance is required.

Maintenance Indicators

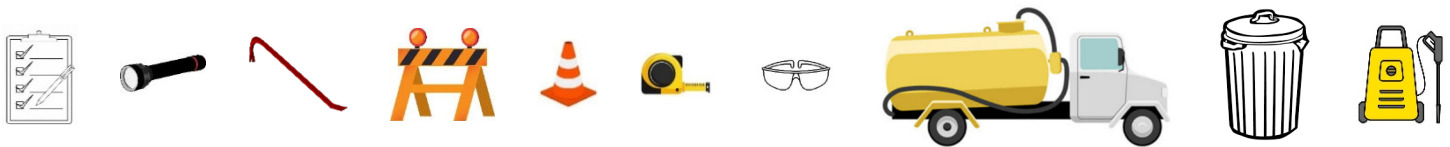
The following list of inspection observations may indicate the need for maintenance:

- Damaged inlet and outlet pipes.
- Obstructions in the system or its inlet or outlet.
- Excessive accumulation of floatables.
- Excessive accumulation of sediment of more than 6" in depth.
- Damaged joint sealant.
- Filter box has become dislodged/unattached from SPEQ floor.
- Fabric on filter boxes is completely occluded and caked with sediment and debris.

Maintenance Equipment

While maintenance can be done fully by hand it is recommended that a vacuum truck be utilized to minimize time requirements required to maintain the StormPrism system:

- Environmental Maintenance Form
- Flashlight
- Manhole hook or appropriate tools to access hatches and covers
- Appropriate traffic control signage and procedures
- Measuring pole and/or tape measure
- Protective clothing and eye protection
- Vacuum truck
- Trash can
- Pressure washer
- Note: Entering a confined space requires appropriate safety and certification. It is generally not required for routine inspections of the system. Entry into the system will be required if maintenance is required.



Maintenance Procedures

It is recommended that maintenance occurs at least three days after the most recent rain event to allow for drain down of the system and any upstream detention systems designed to drain down over an extended period of time. Maintaining the system while flows are still entering it will increase the time and complexity required for maintenance. Once all safety measures have been set up, cleaning of the system can proceed as followed:

- Using an extension on a boom on the vacuum truck, position the hose over the opened man way and lower into the system. Remove all floating debris, standing water and sediment from the system. A power washer can be used as needed to loosen sediments that have become hardened and stuck to the walls and columns. Repeat the same procedure at each manway until the system has been fully maintained.

If maintenance requires entry into the vault:

- Following rules for confined space entry use a gas meter to detect the presence of any hazardous gases. If hazardous gases are present do not enter the vault. Follow appropriate confined space procedures, such as utilizing venting system, to address the hazard. Once it is determined to be safe, enter utilizing appropriate entry equipment such as a ladder and tripod with harness.

- For infiltration systems, fabric covered filter boxes should be inspected one at a time paying attention to the following:
 - Mounting hardware is still in place and filter box is securely attached to the SPEQ floor.
 - Accumulation of sediment and debris on the exterior of the filter box.
 - If exterior of filter box is lightly covered with sediment,
 - Remove filter box from SPEQ floor
 - Remove fabric from filter box
 - Take it out of the system
 - Hose fabric off in a secure area, containing all sediment and debris for proper disposal
 - Replace cleaned fabric onto filter box
 - Place filter box over infiltration port and reattach it to the SPEQ floor
 - If exterior of filter box is completely occluded and caked with sediment
 - Remove filter box from SPEQ floor
 - Remove fabric from filter box
 - Take it out of the system and dispose of according to local regulations
 - Place new fabric onto filter box
 - Place filter box over infiltration port and reattach it to the SPEQ floor
- The last step is to replace all manhole covers and remove all traffic control measures.
- All debris and pollutants removed from the system shall be disposed of following state and local requirements.

Filter Basket Replacement Parts

Adsorb-it Fabric

Adsorbit
PO Box 1355
Silverdale, WA 98383
(888) 668-8982
email: info@adsorbit.com
website: www.adsorbit.com

Filter Baskets

Foley Products
770-251-0296



STORMPRISM INSPECTION FORM

Project Name _____

Project Address _____
Number and Street City Zip

Project Owner _____

Site Contact _____ () - _____
Phone

Inspector Name _____ () - _____
Phone

Inspection Type Routine Follow Up Complaint Post Storm Storm Event in last 72 hours? Yes No

Weather Condition _____ Other Notes: _____

System Type Detention Retention Infiltration

For Official Use Only

Reviewed By _____

Date _____

Time _____ am pm

Date _____

Site Map I.D.	System GPS Coordinates	System Model Number	Inspection of Inlet/Outlet Pipes, Joints, Connection Between Modules	Trash/Sediment Accumulation	Structural Notes	Functioning Per Manufacturer's Specifications? (If not, explain)
	Latitude					
	Longitude					
	Latitude					
	Longitude					
	Latitude					
	Longitude					
	Latitude					
	Longitude					
	Latitude					
	Longitude					

Notes: _____
