Appendix A: Stormwater Facility Inspection Checklists

Inspection and Maintenance Checklist

Stormwater Collection and Conveyance System

Date of Inspection: _____ Inspection Area: _____

Field Inspector(s): _____ Reason for Inspection: _____

Current Weather: _____ Rain (inches): In Last 24 hrs: _____ In Last Week: _____

Facility Type	Location		Sediment Build-up		Maintenance Needed		Maintenance Follow-up	
(CB, Pond, etc)	Facility ID	Address/Location	Depth (in)	Needs Removal?	Code	Description/Action Needed	Date Completed	Initials

Maintenance Codes:

1 – Accumulated Sediment
2 – Trash & Debris
3 – Vegetation Concerns
4 – Water Quality Concerns
5 – Impeded Water Flow
6 – Erosion
7 – Structural Repairs
8 – Cover/Frame/Grate9 – Damaged Pipes
10 – Mosquito/Vector Breeding
11 – Other
12 – Could Not Locate

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Inlet/Outlet pipe clogged with sediment. Sediment accumulation in pond bottom (forebay or main pond) exceeds 6" or 10% of the designed pond depth unless otherwise specified. Water ponding in pond after rainfall ceases and appropriate time allowed for infiltration. Percolation test indicates infiltration rate is less than 90% of design capacity.	Sediment cleaned out to designed pond shape and depth – and so that infiltration system works as designed (if applicable); pond reseeded if necessary to control erosion.
2	Trash & Debris	Trash and debris exceeding 5 cf (equivalent to one standard size garbage can) per 1,000 sf of pond area. Visual evidence of dumping. Inlet/Outlet pipe clogged with trash or debris.	Trash and debris cleared from site. *If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.*
3	Vegetation	Poisonous vegetation constituting a hazard to maintenance staff or the public. Evidence of noxious weeds. Tree growth does not allow access or interferes with slope mowing, silt removal, vactoring, or equipment movements. *If trees are not interfering with access or maintenance, do not remove.* Dead, diseased, or dying trees identified by a certified Arborist. Tree growth on berms > 4' high that may lead to piping/eventual berm failure. Tree growth on emergency spillways.	No danger of poisonous veg where staff/the public might normally be. *Complete eradication of noxious weeds may not be possible.* Trees do not hinder maintenance activities. Harvested trees should be recycled into mulch or firewood. *Remove hazard trees.* Trees should be removed from berms/emergency spillway. If root system is small (base < 4") the root system may be left in place. Otherwise the roots should be removed and the berm restored. A licensed engineer in the state of Idaho should be consulted.
4	Water Quality	Prevalent and visible oil sheen. Evidence of oil, gasoline, contaminants or other pollutants.	No contaminants or pollutants present.
5	Water Flow	First cell (if applicable) is empty, doesn't hold water.	
6	Erosion	Erosion of the pond's side slopes exceeding 2" deep where there is potential for continued erosion. Scouring of the pond bottom exceeding 6" deep, or where continued erosion is prevalent. Mulch displaced (if used) Any erosion observed on a compacted berm embankment.	Slopes should be stabilized using appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction. If erosion is occurring on compacted berms, a licensed engineer in the state of Idaho should be consulted to resolve source of erosion.
7	Cover/Frame/ Grate	*See Control Structures for additional maintenance standards.*	
8	Structure	*See Control Structures for additional maintenance standards.* Liner is visible and has > three ¼" holes in it. Any part of the berm or emergency spillway that has settled 4 inches lower than the design elevation. Discernable water flow through pond berm. Ongoing erosion with potential for erosion to continue. (Consult with Geotechnical Engineer to evaluate condition and recommend repair.) Emergency spillway: only one layer of rock exists above native soil in area > 5 sf, or any exposure of native soil at the top of flow path of spillway. (Rip-rap on inside slopes need not be replaced.) Internal spillway not level.	Liner repaired or replaced. Liner is fully covered. Dike is built back to the design elevation. Piping eliminated. Erosion potential resolved. Rocks and pad depth are restored to design standards.
9	Damaged Pipes	*See Conveyance System standards for pipes and debris barriers/trash racks.*	
10	Mosquitoes	Suitable habitat exists for mosquito production (e.g. standing water for >72 hours in areas accessible to mosquitoes.)	
11	Other	Evidence of rodent holes or any evidence of water piping through dam or berm via rodent holes. (Consult with Geotechnical Engineer to evaluate condition and recommend repair.) Beaver dam within the pond, resulting in change or function of the facility. Insects such as wasps and hornets that interfere with maintenance activities.	Rodents relocated and dam or berm repaired. Apply insecticides in compliance with adopted integrated pest management policy.
