

**Operations/Maintenance BMPs**

**Detention Ponds**

Maintenance Component	Defect	Conditions	Actions
General	Trash & Debris	Trash & Debris present?  <input type="checkbox"/> $\geq 5 \text{ ft}^3 / 1,000 \text{ ft}^2$  <input type="checkbox"/> $< 5 \text{ ft}^3 / 1,000 \text{ ft}^2$	Clear Trash and Debris  ♦ Perform maintenance now  ♦ Perform at next scheduled maintenance
	Poisonous Vegetation and noxious weeds	Poisonous or nuisance vegetation present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Noxious weeds present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Eradicate or begin control effort  ♦ Initiate IPM policies
	Contaminants and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  ♦ Perform removal/cleanup
	Rodent Holes	Does the facility act as a dam or berm?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of rodent holes?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Evidence of water piping through dam or berm via rodent holes?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Eliminate rodents and repair dam or berm (coordinate with Ecology Dam Safety Office if pond exceeds 10 acre-feet).  ♦ Initiate IPM policies  ♦ Engineers review and recommended actions

**Operations/Maintenance BMPs**

**Detention Ponds**

Maintenance Component	Defect	Conditions	Actions
General (cont.)	Beaver Dams	Dam results in change or function of the facility?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Return facility to design function.  ♦ Coordinate trapping of beavers and dam removal with permitting authorities.
	Insects	Insects such as wasps and hornets interfere with maintenance?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Mosquito's present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Vector control  ♦ Initiate IPM policies  ♦ Coordinate mosquito surveillance w/TPCHD
	Tree Growth and Hazard Trees	Trees interfere with maintenance access or activities?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Dead, diseased, or dying trees identified?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove hazardous or nuisance trees.  ♦ Contact certified Arborist to assess health of target trees  ♦ Remove as needed
Side Slopes of Pond	Erosion	Erosion ≥ 2 inches deep?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cause or potential still present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Stabilize Slopes  ♦ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.

**Operations/Maintenance BMPs**

**Detention Ponds**

Maintenance Component	Defect	Conditions	Actions
Side Slopes of Pond (cont.)	Erosion (cont.)	Erosion observed on a compacted berm embankment?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ If erosion is on a compacted berm, an engineer's review and recommended actions are required.</li> </ul>
Storage Area	Sediment	Sediment > 10% of designed pond depth?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Sediment affecting the inletting or outletting function?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove Sediment  <ul style="list-style-type: none"> <li>◆ Sediment cleaned out to designed pond shape and depth</li> <li>◆ Pond reseeded if necessary to control erosion.</li> </ul>
	Liner (If Applicable)	Liner is visible?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  More than three 1/4-inch holes in it?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Rehabilitate the Liner  <ul style="list-style-type: none"> <li>◆ Liner repaired or replaced.</li> <li>◆ Liner is fully covered.</li> </ul>

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**Detention Ponds**

Maintenance Component	Defect	Conditions	Actions
Pond Berms (Dikes)	Settlements	Settlement is apparent? <input type="checkbox"/> YES <input type="checkbox"/> NO  Settlement > 4 inches lower than the design elevation? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Measure berm to determine amount of settlement.</li> <li>◆ An engineer should be consulted to determine the source of the settlement.</li> <li>◆ Dike is built back to the design elevation.</li> </ul>
	Piping	Discernable water flow through pond berm? <input type="checkbox"/> YES <input type="checkbox"/> NO  Ongoing erosion with the potential for erosion to continue? <input type="checkbox"/> YES <input type="checkbox"/> NO	Stabilize Berm  <ul style="list-style-type: none"> <li>◆ Recommend a Geotechnical engineer be called in to inspect and evaluate condition and recommend repair of condition.</li> <li>◆ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.</li> </ul>
Emergency Overflow/Spillway and Berms over 4 feet in height.	Tree Growth	Tree growth on emergency spillway? <input type="checkbox"/> YES <input type="checkbox"/> NO  Tree growth on berms over 4 feet in height? (may lead to piping) <input type="checkbox"/> YES <input type="checkbox"/> NO	Trees should be removed.  <ul style="list-style-type: none"> <li>◆ If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored.</li> <li>◆ An engineer should be consulted for proper berm/spillway restoration.</li> </ul>

**Operations/Maintenance BMPs**

**Detention Ponds**

Maintenance Component	Defect	Conditions	Actions
Emergency Overflow/Spillway and Berms over 4 feet in height. (cont.)	Piping	Discernable water flow through pond berm? <input type="checkbox"/> YES <input type="checkbox"/> NO  Ongoing erosion with the potential for erosion to continue? <input type="checkbox"/> YES <input type="checkbox"/> NO	Stabilize Berm  ♦ Recommend a Geotechnical engineer be called in to inspect and evaluate condition and recommend repair of condition.  ♦ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.
Emergency Overflow/Spillway	Emergency Overflow/Spillway	Only one layer of rock exists above native soil in area five square feet or larger? <input type="checkbox"/> YES <input type="checkbox"/> NO  Native soil exposed at the top of out flow path of spillway? <input type="checkbox"/> YES <input type="checkbox"/> NO	Restore Emergency Overflow/Spillway  ♦ Rocks and pad depth are restored to design standards.
	Missing Rocks	Rocks Missing? <input type="checkbox"/> YES <input type="checkbox"/> NO	Replace rocks as necessary.
	Erosion	Erosion $\geq$ 2 inches deep? <input type="checkbox"/> YES <input type="checkbox"/> NO  Cause or potential still present? <input type="checkbox"/> YES <input type="checkbox"/> NO	Stabilize Slopes  ♦ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.

**Operations/Maintenance BMPs**

**Infiltration Ponds**

Maintenance Component	Defect	Conditions	Actions
General	Trash & Debris	Trash & Debris present?  <input type="checkbox"/> $\geq 5 \text{ ft}^3 / 1,000 \text{ ft}^2$  <input type="checkbox"/> $< 5 \text{ ft}^3 / 1,000 \text{ ft}^2$	Clear Trash and Debris  ♦ Perform maintenance now  ♦ Perform at next scheduled maintenance
	Poisonous/Noxious Vegetation	Poisonous or nuisance vegetation present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Noxious weeds present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Eradicate or begin control effort  ♦ Initiate IPM policies
	Contaminants and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  ♦ Perform removal/cleanup
	Rodent Holes	Does the facility act as a dam or berm?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of rodent holes?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Evidence of water piping through dam or berm via rodent holes?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Eliminate rodents and repair dam or berm (coordinate with Ecology Dam Safety Office if pond exceeds 10 acre-feet).  ♦ Initiate IPM policies Engineers review and recommended actions

**Operations/Maintenance BMPs**

**Infiltration Ponds**

Maintenance Component	Defect	Conditions	Actions
Storage Area	Sediment	Water ponding in infiltration pond after rainfall ceases? <input type="checkbox"/> YES <input type="checkbox"/> NO  Two inches or more sediment? <input type="checkbox"/> YES <input type="checkbox"/> NO	Remove Sediment ♦ Remove and/or clean so that infiltration system works according to design.
Filter Bags (if applicable)	Filled with Sediment and Debris	Bag(s) > 1/2 full? <input type="checkbox"/> YES <input type="checkbox"/> NO	Maintain filter bag ♦ Replace filter bag or ♦ Redesign System
Rock Filters	Sediment and Debris	Little or no water flows through filter? <input type="checkbox"/> YES <input type="checkbox"/> NO	Replace ♦ Gravel in rock filter is replaced.
Side Slopes of Pond	Erosion	Erosion ≥ 2 inches deep? <input type="checkbox"/> YES <input type="checkbox"/> NO  Cause or potential still present? <input type="checkbox"/> YES <input type="checkbox"/> NO	Stabilize Slopes ♦ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.
Emergency Overflow Spillway and Berms over 4 feet in height.	Tree Growth	Tree growth on emergency spillway? <input type="checkbox"/> YES <input type="checkbox"/> NO	Trees should be removed. ♦ If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored.

**Operations/Maintenance BMPs**

**Infiltration Ponds**

Maintenance Component	Defect	Conditions	Actions
Emergency Overflow Spillway and Berms over 4 feet in height. (cont.)	Tree Growth (cont.)	Tree growth on berms over 4 feet in height? (may lead to piping)  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ An engineer should be consulted for proper berm/spillway restoration.</li> </ul>
	Piping	Discernable water flow through pond berm?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Ongoing erosion with the potential for erosion to continue?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Stabilize Berm  <ul style="list-style-type: none"> <li>◆ Recommend a Geotechnical engineer be called in to inspect and evaluate condition and recommend repair of condition.</li> <li>◆ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.</li> </ul>
Emergency Overflow Spillway	Rock Missing	Rocks Missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Replace rocks as necessary.
	Erosion	Erosion ≥ 2 inches deep?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cause or potential still present?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Stabilize Slopes  <ul style="list-style-type: none"> <li>◆ Use appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.</li> </ul>



**Operations/Maintenance BMPs**

**Infiltration Ponds**

Maintenance Component	Defect	Conditions	Actions
Pre-settling Ponds	Facility filled with Sediment and/or debris	Sediment $\geq$ 6 inches? <input type="checkbox"/> YES <input type="checkbox"/> NO	Sediment is removed. ♦ Restore to designed bottom elevation.
Vaults	Sump filled with Sediment and/or debris	Exceeds designed depth of sediment trap? <input type="checkbox"/> YES <input type="checkbox"/> NO	Sediment is removed. ♦ Vactor sediment and/or debris.

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Storage Area	Plugged Air Vents	Vent blockage $\geq \frac{1}{2}$ of the diameter? <input type="checkbox"/> YES <input type="checkbox"/> NO  Vent damaged? <input type="checkbox"/> YES <input type="checkbox"/> NO	Restore the vent to proper function.  ♦ Clear blockage  ♦ Repair damage.
	Debris and Sediment	Sediment depth > 10% of the diameter of the storage area for 1/2 length of storage vault? <input type="checkbox"/> YES <input type="checkbox"/> NO  Any point depth > 15% of diameter? <input type="checkbox"/> YES <input type="checkbox"/> NO	All sediment and debris removed from storage area.  ♦ Perform maintenance now  ♦ Perform at next scheduled maintenance
	Joints Between Tank/Pipe Section	Openings or voids allowing material to be transported into facility? <input type="checkbox"/> YES <input type="checkbox"/> NO	Eliminate openings and voids.  ♦ All joint between tank/pipe sections are sealed.  ♦ Consult an engineer to determine structural stability. (required)
	Tank Pipe Bent Out of Shape	Any part of tank/pipe is bent out of shape > 10% of its design shape? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Tank/pipe repaired or replaced to design.  ♦ Review required by engineer to determine structural stability

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Storage Area (cont.)	Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab	Cracks wider than 1/2-inch (including inlet/outlet pipes)? <input type="checkbox"/> YES <input type="checkbox"/> NO Evidence of soil particles entering the structure through the cracks? <input type="checkbox"/> YES <input type="checkbox"/> NO Vault is not structurally sound? <input type="checkbox"/> YES <input type="checkbox"/> NO	Vault replaced or repaired to design specifications and is structurally sound. ♦ Cracks > 1/4-inch wide at the joint of the inlet/outlet pipe must be repaired or filled. ♦ Repair / fill cracks. ♦ Consult engineer for structural integrity.
Manhole	Cover Not in Place	Cover is missing or only partially in place? <input type="checkbox"/> YES <input type="checkbox"/> NO	Manhole is closed. ♦ Repair or replace manhole cover.
	Locking Mechanism Not Working	Mechanism can be opened by one maintenance person with proper tools? <input type="checkbox"/> YES <input type="checkbox"/> NO Bolts into frame < 1/2 inch of thread? <input type="checkbox"/> YES <input type="checkbox"/> NO	Mechanism opens with proper tools. ♦ Repair/replace mechanism. ♦ Replace with longer bolts.
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair lid to prevent sealing off access for maintenance.

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
<p>Manhole (cont.)</p>	<p>Ladder Rungs Unsafe</p>	<p>Ladder is unsafe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs misaligned or not securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs rusted or cracked?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>Ladder meets design standards. Allows maintenance person safe access.</p> <p>◆ Repair or replace ladder or rungs.</p>
<p>Catch Basins General</p>	<p>Trash &amp; Debris</p>	<p>Trash or debris which is located immediately in front of the catch basin opening?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Trash or debris blocking inletting capacity of the basin by more than 10%.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Clear trash and debris.</p> <p>◆ Vector if necessary.</p>

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Catch Basins General (cont.)	Trash & Debris (cont.)	Material > 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		Trash or debris in any inlet or outlet pipe blocking > 1/3 of its height.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		Dead animals or vegetation causing odors or dangerous gases?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove dead animals or vegetation.</li> </ul>
	Sediment	Sediment > 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
	Structure Damage to Frame and/or Top Slab	Top slab has holes > 2 in <sup>2</sup> ?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair or fill holes.</li> </ul>

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Catch Basins General (cont.)	Structure Damage to Frame and/or Top Slab (cont.)	Cracks > 1/4 inch? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair or fill cracks.
		Frame sitting flush on top slab? <input type="checkbox"/> YES <input type="checkbox"/> NO  Frame securely attached? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Reattach and secure frame.
	Fractures or Cracks in Basin Walls/Bottom	Structure is unsound? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Replace or repair to design standards.
		Grout separated? <input type="checkbox"/> YES <input type="checkbox"/> NO  Grout cracked > 1/2 inch and longer than 1 ft. at the joint of any inlet/outlet pipe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of soil particles entering catch basin through cracks? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ RegROUT and secure pipe at basin wall.

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Catch Basins General (cont.)	Settlement/ Misalignment	Basin has failed creating a safety, function, or design problem?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace or repair basin to design standards.
	Vegetation	Vegetation blocking > 10% of the basin opening?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove vegetation.
		Vegetation growing in inlet/outlet pipe joints > 6 in. tall and < 6 in. apart?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove vegetation.  ♦ Cut roots.
	Contamination and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  ♦ Perform removal/cleanup
Catch Basin Cover	Cover Not in Place	Cover is missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace cover.
		Cover is partially in place? <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Reposition cover correctly.
	Locking Mechanism Not Working	Mechanism can be opened by one maintenance person with proper tools?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Mechanism opens with proper tools.  ♦ Repair/replace mechanism.

**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Catch Basin Cover (cont.)	Locking Mechanism Not Working (cont.)	Bolts into frame < 1/2 inch of thread? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace with longer bolts.</li> </ul>
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair lid to prevent sealing off access for maintenance.</li> </ul>
Ladder	Ladder Rungs Unsafe	Ladder is unsafe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Missing rungs? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs misaligned or not securely attached to structure wall? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs rusted or cracked? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Ladder must meet design standards and allow maintenance person safe access.</li> <li>◆ Repair or replace ladder or rungs.</li> </ul>
Metal Grates (If Applicable)	Grate opening Unsafe	Grate > 7/8 inch? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Grate opening meets design standards.</li> </ul>



**Operations/Maintenance BMPs**

**Closed Detention Systems**

Maintenance Component	Defect	Conditions	Actions
Metal Grates (If Applicable) (cont.)	Trash and Debris	Trash and debris blocking > 20% of grate surface inletting capacity?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Clear grate of trash and debris.
	Grate damaged or Missing.	Grate missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Broken member(s) of the grate?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace grate.  ♦ Repair grate to meet design standards.