12	Could Not Locate	Field inspectors are unable to locate the pond.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment exceeds 60% of sump depth. Sediment depth within 6" of the invert of the lowest pipe.	No sediment in the catch basin
2	Trash & Debris	Trash or debris in front of catch basin opening or blocking inlet by more than 10%. Trash or debris exceeds 60% of sump depth. Trash or debris within 6" of the invert of the lowest pipe. Trash or debris blocking more than 1/3 of any inlet or outlet pipe. Trash and debris blocking more than 20% of grate surface. Dead animals or vegetation that generate odors and cause complaints or dangerous gases (e.g., methane).	No trash or debris located immediately in front of catch basin or on grate opening. No trash or debris in the catch basin. Inlet and outlet pipes free of trash or debris. No dead animals or vegetation present within the catch basin.
3	Vegetation	Vegetation growing across and blocking more than 10% of the grate opening. Vegetation growing in inlet/outlet pipe joints that is more than 6" tall.	No vegetation blocking opening to basin. No vegetation or root growth present.
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing in catch basin during dry weather – *report as potential illicit discharge concern.*	No pollution present.
5	Water Flow	Impeded water flow due to vegetation or sediment (use appropriate code from above).	
6	Erosion	N/A	
7	Cover/Frame/Grate	Cover is missing or only partially in place. One maintenance person cannot remove lid after applying normal lifting pressure. Frame separated by more than ¾ inch from top slab. Frame not securely attached. Locking mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½" of thread. Grate with opening wider than 7/8". Grate damaged or missing.	Catch basin cover is closed Cover can be removed by one maintenance person Frame is sitting flush on the riser rings or top slab and firmly attached. Locking mechanism opens with proper tools. Grate opening meets design standards. Grate is in place and meets design standards.
8	Structure	Top slab with holes larger than 2 square inches or cracks wider than ¼". Fractures or cracks in basin walls or bottom. Grout at inlet/outlet pipes has separated or cracked wider than ½ inch and longer than one foot. Soil is entering the catch basin through cracks in the structure. Settlement has created a safety, function, or design problem. Field inspector judges that structure is unsound.	Top slab is free of holes and cracks. Basin replaced or repaired to design standards. Pipe is regrouted and secure at basin wall. Basin replaced or repaired to design standards.
9	Damaged Pipes	Inlet or outlet piping damaged or broken and in need of repair.	
10	Mosquito	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other	Ladder is unsafe due to missing rungs, not securely attached to basin wall, misalignment, rust, cracks, etc.	Ladder meets design standards and allows maintenance person safe access.
12	Could Not Locate	Field inspectors are unable to locate the catch basin or manhole.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Material > 25% of sump depth or 1' below orifice plate.	Control structure orifice is not blocked. All trash and debris removed.
2	Trash & Debris	Material > 25% of sump depth or 1' below orifice plate.	Control structure orifice is not blocked. All trash and debris removed.
3	Vegetation	Vegetation growing in inlet/outlet pipe joints that is more than 6" tall.	
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants.	
5	Water Flow	Impeded water flow due to vegetation or sediment (use appropriate code from above).	
6	Erosion	N/A	
7	Cover/Frame/Grate	See "Catchbasins" See "Manholes" Trash rack bars are bent out of shape > 3". Trash rack bars are missing or entire barrier missing. Trash rack bars are loose and rust is causing 50% deterioration to any part of barrier.	Trash rack bars in place with no bends > 0.75". Trash rack bars in place according to design. Trash rack replaced or repaired to design standards.
8	Structure	Damaged or missing orifice plate. Control structure is not securely attached to manhole wall. Structure is not in upright position (allow up to 10% from plumb) Connection between control structure and outlet pipe is not water tight. Holes (other than design openings) in the control structure. Cleanout gate is not watertight, is missing, is rusted, or cannot be moved up and down by one maintenance person applying normal pressure. Chain/rod leading to gate is missing or damaged. Gate is rusted > 50% of its surface area. Control device is not working properly due to missing, out of place, or bent orifice plate. Any trash, debris, sediment, or vegetation blocking the plate.	Structure securely attached to wall and outlet pipe. Structure in correct position. Connections to outlet pipe are water tight; structure repaired or replaced and works as designed. Structure has no holes other than designed holes. Cleanout gate is watertight and works as designed. Gate moves up and down easily and is watertight. Chain is in place and works as designed. Gate is repaired or replaced to meet design standards. Orifice plate is in place and works as designed. Orifice plate is free of all obstructions and works as designed.