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Storage Area	Plugged Air Vents	Vent blockage $\geq \frac{1}{2}$ of the diameter? <input type="checkbox"/> YES <input type="checkbox"/> NO  Vent damaged? <input type="checkbox"/> YES <input type="checkbox"/> NO	Restore the vent to proper function.  ♦ Clear blockage  ♦ Repair damage.
	Debris and Sediment	Sediment depth > 10% of the diameter of the storage area for 1/2 length of storage vault? <input type="checkbox"/> YES <input type="checkbox"/> NO  Any point depth > 15% of diameter? <input type="checkbox"/> YES <input type="checkbox"/> NO	All sediment and debris removed from storage area.  ♦ Perform maintenance now  ♦ Perform at next scheduled maintenance
	Joints Between Tank/Pipe Section	Openings or voids allowing material to be transported into facility? <input type="checkbox"/> YES <input type="checkbox"/> NO	Eliminate openings and voids.  ♦ All joint between tank/pipe sections are sealed.  ♦ Consult an engineer to determine structural stability. (required)
	Tank Pipe Bent Out of Shape	Any part of tank/pipe is bent out of shape > 10% of its design shape? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Tank/pipe repaired or replaced to design.  ♦ Review required by engineer to determine structural stability

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Storage Area (cont.)	Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab	Cracks wider than 1/2-inch (including inlet/outlet pipes)?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Evidence of soil particles entering the structure through the cracks?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Vault is not structurally sound?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Vault replaced or repaired to design specifications and is structurally sound.  ♦ Cracks > 1/4-inch wide at the joint of the inlet/outlet pipe must be repaired or filled.  ♦ Repair / fill cracks.  ♦ Consult engineer for structural integrity.
Manhole	Cover Not in Place	Cover is missing or only partially in place?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Manhole is closed.  ♦ Repair or replace manhole cover.
	Locking Mechanism Not Working	Mechanism can be opened by one maintenance person with proper tools?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Bolts into frame < 1/2 inch of thread?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Mechanism opens with proper tools.  ♦ Repair/replace mechanism.  ♦ Replace with longer bolts.
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair lid to prevent sealing off access for maintenance.

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
<p>Manhole (cont.)</p>	<p>Ladder Rungs Unsafe</p>	<p>Ladder is unsafe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs misaligned or not securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs rusted or cracked?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Ladder must meet design standards.</li> <li>◆ Ladders must allow maintenance person safe access.</li> <li>◆ Repair or replace ladder or rungs.</li> </ul>
<p>Catch Basins General</p>	<p>Trash &amp; Debris</p>	<p>Trash or debris which is located immediately in front of the catch basin opening?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Trash or debris blocking inletting capacity of the basin by more than 10%.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vector if necessary.</li> </ul>

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Catch Basins General (cont.)	Trash & Debris (cont.)	Material > 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		Trash or debris in any inlet or outlet pipe blocking > 1/3 of its height.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		Dead animals or vegetation causing odors or dangerous gases?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove dead animals or vegetation.</li> </ul>
	Sediment	Sediment > 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
Structure Damage to Frame and/or Top Slab	Top slab has holes > 2 in <sup>2</sup> ? <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair or fill holes.</li> </ul>	

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
<p>Catch Basins General (cont.)</p>	<p>Structure Damage to Frame and/or Top Slab (cont.)</p>	<p>Cracks &gt; 1/4 in?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair or fill cracks.</p>
		<p>Frame sitting flush on top slab?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Frame securely attached?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Reattach and secure frame.</p>
	<p>Fractures or Cracks in Basin Walls/Bottom</p>	<p>Structure is unsound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Grout separated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Grout cracked &gt; 1/2 inch and longer than 1 ft. at the joint of any inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Evidence of soil particles entering catch basin through cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace or repair to design standards.</p> <p>◆ Regrout and secure pipe at basin wall.</p>

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Catch Basins General (cont.)	Settlement/ Misalignment	Basin has failed creating a safety, function, or design problem?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace or repair basin to design standards.
	Vegetation	Vegetation blocking > 10% of the basin opening?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Vegetation growing in inlet/outlet pipe joints > 6 in. tall and < 6 in. apart?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove vegetation.  ♦ Remove vegetation.  ♦ Cut roots.
	Contamination and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  ♦ Perform removal/cleanup
Catch Basin Cover	Cover Not in Place	Cover is missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cover is partially in place?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace cover.    ♦ Reposition cover correctly.
	Locking Mechanism Not Working	Mechanism can be opened by one maintenance person with proper tools?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Mechanism opens with proper tools.  ♦ Repair/replace mechanism.

**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Catch Basin Cover (cont.)	Locking Mechanism Not Working (cont.)	Bolts into frame < 1/2 inch of thread? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace with longer bolts.</li> </ul>
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair lid to prevent sealing off access for maintenance.</li> </ul>
Ladder	Ladder Rungs Unsafe	Ladder is unsafe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Missing rungs? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs misaligned or not securely attached to structure wall? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs rusted or cracked? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Ladder must meet design standards and allow maintenance person safe access.</li> <li>◆ Repair or replace ladder or rungs.</li> </ul>
Metal Grates (If Applicable)	Grate opening Unsafe	Grate > 7/8 inch? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Grate opening meets design standards.</li> </ul>



**Operations/Maintenance BMPs**

**Closed Tanks and Vaults**

Maintenance Component	Defect	Conditions	Actions
Metal Grates (If Applicable) (cont.)	Trash and Debris	Trash and debris blocking > 20% of grate surface inletting capacity?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Clear grate of trash and debris.
	Grate damaged or Missing.	Grate missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Broken member(s) of the grate?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace grate.   ♦ Repair grate to meet design standards.

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

Maintenance Component	Defect	Condition	Actions
General	Trash and Debris (Includes Sediment)	Material > 25% of sump depth? <input type="checkbox"/> YES <input type="checkbox"/> NO  Material < 1 ft below orifice plate? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove blockages from control structure orifice.</li> <li>◆ Remove or vacator trash and debris.</li> </ul>
	Structural Damage	Structure securely attached to manhole wall? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Secure structure to wall and outlet pipe.</li> </ul>
		Structure is in upright position? (< 10% from plumb). <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Align structure in correct position.</li> </ul>
		Connections to outlet pipe are watertight? <input type="checkbox"/> YES <input type="checkbox"/> NO  Signs of rust? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Seal connections to outlet pipe.</li> <li>◆ Repair or replace structure to function as designed.</li> </ul>
		Any holes--other than designed holes--in the structure? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair or plug hole(s), other than designed holes.</li> </ul>
Cleanout Gate	Damaged or Missing	Cleanout gate watertight? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair gate to design function (watertight seal can be achieved).</li> </ul>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

Maintenance Component	Defect	Condition	Actions
<p>Cleanout Gate (cont.)</p>	<p>Damaged or Missing (cont.)</p>	<p>Cleanout gate missing.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace gate.</p>
		<p>Gate moves up and down by one maintenance person?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Perform maintenance now</p> <p>◆ Perform at next scheduled maintenance</p>
		<p>Chain/rod leading to gate is missing?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Chain/rod leading to gate is damaged?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Gate is repaired or replaced to meet design standards.</p>
		<p>Gate is rusted over 50% of its surface area?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Gate is repaired or replaced to meet design standards.</p>
<p>Orifice Plate</p>	<p>Damaged or Missing</p>	<p>Missing orifice plate?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Out of place orifice plate?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Bent orifice plate?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Orifice plate is repaired or replaced to meet design standards.</p> <p>◆ Orifice plate is repaired or replaced to meet design standards.</p>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

Maintenance Component	Defect	Condition	Actions
Orifice Plate (cont.)	Obstructions	Trash, debris, sediment, or vegetation blocking the plate?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Perform maintenance now</li> <li>◆ Perform at next scheduled maintenance</li> </ul>
Overflow Pipe	Obstructions	Any trash or debris blocking (or having the potential of blocking) the overflow pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Perform maintenance now</li> <li>◆ Perform at next scheduled maintenance</li> </ul>
Manhole	Cover Not in Place	Cover is missing or only partially in place?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<p>Manhole is closed.</p> <ul style="list-style-type: none"> <li>◆ Repair or replace manhole cover.</li> </ul>
	Locking Mechanism Not Working	<p>Mechanism can be opened by one maintenance person with proper tools?</p> <p><input type="checkbox"/> YES  <input type="checkbox"/> NO</p> <p>Bolts into frame &lt; 1/2 inch of thread?</p> <p><input type="checkbox"/> YES  <input type="checkbox"/> NO</p>	<p>Mechanism opens with proper tools.</p> <ul style="list-style-type: none"> <li>◆ Repair/replace mechanism.</li> <li>◆ Replace with longer bolts.</li> </ul>
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair lid to prevent sealing off access for maintenance.</li> </ul>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

	<p>Ladder Rungs Unsafe</p>	<p>Ladder is unsafe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs misaligned or not securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs rusted or cracked?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>Ladder meets design standards. Allows maintenance person safe access.</p> <p>◆ Repair or replace ladder or rungs.</p>
<p>Catch Basin (General)</p>	<p>Trash &amp; Debris</p>	<p>Trash or debris which is located immediately in front of the catch basin opening?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Trash or debris blocking inletting capacity of the basin by more than 10%.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Clear trash and debris.</p> <p>◆ Vactor if necessary.</p>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

		<p>Material &gt; 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		<p>Trash or debris in any inlet or outlet pipe blocking &gt; 1/3 of its height.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		<p>Dead animals or vegetation causing odors or dangerous gases?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Remove dead animals or vegetation.</li> </ul>
	Sediment	<p>Sediment &gt; 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

	Structure Damage to Frame and/or Top Slab	<p>Top slab has holes &gt; 2 in<sup>2</sup>?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Cracks &gt; 1/4 inch?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair or fill holes.</p> <p>◆ Repair or fill cracks.</p>
		<p>Frame sitting flush on top slab?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Frame securely attached?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Reattach and secure frame.</p>
	Fractures or Cracks in Basin walls/Bottom	<p>Structure is unsound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Grout separated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Grout cracked &gt; 1/2 inch and longer than 1 ft. at the joint of any inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Evidence of soil particles entering catch basin through cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace or repair to design standards.</p> <p>◆ Regrout and secure pipe at basin wall.</p>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

	Settlement/ Misalignment	Basin has failed creating a safety, function, or design problem?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace or repair basin to design standards.</li> </ul>
	Vegetation	Vegetation blocking > 10% of the basin opening?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Vegetation growing in inlet/outlet pipe joints > 6 in. tall and < 6 in. apart?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove vegetation.</li> <li>◆ Cut roots.</li> </ul>
	Contamination and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  <ul style="list-style-type: none"> <li>◆ Perform removal/cleanup</li> </ul>
Catch Basin Cover	Cover Not in Place	Cover is missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cover is partially in place?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace cover.</li> <li>◆ Reposition cover correctly.</li> </ul>



**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

	<p>Locking Mechanism Not Working</p>	<p>Mechanism can be opened by one maintenance person with proper tools?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Bolts into frame &lt; 1/2 inch of thread?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>Mechanism opens with proper tools.</p> <p>◆ Repair/replace mechanism.</p> <p>◆ Replace with longer bolts.</p>
	<p>Cover Difficult to Remove</p>	<p>One maintenance person can remove lid after applying normal lifting pressure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair lid to prevent sealing off access for maintenance.</p>
<p>Ladder</p>	<p>Ladder Rungs Unsafe</p>	<p>Ladder is unsafe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs misaligned or not securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Rungs rusted or cracked?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Ladder must meet design standards and allow maintenance person safe access.</p> <p>◆ Repair or replace ladder or rungs.</p>
<p>Metal Grates (If Applicable)</p>	<p>Grate opening Unsafe</p>	<p>Grate &gt; 7/8 inch?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Grate opening meets design standards.</p>

**Operations/Maintenance BMPs**

**Control Structure /Flow Restrictor**

	<p>Trash and Debris</p>	<p>Trash and debris blocking &gt; 20% of grate surface inletting capacity?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Clear grate of trash and debris.</p>
	<p>Damaged or Missing.</p>	<p>Grate missing?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Broken member(s) of the grate?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace grate.</p> <p>◆ Repair grate to meet design standards.</p>

Operations/Maintenance BMPs

Catch Basins

Maintenance Component	Defect	Conditions	Actions
<p>General</p>	<p>Trash &amp; Debris</p>	<p>Trash or debris which is located immediately in front of the catch basin opening?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Trash or debris blocking inletting capacity of the basin by more than 10%?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		<p>Material &gt; 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		<p>Trash or debris in any inlet or outlet pipe blocking &gt; 1/3 of its height.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
		<p>Dead animals or vegetation causing odors or dangerous gases?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Remove dead animals or vegetation.</li> </ul>

**Operations/Maintenance BMPs**

**Catch Basins**

Maintenance Component	Defect	Conditions	Actions
	Sediment	Sediment > 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear trash and debris.</li> <li>◆ Vactor if necessary.</li> </ul>
	Structure Damage to Frame and/or Top Slab	Top slab has holes > 2 in <sup>2</sup> ?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cracks > 1/4 inch?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair or fill holes.</li> <li>◆ Repair or fill cracks.</li> </ul>
		Frame sitting flush on top slab?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Frame securely attached?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Reattach and secure frame.</li> </ul>
	Fractures or Cracks in Basin Walls/Bottom	Structure is unsound?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace or repair to design standards.</li> </ul>

Operations/Maintenance BMPs

Catch Basins

Maintenance Component	Defect	Conditions	Actions
	Fractures or Cracks in Basin Walls/Bottom	Grout separated? <input type="checkbox"/> YES <input type="checkbox"/> NO  Grout cracked > 1/2 inch and longer than 1 ft. at the joint of any inlet/outlet pipe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of soil particles entering catch basin through cracks? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Regrout and secure pipe at basin wall.</li> </ul>
	Settlement/Misalignment	Basin has failed creating a safety, function, or design problem? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace or repair basin to design standards.</li> </ul>
	Vegetation	Vegetation blocking > 10% of the basin opening? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove vegetation.</li> </ul>
		Vegetation growing in inlet/outlet pipe joints > 6 in. tall and < 6 in. apart? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove vegetation.</li> <li>◆ Cut roots.</li> </ul>

**Operations/Maintenance BMPs**

**Catch Basins**

Maintenance Component	Defect	Conditions	Actions
	Contamination and Pollution	Evidence of oil, gasoline or other pollutants?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Remove  ♦ Perform removal/cleanup
Catch Basin Cover	Cover Not in Place	Cover is missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Cover is partially in place?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace cover.   ♦ Reposition cover correctly.
	Locking Mechanism Not Working	Mechanism can be opened by one maintenance person with proper tools?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Bolts into frame < 1/2 inch of thread?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Mechanism opens with proper tools.  ♦ Repair/replace mechanism.   ♦ Replace with longer bolts.
	Cover Difficult to Remove	One maintenance person can remove lid after applying normal lifting pressure?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair lid to prevent sealing off access for maintenance.