9	Damaged Pipes	Inlet or outlet piping damaged or broken and in need of repair. Trash or debris that is plugging > 20% of the openings in the trash rack. Trash rack missing or not attached to pipe	Pipe is free of all obstructions and works as designed. Trash rack cleared to design flow capacity. Trash rack firmly attached to pipe
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other	Ladder is unsafe due to missing rungs, not securely attached to basin wall, misalignment, rust, cracks, or sharp edges.	
12	Could Not Locate	Field inspectors are unable to locate the structure.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Accumulated sediment exceeds 20% of the design depth. Over 1/2 of perforations in dispersion pipe are plugged with sediment.	Pipe cleaned/flushed so that it matches design. Perforated pipe cleaned or replaced.
2	Trash & Debris	Visual evidence of dumping Over 1/2 of perforations in dispersion pipe are plugged with trash or debris.	
3	Vegetation	Excessive vegetation reduces free movement of water through the flow spreader or energy dissipator.	
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing through facility during dry weather - *report as potential illicit discharge concern.*	
5	Water Flow	Visual evidence of water discharging at concentrated points from the dissipator (normal condition is a "sheet flow" of water from the facility). Intent is to prevent erosion damage. Water in receiving area has potential to cause significant erosion or landslide. Maintenance person observes or receives credible report of water flowing out during any storm less than the design storm or is causing or appears likely to cause damage.	Trench redesigned or rebuilt to standards. No danger of landslides. Energy dissipator rebuilt or redesigned to standards
6	Erosion	Only one layer of rock above native soil in an area five square feet or larger. Any exposure of native soil within rock pad area. Soil erosion in or adjacent to rock pad.	Rock pad replaced to design standards.
7	Cover/Frame/ Grate	N/A	
8	Structure	Flow spreader has deteriorated to1/2 of original size or concentrated worn spots exceeding one square foot making structure unsound. *See Conveyance System standards for pipes and debris barriers/trash racks.*	Structure replaced to design standards.
9	Damaged Pipes	*See Conveyance System standards for pipes and debris barriers/trash racks.*	
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other		
12	Could Not Locate	Field inspectors are unable to locate the energy dissipator facility.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment depth in bottom of structure exceeds 6".	No sediment deposits on vault bottom that would impede flow through the vault and reduce separation efficiency.
2	Trash & Debris	Trash and debris accumulation in vault, or pipe inlet/outlet, floatables and non-floatables.	Trash and debris removed from vault, and inlet/outlet piping.
3	Vegetation	Root systems entering the structure.	
4	Water Quality	Discharge shows obvious signs of poor water quality. Oil accumulations that exceed 1" at the surface of the water. Water flowing into the system during dry weather – *report as potential illicit discharge concern.*	Extract oil from vault by Vactoring. Clean coalescing plates (if applicable). Disposal in accordance with state and local rules and regulations. Should be no visible oil depth on water. Effluent discharge from vault should be clear with no thick visible sheen.
5	Water Flow	Water is not flowing properly through the facility.	
6	Erosion	N/A	
7	Cover/Frame/Grate	Cover is missing or only partially in place. One maintenance person cannot remove lid after applying normal lifting pressure. Locking mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½" of thread.	Cover repaired to proper working specifications or replaced.
8	Structure	Cracks wider than ½". Any evidence of soil entering the structure through cracks. The vault is not structurally sound. Baffles or walls corroding, cracking, warping and/or showing signs of failure. Plate media broken, deformed, cracked and/or showing signs of failure.	Vault replaced or repairs made so that vault meets design specifications and is structurally sound. Vault repaired so that no cracks exist > 0.25" at the joint of the inlet/outlet pipe. Baffles repaired or replaced to specifications; A portion of the media pack for coalescing plates or the entire plate pack is replaced depending on severity of failure.
9	Damaged Pipes	Inlet or outlet piping damaged or broken and in need of repair.	Pipe repaired or replaced.
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other	Ladder is corroded or deteriorated, not functioning properly, not securely attached to structural wall, missing rungs, has cracks and/or is misaligned.	Ladder replaced or repaired and meets specifications, and is safe to use as determined by inspection personnel.
12	Could Not Locate	Field inspectors are unable to locate the facility.	