Operations/Maintenance BMPs

Catch Basins

Maintenance Component	Defect	Conditions	Actions
Ladder	Ladder Rungs Unsafe	Ladder is unsafe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Missing rungs? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs misaligned or not securely attached to structure wall? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs rusted or cracked? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Ladder must meet design standards and allow maintenance person safe access.</li> <li>◆ Repair or replace ladder or rungs.</li> </ul>
Metal Grates (If Applicable)	Grate opening Unsafe	Grate > 7/8 inch? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Grate opening meets design standards.</li> </ul>
	Trash and Debris	Trash and debris blocking > 20% of grate surface inletting capacity? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Clear grate of trash and debris.</li> </ul>
	Damaged or Missing.	Grate missing? <input type="checkbox"/> YES <input type="checkbox"/> NO  Broken member(s) of the grate? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace grate.</li> <li>◆ Repair grate to meet design standards.</li> </ul>

**Operations/Maintenance BMPs**

**Debris Barriers**

Maintenance Component	Defect	Conditions	Actions
General	Trash and Debris	Trash or debris plugging > 20% of the openings in the barrier?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Clear debris.
Metal	Damaged/Missing Bars.	Bars bent > 3 inches?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Bend bar(s) to < 3/4 in.  ♦ Replace bar(s)
		Bars are damaged?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Entire barrier missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair or replace bars.
		Bars are loose?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Rust is causing 50% deterioration to any part of barrier?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair or replace bars.
	Inlet/Outlet Pipe	Debris barrier missing?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Debris barrier attached to pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace barrier.  ♦ Secure barrier to pipe.



**Operations/Maintenance BMPs**

**Energy Dissipaters**

Maintenance Component	Defect	Conditions	Actions
External:			
Rock Pad	Missing or Moved Rock	Only one layer of rock exists above native soil in area five square feet or larger?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Native soil exposed at the top of out flow path of spillway?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace rock pad to design standards.
	Erosion	Soil erosion in or adjacent to rock pad?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace rock pad to design standards.
Dispersion Trench	Pipe Plugged with Sediment	Sediment > 20% of the design depth?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Clean/flush pipe so that it matches design.
	Not Discharging Water Properly	Visual evidence of water discharging at concentrated points along trench (normal condition is a "sheet flow" of water along trench)?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Redesign or rebuild trench to standards.
	Perforations Plugged.	Perforations > ½ plugged in pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Clean or replace pipe.

**Operations/Maintenance BMPs**

**Energy Dissipaters**

Maintenance Component	Defect	Conditions	Actions
Dispersion Trench (cont.)	Water Flows Out Top of "Distributor" Catch Basin.	Water flowing out during any storm less than the design storm? <input type="checkbox"/> YES <input type="checkbox"/> NO  Causing or likely to cause damage? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Facility rebuilt or redesigned to standards.
	Receiving Area Over-Saturated	Causing or has potential of causing landslide problems? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Consult engineer for review.
Internal:			
Manhole/Chamber	Worn or Damaged Post, Baffles, Side of Chamber	Structure deteriorated to ½ of original size? <input type="checkbox"/> YES <input type="checkbox"/> NO  Concentrated worn spot > 1 ft <sup>2</sup> ? <input type="checkbox"/> YES <input type="checkbox"/> NO  Structure appears sound? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Replace structure to designed standards.

**Operations/Maintenance BMPs**

**Typical Biofiltration Swale**

Maintenance Component	Defect	Conditions	Actions
General	Sediment Accumulation on Grass	Sediment depth > 2 in? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits on grass treatment area of the bio-swale.</li> <li>◆ When finished, swale should be level from side to side and drain freely toward outlet. There should be no areas of standing water once inflow has ceased.</li> </ul>
	Standing Water	Water in the swale between storms? <input type="checkbox"/> YES <input type="checkbox"/> NO  Water drains freely? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment or trash blockages.</li> <li>◆ Improve grade from head to foot of swale.</li> <li>◆ Remove clogged check dams</li> <li>◆ Add under drains or convert to a wet biofiltration swale.</li> </ul>
	Flow spreader	Flow spreader uneven? <input type="checkbox"/> YES <input type="checkbox"/> NO  Flow spreader clogged? <input type="checkbox"/> YES <input type="checkbox"/> NO  Flows are uniformly distributed through entire swale width? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Level the spreader.</li> <li>◆ Clean so that flows are spread evenly over entire swale width.</li> </ul>
	Constant Baseflow	Eroded and/or muddy channel has formed in the swale bottom? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Add a low-flow pea-gravel drain the length of the swale</li> <li>◆ By-pass the baseflow around the swale.</li> </ul>

**Operations/Maintenance BMPs**

**Typical Biofiltration Swale**

Maintenance Component	Defect	Conditions	Actions
General (cont.)	Poor Vegetation Coverage	Grass is sparse? <input type="checkbox"/> YES <input type="checkbox"/> NO  Bare or eroded patches occur in > 10% of the swale bottom? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Determine why grass growth is poor and correct that condition.</li> <li>◆ Re-plant with plugs of grass from the upper slope: plant in the swale bottom at 8-inch intervals.</li> <li>◆ Re-seed into loosened, fertile soil.</li> </ul>
	Vegetation	Grass > 10-inches? <input type="checkbox"/> YES <input type="checkbox"/> NO  Weeds and/or other vegetation are taking over? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Mow vegetation.</li> <li>◆ Remove nuisance vegetation so that flow not impeded.</li> <li>◆ Grass should be mowed to a height of 3 to 4 inches.</li> <li>◆ Remove grass clippings.</li> </ul>
	Excessive Shading	Grass growth is poor because sunlight does not reach swale? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Trim back over-hanging limbs.</li> <li>◆ Remove brushy vegetation on adjacent slopes.</li> </ul>
	Inlet/Outlet	Inlet/outlet areas clogged with sediment and/or debris? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove material.</li> </ul>
	Trash and Debris Accumulation	Trash and debris accumulated in the bio-swale? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove trash and debris from bioswale.</li> </ul>

**Operations/Maintenance BMPs**

**Typical Biofiltration Swale**

Maintenance Component	Defect	Conditions	Actions
<p>General (cont.)</p>	<p>Erosion/Scouring</p>	<p>Eroded or scoured swale bottom due to flow channelization, or higher flows?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>For ruts or bare areas &lt; 12 in. wide:</p> <ul style="list-style-type: none"> <li>◆ Repair the damaged area by filling with crushed gravel.</li> </ul> <p>For rut or bare spots &gt; 12 in. wide:</p> <ul style="list-style-type: none"> <li>◆ The swale should be re-graded and re-seeded.</li> </ul> <p>For smaller bare areas:</p> <ul style="list-style-type: none"> <li>◆ Overseed when bare spots are evident, or take plugs of grass from the upper slope and plant in the swale bottom at 8-inch intervals.</li> </ul>