Maintenance Standards

The structural life of a drywell is approximately 20 years, although hydraulic failure could potentially occur at any time. Drywell performance is dependent on proper installation, regularly scheduled maintenance and contaminants reaching the drywell.

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment needs to be cleaned out before depth reaches the lowest row of slots providing outflow from drywell. Sediment impedes flow from inlet pipes.	Sediment removed. *Note depth of sediment.*
2	Trash & Debris	Trash or debris exceeds 2 feet or impedes flow from inlet pipes. Trash or debris blocks more than 1/3 of any inlet or outlet pipe. Dead animals or vegetation that generate odors and cause complaints or dangerous gases (e.g., methane).	
3	Vegetation	Vegetation growing in inlet/outlet pipe joints that is more than six inches tall. Root systems entering drywell.	
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing into drywell during dry weather – report as potential illicit discharge concern.	
5	Water Flow	Facility does not drain within 72 hours. Impeded water flow due to vegetation or sediment (use appropriate code from above).	
6	Erosion	N/A	
7	Cover/Frame/Grate	Cover is missing or only partially in place. One maintenance person cannot remove lid after applying normal lifting pressure. Frame separated by more than ¾" from top slab. Frame not securely attached. Locking mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½" of thread.	The metal frame and grate should sit flush on the top ring.
8	Structure	Top slab with holes larger than 2 square inches or cracks wider than ¼". Grout at inlet/outlet pipes has separated or cracked wider than ½" and longer than 1'. Cracks on drywell floor wider than 1/2" and longer than 1'; cracks on drywell barrel wider than ½" and longer than 3'. Settlement has created a safety, function, or design problem. Field inspector judges that structure is unsound.	*Cracks should be repaired with mortar similar to that used between the adjustment rings. Mortar or grout should be waterproof and of the nonshrink variety.*
9	Damaged Pipes	Inlet piping damaged or broken and in need of repair.	
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other		
12	Could Not Locate	Field inspectors are unable to locate the drywell.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment or debris exceeds 20% of pipe diameter or 20% of debris barrier openings. Accumulated sediment that exceeds 20% of the design depth of the ditch.	Design capacity restored. *Stabilize all disturbed soils*
2	Trash & Debris	Trash and debris accumulated in pipe or ditch. Visual evidence of dumping	Trash removed.
3	Vegetation	Vegetation reduces movement of water through pipes. Excessive vegetation that reduces free movement of water through ditches.	Design capacity restored. *Stabilize all disturbed soils*
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing in pipes or ditch during dry weather – *report as potential illicit discharge concern.*	
5	Water Flow	Impeded water flow due to vegetation or sediment (use appropriate code from above). Standing water in the pipe or swale between storm events.	
6	Erosion	Erosion damage over 2 inches deep where cause is still present or there is potential for continued erosion. Native soil is visible beneath the rock lining of a conveyance ditch.	Eroded soils stablilized.
7	Cover/Frame/Grate	N/A	
8	Structure	Debris barrier/trash rack is missing or not attached to pipe. Debris barrier/trash rack bars are bent by more than 3 inches. Debris barrier/trash rack bars are loose or rust is causing 50% deterioration to any part of the barrier.	
9	Damaged Pipes	Protective coating is damaged or rust is causing more than 50% deterioration to any part of pipe. Any dent that decreases the flow area by more than 20% or puncture that impacts performance.	
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other		
12	Could Not Locate	Field inspectors are unable to locate the pipe or ditch.	