Operations/Maintenance BMPs

Wet Biofiltration Swale

Maintenance Component	Defect	Condition	Actions
General	Sediment Accumulation	Sediment depth > 2 inches in 10% of the swale treatment area.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits in treatment area.</li> </ul>
	Water Depth	Water not retained to a depth of about 4 inches during the wet season?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Build up or repair outlet berm so that water is retained in the wet swale.</li> </ul>
	Wetland Vegetation	Vegetation is sparse and does not provide adequate filtration?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Vegetation is crowded out by very dense clumps of cattail, which do not allow water to flow through the clumps?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Determine cause of lack of vigor of vegetation and correct.</li> <li>◆ Replant as needed.</li> </ul> For excessive cattail growth: <ul style="list-style-type: none"> <li>◆ Cut cattail shoots back and compost off-site.</li> </ul> (Normally wetland vegetation does not need to be harvested unless die-back is causing oxygen depletion in downstream waters).
	Inlet/Outlet	Inlet/outlet area clogged with sediment and/or debris?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove clogging or blockage in the inlet and outlet areas.</li> </ul>
	Trash and Debris Accumulation	Trash & Debris present?  <input type="checkbox"/> $\geq 5 \text{ ft}^3 / 1,000 \text{ ft}^2$  <input type="checkbox"/> $< 5 \text{ ft}^3 / 1,000 \text{ ft}^2$	Clear Trash and Debris <ul style="list-style-type: none"> <li>◆ Perform maintenance now</li> <li>◆ Perform at next scheduled maintenance</li> </ul>

**Operations/Maintenance BMPs**

**Wet Biofiltration Swale**

Maintenance Component	Defect	Condition	Actions
General (cont.)	Erosion/Scouring	Swale has eroded or scoured due to flow channelization, or higher flows?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Check design flows to assure swale is large enough to handle flows.</li> <li>◆ By-pass excess flows.</li> <li>◆ Enlarge swale.</li> <li>◆ Replant eroded areas with fibrous-rooted plants.</li> </ul>

**Operations/Maintenance BMPs**

**Filter Strips**

Maintenance Component	Defect	Condition	Actions
General	Sediment Accumulation on Grass	Sediment depth > 2 in? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits</li> <li>◆ Re-level so slope is even and flows pass evenly through strip.</li> </ul>
	Vegetation	Grass > 10 in? <input type="checkbox"/> YES <input type="checkbox"/> NO  Weeds and/or other vegetation are taking over? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Mow grass.</li> <li>◆ Control nuisance vegetation.</li> <li>◆ Grass should be mowed to a height between 3-4 inches.</li> </ul>
	Trash and Debris Accumulation	Trash and debris accumulated on the filter strip? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove trash and Debris from filter.</li> </ul>
	Erosion/Scouring	Eroded or scoured areas due to flow channelization, or higher flows? <input type="checkbox"/> YES <input type="checkbox"/> NO	For ruts or bare areas < 12 in. wide: <ul style="list-style-type: none"> <li>◆ Repair the damaged area by filling with crushed gravel.</li> </ul> For rut or bare spots > 12 in. wide: <ul style="list-style-type: none"> <li>◆ The swale should be re-graded and re-seeded.</li> </ul> For smaller bare areas:  Overseed when bare spots are evident, or take plugs of grass from the upper slope and plant in the swale bottom at 8-inch intervals.
	Flow spreader	Flow spreader uneven or clogged? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Level the spreader.</li> <li>◆ Clean so that flows are spread evenly over entire filter width.</li> </ul>



Maintenance Component	Defect	Condition	Actions
General	Water level	First cell is empty / doesn't hold water?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Line the first cell to maintain at least 4 feet of water.
	Trash and Debris	Accumulation > 1 ft <sup>3</sup> per 1000 ft <sup>2</sup> of pond area?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Remove trash and debris from pond.
	Inlet/Outlet Pipe	Inlet/Outlet pipe clogged with sediment and/or debris material?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Clear and remove clogging or blockage in the inlet and outlet piping.
	Sediment Accumulation in Pond Bottom	Is > depth of sediment zone plus 6-inches?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Remove sediment from pond bottom.
	Oil Sheen on Water	Prevalent and visible oil sheen?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Remove using oil-absorbent pads or vacuor truck.  ◆ Locate and correct source of contaminant.
	Erosion	Erosion of the pond's side slopes and/or scouring of the pond bottom, exceeds 6-inches?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Continued erosion is prevalent?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	◆ Stabilize slopes using proper erosion control measures and repair methods.

**Operations/Maintenance BMPs**

**Wet Ponds**

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Settlement of Pond Dike/Berm</p>	<p>Settling <math>\leq</math> 4 in. or lower than the design elevation?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Dike/berm is unsound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>♦ Repair dike/berm to specifications.</p>
	<p>Internal Berm</p>	<p>Berm dividing cells level?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>♦ Berm surface is leveled so that water flows evenly over entire length of berm.</p>
	<p>Overflow Spillway</p>	<p>Rock is missing?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Soil is exposed at top of spillway or outside slope.</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>♦ Rocks replaced to specifications.</p>

**Operations/Maintenance BMPs**

**Wet Vaults**

Maintenance Component	Defect	Condition	Actions
General	Trash/Debris Accumulation	Trash and debris accumulated in vault, pipe or inlet/outlet?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove trash and debris from vault.
	Sediment Accumulation in Vault	Sediment > depth of the sediment zone plus 6-inches?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment from vault.
	Damaged Pipes	Inlet/outlet piping damaged?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair and/or replace pipe.
	Access Cover Damaged/Not Working	Cover cannot be opened or removed by one person?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair or replace pipe to proper working specifications.
	Ventilation	Ventilation area blocked or plugged?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove or clear blocking material from ventilation area.  ♦ Refer to design specifications).
	Vault Structure Damage -Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab	Vault is structurally sound?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace or repair vault to meet design specifications.  ♦ Consult engineer to determine the structural integrity.
Cracks wider than 1/2-inch at the joint of any inlet/outlet pipe?  <input type="checkbox"/> YES  <input type="checkbox"/> NO		♦ Repair vault so that no cracks exist wider than 1/4-inch at the joint of the inlet/outlet pipe.	

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Vault Structure Damage -Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab (cont.)</p>	<p>Evidence of soil particles entering through the cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair vault so that no cracks exist wider than 1/4-inch at the joint of the inlet/outlet pipe.</p>
	<p>Baffles</p>	<p>Baffles corroding, cracking, warping and/or showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair or replace baffles to specifications.</p>
	<p>Access Ladder Damage</p>	<p>Ladder is corroded or deteriorated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder not functioning properly?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder not attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs, has cracks and/or misaligned?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Confined space warning sign visible?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace or repair ladder to specifications, and is safe to use as determined by inspection personnel.</p> <p>◆ Replace sign warning of confined space entry requirements.</p> <p>◆ Ladder and entry notification must comply with OSHA standards.</p>

**Operations/Maintenance BMPs**

**Sand Filters - Open**

Maintenance Component	Defect	Condition	Actions
Above Ground (open sand filter)	Sediment Accumulation on top layer	Sediment depth > ½ in?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment deposit on grass layer of sand filter that would impede permeability of the filter section.
	Trash and Debris Accumulations	Trash and debris accumulated on sand filter bed?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove trash and debris from sand filter bed.
	Sediment/Debris in Clean-Outs	Clean-outs full or partially plugged with sediment and/or debris?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment from clean-outs.
	Sand Filter Media	Drawdown of water through the sand filter media takes longer than 24-hours?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Flow through the overflow pipes occurs frequently.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Top several inches of sand are scraped.  ♦ May require replacement of entire sand filter depth depending on extent of plugging.  ♦ Consult an engineer for review.
	Prolonged Flows	Sand is saturated and does not dry out between storms due?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Limit low and continuous flows to a small portion of the facility by using a low wooden divider or slightly depressed sand surface.

Operations/Maintenance BMPs

Sand Filters - Open

Maintenance Component	Defect	Condition	Actions
Above Ground (open sand filter) (cont.)	Short Circuiting	Flows have become concentrated over one section of the sand filter rather than dispersed?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Disperse flow across the entire filter area.
	Erosion Damage to Slopes	Erosion > 2 in. deep?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Potential for continued erosion is evident?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Stabilize slope using proper erosion control measures.
	Rock Pad Missing or Out of Place	Soil beneath the rock is visible?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Replace or rebuild rock pad to design specifications.
	Flow Spreader	Flow spreader uneven or clogged?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Level and clean spreader so that flows are spread evenly over sand filter.
	Damaged Pipes	Piping is crushed or deformed > 20%?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Other failure to the piping.  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair or replace pipe.

**Operations/Maintenance BMPs**

**Sand Filters - Closed**

Maintenance Component	Defect	Condition	Actions
Below Ground Vault.	Sediment Accumulation on Sand Media Section	Sediment depth > ½ in.? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits on sand filter section that which would impede permeability of the filter section.</li> </ul>
	Sediment Accumulation in Pre-Settling Portion of Vault	Sediment in vault bottom > depth of the sediment zone + 6 in? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits in first chamber of vault.</li> </ul>
	Trash/Debris Accumulation	Trash and debris in vault? <input type="checkbox"/> YES <input type="checkbox"/> NO  Trash and debris in pipe inlet/outlet? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove trash and debris from vault.</li> <li>◆ Remove trash and debris from inlet/outlet piping.</li> </ul>
	Sediment in Drain Pipes/Cleanouts	Drain pipes full with sediment and/or debris? <input type="checkbox"/> YES <input type="checkbox"/> NO  Cleanouts full with sediment and/or debris? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment and debris.</li> </ul>
	Short Circuiting	Seepage/flow occurring along the vault walls and corners? <input type="checkbox"/> YES <input type="checkbox"/> NO  Sand eroding near inflow area? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Re-lay sand filter media section and compact along perimeter of vault to form a semi-seal.</li> <li>◆ Add erosion protection to dissipate force of incoming flow and curtail erosion.</li> </ul>

Operations/Maintenance BMPs

Sand Filters - Closed

Maintenance Component	Defect	Condition	Actions
Below Ground Vault. (cont.)	Damaged Pipes	Inlet pipe damaged or broken?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Outlet pipe damaged or broken?  <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair and/or replace pipe.
	Access Cover Damaged/Not Working	Cover cannot be opened?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Corrosion/deformation of cover?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Cannot remove cover using normal lifting pressure?  <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair cover to proper working specifications or replaced.
	Ventilation	Ventilation area blocked or plugged?  <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Remove or clear blocking material from ventilation area.
	Vault Structure Damaged; Includes Cracks in Walls, Bottom, Damage to Frame and/or Top Slab.	Cracks > ½ in?  <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of soil particles entering the structure through the cracks?  <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair or replace vault to designed specifications.



**Operations/Maintenance BMPs**

**Sand Filters - Closed**

Maintenance Component	Defect	Condition	Actions
<p>Below Ground Vault. (cont.)</p>	<p>Vault Structure Damaged; Includes Cracks in Walls, Bottom, Damage to Frame and/or Top Slab. (cont.)</p>	<p>Vault is structurally sound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Consult engineer to determine if the vault is structurally sound.</p>
		<p>Cracks &gt; ½ in. at the joint of any inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Evidence of soil particles entering through the cracks at the joint of the inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair vault so that no cracks exist &gt; ¼ in. at the joint of the inlet/outlet pipe.</p>
	<p>Baffles/Internal walls</p>	<p>Baffles or walls corroding?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles or walls cracking?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles or walls warping?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles or walls showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair and/or replace baffle to designed specifications.</p>
	<p>Access Ladder Damaged</p>	<p>Ladder is corroded or deteriorated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair and/or replace ladder to specifications.</p>

**Operations/Maintenance BMPs**

**Sand Filters - Closed**

Maintenance Component	Defect	Condition	Actions
Below Ground Vault. (cont.)	Access Ladder Damaged (cont.)	Ladder functioning properly? <input type="checkbox"/> YES <input type="checkbox"/> NO  Ladder securely attached to structure wall? <input type="checkbox"/> YES <input type="checkbox"/> NO  Missing rungs? <input type="checkbox"/> YES <input type="checkbox"/> NO  Cracks and/or misaligned? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Repair and/or replace ladder to specifications.

**Operations/Maintenance BMPs**

**Stormfilter – Leaf Compost**

Maintenance Component	Defect	Conditions	Action
Below Ground Vault	Sediment Accumulation on Media.	Sediment > ¼ in?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment deposits which could impede permeability of the compost media.
	Sediment Accumulation in Vault	Sediment > 6 inches in first chamber?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment deposits in vault bottom of first chamber.
	Trash/Debris Accumulation	Trash and debris accumulated on compost filter bed?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove trash and debris from the compost filter bed.
	Sediment in Drain Pipes/Clean-Outs	Drain pipes full with sediment and/or debris?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Clean-outs full with sediment and/or debris?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment and debris.
	Damaged Pipes	Pipes crushed or damaged due to corrosion and/or settlement?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Repair or replace pipe.

**Operations/Maintenance BMPs**

**Stormfilter – Leaf Compost**

Maintenance Component	Defect	Conditions	Action
Below Ground Vault (cont.)	Access Cover Damaged/Not Working	Cover cannot be opened? <input type="checkbox"/> YES <input type="checkbox"/> NO  Corrosion/deformation of cover? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair cover to proper working specifications.</li> <li>◆ Replace cover.</li> </ul>
	Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab	Cracks > ½ in? <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of soil particles entering the structure through the cracks? <input type="checkbox"/> YES <input type="checkbox"/> NO  Vault is structurally sound? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace vault.</li> <li>◆ Repair vault to designed specifications.</li> <li>◆ Consult engineer for determination of structural integrity.</li> </ul>
		Cracks > ½ in. at the joint of any inlet/outlet pipe? <input type="checkbox"/> YES <input type="checkbox"/> NO  Evidence of soil particles entering through the cracks? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair vault so that no cracks exist &gt; ¼ in. at the joint of the inlet/outlet pipe.</li> </ul>

**Operations/Maintenance BMPs**

**Stormfilter – Leaf Compost**

Maintenance Component	Defect	Conditions	Action
<p>Below Ground Vault (cont.)</p>	<p>Baffles</p>	<p>Baffles corroding?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles cracking?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles warping?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>♦ Repair or replace baffles to specifications.</p>
	<p>Access Ladder Damaged</p>	<p>Ladder is corroded or deteriorated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder functioning properly?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Missing rungs?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>♦ Replace ladder.</p> <p>♦ Ladder replaced to designed specifications.</p>

**Operations/Maintenance BMPs**

**Stormfilter – Leaf Compost**

Maintenance Component	Defect	Conditions	Action
Below Ground Vault (cont.)	Access Ladder Damaged (cont.)	Rungs cracked or misaligned? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace ladder.</li> <li>◆ Ladder replaced to designed specifications.</li> </ul>
Below Ground Cartridge Type	Compost Media	Drawdown of water through the media > 1 hour? <input type="checkbox"/> YES <input type="checkbox"/> NO  Overflow occurs frequently? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace media cartridges.</li> </ul>
	Short Circuiting	Flows properly enter filter cartridges? <input type="checkbox"/> YES <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace filter cartridges.</li> </ul>