Code	Type	Conditions When Maintenance Is Needed	ACTIVITY (*routine* and as needed)
1	Sediment	Sediment depth exceeds 2". Inlet (forebay)/outlet areas clogged with sediment.	Determine sediment source within the contributing area and stabilize. Shovel or rake out sediment within vegetated areas. Vactor catch basins or other sediment structures, including concrete forebays. Remove material so that there is no clogging/blockage in inlet and outlet areas. *Clean curb cuts. Twice annually.*
2	Trash & Debris	Trash and debris accumulated in the swale. Inlet/outlet areas clogged with trash and debris.	*Remove trash and debris from swale. Twice annually.*
3	Vegetation	Vegetation accumulation at pavement edge limits sheetflow into swale. Vegetation is sparse (compared to planting plan) or bare or eroded patches occur in more than 10% of the bottom of the swale. If turf grass is taller than 10". Nuisance weeds or other vegetation starting to take over. Excessive shading limiting plant growth. Excessive plant growth impeding water flow.	Clean intersection of pavement and vegetation to maintain sheet flow. Remove excess vegetation with a line trimmer, vacuum sweeper, rake or shovel. Clear vegetation within 1' of inlets and outfalls, maintain access pathways. Reseed or replant bare spots or poorly performing plants *Weed undesired vegetation by hand. Twice annually* *Mow turf grass to a height of 3 - 4". Remove grass clippings. As needed.* *Prune vegetation and remove dead plant material. Once or twice annually.* *Maintain drip irrigation system. Hand water as needed for specific plants. Twice annually (and as-needed for hand watering)*
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing through facility during dry weather	Report as potential illicit discharge concern.
5	Water Flow	Standing water in swale between storms does not drain freely. Flow spreader uneven or clogged where flows are not uniformly distributed through the swale.	Clean underdrains: Jet clean or rotary cut debris/roots from underdrains. Replace soil: Remove vegetation (save as much plant material as possible for replanting) and excavated soil with backhoe, excavator or, if small BMP, by hand. Level the flow spreader and clean so that flows are spread evenly over entire swale width.
6	Erosion	Small quantities of water continually flow causing an eroded, muddy channel at the bottom. Eroded or scoured swale bottom due to flow channelization, or higher flows. Eroded side slopes from foot or automobile traffic intrusion. Mulch displaced (if used).	For ruts or bare areas < 12" wide, repair the damaged area by filling with crushed gravel. If bare areas are large, generally > 12" wide, the swale should be regraded and reseeded. For smaller bare areas, overseed when bare spots are evident, or replant. Regrade or recontour side slopes: Maintain proper slope with hand tools, back hoe, or excavator; replant exposed areas. *Replace or add mulch with hand tools to a depth of 2 - 3". Organic mulch will need to be replenished every couple years.*
7	Cover/Frame/Grate	N/A	
8	Structure	N/A	
9	Damaged Pipes	*See Conveyance System standards for pipes and debris barriers/trash racks.*	
10	Mosquitoes	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other		
12	Could Not Locate	Field inspectors are unable to locate the swale.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment accumulation in vault bottom exceeds the depth of the sediment zone plus 6". OR Accumulated sediment depth > 10% of the diameter of the storage area for one-half the length of storage vault or any point depth > 15% of diameter. (Example: 72-inch storage tank would require cleaning when sediment reaches depth of 7 inches for > one-half the length of tank.)	Remove sediment from vault.
2	Trash & Debris	Trash or debris exceeds the limits for sediment described above.	Remove trash and debris from vault.
3	Vegetation	N/A	
4	Water Quality	Prevalent and visible oil sheen. Evidence of oil, gasoline, contaminants or other pollutants.	
5	Water Flow	First cell (if applicable) is empty, doesn't hold water.	
6	Erosion	N/A	
7	Cover/Frame/Grate	Cover is missing or only partially in place. One maintenance person cannot remove lid after applying normal lifting pressure. Locking mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½"of thread.	Manhole is closed. Cover can be removed and reinstalled by one maintenance person. Mechanism opens with proper tools
8	Structure	Tank/pipe is bent more than 10% of its design shape. Cracks wider than ½". Evidence of soil particles entering structure through cracks. Cracks > 0.5 inch at the joint of any inlet/outlet pipe or any evidence of soil particles entering the vault through the walls. The vault is not structurally sound. One-half of the cross section of an air vent is blocked or vent is damaged. Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance/inspection staff. *See Control Structures for additional maintenance standards.*	Tank/pipe repaired or replaced to design. Licensed engineer in State of Idaho to determine structural stability. Vault repaired so that no cracks exist > 0.25" at the joint of the inlet/outlet pipe. Vault replaced or repairs made so that vault meets design specifications and is structurally sound. Blocking material removed or cleared from ventilation area. A specified percentage of the vault surface area must provide ventilation to the vault interior (see design specifications). Baffles repaired or replaced to specifications
9	Damaged Pipes	Inlet or outlet piping damaged or broken and in need of repair.	Pipe repaired or replaced.
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other	Ladder is unsafe due to missing rungs, misalignment, not securely attached to structure wall, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
12	Could Not Locate	Field inspectors are unable to locate the facility.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Sediment depth exceeds 2 inches.	Remove sediment deposits, relevel so slope is even and flows pass evenly through strip.
2	Trash & Debris	Trash and debris accumulated on the filter strip.	Remove trash and debris from filter.
3	Vegetation	Grass taller than 10-inches. Nuisance weeds or other vegetation starts to take over. Planted vegetation is sparse or bare or eroded patches occur in more than 10% of the filter strip area.	Mow grass, control nuisance vegetation, such that flow not impeded. Grass should be mowed to a height between 3 to 4 inches.
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants. Water flowing through facility during dry weather - *report as potential illicit discharge concern.*	
5	Water Flow	Visual evidence of water discharging at concentrated points (rather than sheet flow) onto the filter strip.	Regrade and reseed filter strip.
6	Erosion	Eroded or scoured areas due to flow channelization or higher flows.	For ruts or bare areas < 12 inches wide, repair the damaged area by filling with crushed gravel. The grass will creep in over the rock in time. If bare areas are large, generally > 12 inches wide, the filter strip should be regraded and reseeded. For smaller bare areas, overseed when bare spots are evident.
7	Cover/Frame/Grate	N/A	
8	Structure	Flow spreader uneven or clogged so that flows are not uniformly distributed through filter width.	Level the spreader and clean so that flows are spread evenly over entire filter width.
9	Damaged Pipes	*See Conveyance System standards for pipes and debris barriers/trash racks.*	
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g. standing water for more than 72 hours in areas accessible to mosquitoes.)	
11	Other		
12	Could Not Locate	Field inspectors are unable to locate the filter strip.	