**Operations/Maintenance BMPs**

**Baffle Oil Water Separator -API**

Maintenance Component	Defect	Condition	Actions
General	Monitoring	Discharge show signs of poor water quality?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Perform maintenance.</li> </ul>
	Sediment Accumulation	Sediment bottom of vault > 6 inches in depth?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment on vault bottom that could impede flow through the vault and reduce separation efficiency.</li> </ul>
	Trash and Debris Accumulation	Trash and debris in vault?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Trash and debris in pipe inlet/outlet?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove trash and debris from vault.</li> <li>◆ Remove trash and debris from and inlet/outlet piping.</li> </ul>
	Oil Accumulation	Oil accumulations > 1 in. at the surface of the water?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Extract oil from vault by vactoring.</li> <li>◆ Dispose in accordance with state and local rules and regulations.</li> </ul>
	Damaged Pipes	Inlet piping damaged or broken?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Outlet piping damaged or broken?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Repair or replace pipe.</li> </ul>

Operations/Maintenance BMPs

Baffle Oil Water Separator -API

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Access Cover Damaged/Not Working</p>	<p>Cover cannot be opened?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Corrosion/deformation of cover?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Repair cover to proper working specifications.</li> <li>◆ Replace cover.</li> </ul>
	<p>Vault Structure Damage - Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab</p>	<p>Top slab has holes &gt; 2 in<sup>2</sup>?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Cracks &gt; 1/4 inch?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Frame sitting flush on top slab?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Frame securely attached?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Structure is unsound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Replace or repair vault to designed specifications and is structurally sound.</li> </ul>



Operations/Maintenance BMPs

Baffle Oil Water Separator -API

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Vault Structure Damage - Includes Cracks in Walls Bottom, Damage to Frame and/or Top Slab (cont.)</p>	<p>Grout separated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Grout cracked &gt; 1/2 inch and longer than 1 ft. at the joint of any inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Evidence of soil particles entering catch basin through cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair vault so that no cracks exist wider than ¼ in. at the joint of the inlet/outlet pipe.</p>
	<p>Baffles</p>	<p>Baffles corroding?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles cracking or warping?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair or replace baffles to specifications.</p>
	<p>Access Ladder Damaged</p>	<p>Ladder is corroded or deteriorated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder functioning properly?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace or repair ladder to meet specifications, and is safe to use.</p>

**Operations/Maintenance BMPs**

**Baffle Oil Water Separator -API**

Maintenance Component	Defect	Condition	Actions
General (cont.)	Access Ladder Damaged (cont.)	Ladder securely attached to structure wall? <input type="checkbox"/> YES <input type="checkbox"/> NO  Missing rungs? <input type="checkbox"/> YES <input type="checkbox"/> NO  Rungs cracked, or misaligned? <input type="checkbox"/> YES <input type="checkbox"/> NO	♦ Replace or repair ladder to meet specifications, and is safe to use.

Operations/Maintenance BMPs

Oil Water Separator - CP

Maintenance Component	Defect	Condition	Actions
General	Monitoring	Discharge water shows signs of poor water quality?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Perform maintenance.</li> </ul>
	Sediment Accumulation	Sediment depth in bottom of vault > 6 inches in depth and/or visible signs of sediment on plates?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove sediment deposits on vault bottom and plate media, which would impede flow through the vault and reduce separation efficiency.</li> </ul>
	Trash and Debris Accumulation	Trash and debris in vault?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Trash and debris in pipe inlet/outlet?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Remove trash and debris from vault.</li> <li>◆ Remove trash and debris from inlet/outlet pipe.</li> </ul>
	Oil Accumulation	Oil accumulation > 1 in. at the water surface?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Oil is extracted from vault using vactoring methods.</li> <li>◆ Coalescing plates are cleaned by thoroughly rinsing and flushing.</li> <li>◆ Should be no visible oil depth on water.</li> </ul>
	Damaged Coalescing Plates	Plate media broken?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Plate media deformed?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	<ul style="list-style-type: none"> <li>◆ Replace a portion of the media pack.</li> <li>◆ Replace the entire plate pack depending on severity of failure.</li> </ul>

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Damaged Coalescing Plates (cont.)</p>	<p>Plate media cracked?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Plate media showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Replace a portion of the media pack.</li> <li>◆ Replace the entire plate pack depending on severity of failure.</li> </ul>
	<p>Damaged Pipes</p>	<p>Inlet or outlet piping damaged or broken?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Repair or replace pipe.</li> </ul>
	<p>Baffles</p>	<p>Baffles corroding?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles cracking or warping?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Baffles showing signs of failure?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Repair or replace baffles to meet specifications.</li> </ul>
	<p>Vault Structure Damage -Includes Cracks in Walls, Bottom, Damage to Frame and/or Top Slab</p>	<p>Cracks &gt; ½ in?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<ul style="list-style-type: none"> <li>◆ Replace or repair vault to designed specifications and is structurally sound.</li> </ul>

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Vault Structure Damage -Includes Cracks in Walls, Bottom, Damage to Frame and/or Top Slab (cont.)</p>	<p>Evidence of soil particles entering the structure through the cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Vault is structurally sound?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Replace or repair vault to designed specifications and is structurally sound.</p>
		<p>Cracks &gt; ½ in. at the joint of any inlet/outlet pipe?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Evidence of soil particles entering through the cracks?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair vault so that no cracks exist wider than ¼ in. at the joint of the inlet/outlet pipe.</p>
	<p>Access Ladder Damaged</p>	<p>Ladder is corroded or deteriorated?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder functioning properly?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p> <p>Ladder securely attached to structure wall?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Repair or replace ladder to meet specifications and is safe to use.</p>

**Operations/Maintenance BMPs**

**Oil Water Separator - CP**

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Access Ladder Damaged (cont.)</p>	<p>Missing rungs?   <input type="checkbox"/> YES   <input type="checkbox"/> NO                       Rungs cracked, or misaligned?   <input type="checkbox"/> YES   <input type="checkbox"/> NO</p>	<p>♦ Repair or replace ladder to meet specifications and is safe to use.</p>

**Operations/Maintenance BMPs**

**Catch Basin Inserts**

Maintenance Component	Defect	Condition	Actions
General	Sediment Accumulation	Sediment forming a cap over the insert media of the insert and/or unit?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove sediment cap on the insert media and its unit.
	Trash and Debris Accumulation	Trash and debris on insert unit creating a blockage/restriction?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Runoff flows easily into catch basin?	♦ Remove trash and debris from insert unit.
	Media Insert Not Removing Oil	Effluent water from media insert has a visible sheen?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Perform maintenance.
	Media Insert Water Saturated	Catch basin insert is saturated with water?  <input type="checkbox"/> YES  <input type="checkbox"/> NO  Catch basin insert no longer has the capacity to absorb?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	♦ Remove and replace media insert

**Operations/Maintenance BMPs**

**Catch Basin Inserts**

Maintenance Component	Defect	Condition	Actions
<p>General (cont.)</p>	<p>Media Insert-Oil Saturated</p>	<p>Media oil saturated due to petroleum spill that drains into catch basin?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Remove and replace media insert.</p>
	<p>Media Insert Use Beyond Normal Product Life</p>	<p>Media has been used beyond the typical average life of media insert product?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>	<p>◆ Remove and replace media at regular intervals, depending on insert product.</p>