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Inlets to roof drainage system clogged with sediment.	Free draining inlet pipes (*Check 2x/year)*
2	Trash & Debris	Inlets to roof drainage system clogged with trash or debris. Trash and debris accumulated on the roof.	
3	Vegetation	Planted vegetation becomes excessively tall. Presence of poisonous or nuisance vegetation or noxious weeds. Planted vegetation is sparse or bare or eroded patches occur in more than 10% of roof garden.	Desired plant growth. Maintained aesthetics. (*Check 2x/year)*
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants.	
5	Water Flow	Water stands in the green roof between storms and does not drain freely.	
6	Erosion	Eroded or scoured areas due to wind or water.	
7	Cover/Frame/Grate	N/A	
8	Structure	Membrane or roof structure is compromised by either roots and/or water damage.	
9	Damaged Pipes	N/A	
10	Mosquito Vector Breeding	Suitable habitat exists for mosquito production (e.g., standing water for more than 72 hours in areas accessible to mosquitoes)	
11	Other	Irrigation system leaking or malfunctioning.	
12	Could Not Locate	Field inspectors are unable to locate the facility.	

Maintenance Standards

Permeable Pavement

Code	Type	Conditions When Maintenance Is Needed	Results expected following maintenance
1	Sediment	Porous pavement clogging due to organic matter and sediment.	Infiltration capacity at design. *Inspect and maintain per manufacturer's recommendations. Remove clogged aggregate with suction equipment and high pressure washing 1-2x/year.*
2	Trash & Debris	Porous pavement clogging due to trash or debris. Trash and debris accumulated on overflow devices.	
3	Vegetation	Planted vegetation becomes excessively tall. Nuisance weeds and other vegetation start to take over.	
4	Water Quality	Any evidence of oil, gasoline, contaminants or other pollutants	
5	Water Flow	N/A	
6	Erosion	Soil from adjacent areas washed onto pavement.	Minimized sediment inputs to pavement area. *Mulch/plant exposed soils that may erode into paving system (1x/year).*
7	Cover/Frame/Grate	N/A	
8	Structure	Cracked or moving edge restraints. Cracked or settled pavement Aggregate loss in pavers from settling or power washing.	Broken pavers and missing aggregate replace.
9	Damaged Pipes	N/A	
10	Mosquito Vector Breeding	N/A	
11	Other		
12	Could Not Locate		