APPENDIX A

MAINTENANCE REQUIREMENTS FOR FLOW CONTROL, CONVEYANCE, AND WQ FACILITIES

This appendix contains the maintenance requirements for the following typical stormwater control facilities and components:

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No. 2 – Infiltration Facilities (p. A-3)
No. 3 – Detention Tanks and Vaults (p. A-5)
No. 4 – Control Structure/Flow Restrictor (p. A-7)
No. 5 – Catch Basins and Manholes (p. A-9)
No. 6 – Conveyance Pipes and Ditches (p. A-11)
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### NO. 1 – DETENTION PONDS

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance Is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site</strong></td>
<td>Trash and debris</td>
<td>Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.</td>
<td>Trash and debris cleared from site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td><strong>Top or Side Slopes of Dam, Berm or Embankment</strong></td>
<td>Rodent holes</td>
<td>Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.</td>
<td>Rodents removed or destroyed and dam or berm repaired.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td>Tree growth threatens integrity of slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat or not interfering with access or maintenance, they do not need to be removed.</td>
<td>Trees do not hinder facility performance or maintenance activities.</td>
</tr>
<tr>
<td></td>
<td>Erosion</td>
<td>Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.</td>
<td>Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.</td>
</tr>
<tr>
<td></td>
<td>Settlement</td>
<td>Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.</td>
<td>Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.</td>
</tr>
<tr>
<td><strong>Storage Area</strong></td>
<td>Sediment accumulation</td>
<td>Accumulated sediment that exceeds 10% of the designed pond depth.</td>
<td>Sediment cleaned out to designed pond shape and depth; pond reseeded if necessary to control erosion.</td>
</tr>
<tr>
<td></td>
<td>Liner damaged (If Applicable)</td>
<td>Liner is visible or pond does not hold water as designed.</td>
<td>Liner repaired or replaced.</td>
</tr>
<tr>
<td><strong>Inlet/Outlet Pipe</strong></td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ½-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td><strong>Emergency Overflow/Spillway</strong></td>
<td>Tree growth</td>
<td>Tree growth impedes flow or threatens stability of spillway.</td>
<td>Trees removed.</td>
</tr>
<tr>
<td></td>
<td>Rock missing</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger or any exposure of native soil on the spillway.</td>
<td>Spillway restored to design standards.</td>
</tr>
</tbody>
</table>
# APPENDIX A MAINTENANCE REQUIREMENTS FOR FLOW CONTROL, CONVEYANCE, AND WQ FACILITIES

## NO. 2 – INFILTRATION FACILITIES

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance Is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.</td>
<td>Trash and debris cleared from site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td>Infiltration Pond, Top or Side Slopes of Dam, Berm or Embankment</td>
<td>Rodent holes</td>
<td>Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.</td>
<td>Rodents removed or destroyed and dam or berm repaired.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td>Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.</td>
<td>Trees do not hinder facility performance or maintenance activities.</td>
</tr>
<tr>
<td></td>
<td>Erosion</td>
<td>Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.</td>
<td>Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.</td>
</tr>
<tr>
<td></td>
<td>Settlement</td>
<td>Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.</td>
<td>Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.</td>
</tr>
<tr>
<td>Infiltration Pond, Tank, Vault, Trench, or Small Basin Storage Area</td>
<td>Sediment accumulation</td>
<td>If two inches or more sediment is present or a percolation test indicates facility is working at or less than 90% of design.</td>
<td>Facility infiltrates as designed.</td>
</tr>
<tr>
<td>Infiltration Tank Structure</td>
<td>Plugged air vent</td>
<td>Any blockage of the vent.</td>
<td>Tank or vault freely vents.</td>
</tr>
<tr>
<td></td>
<td>Tank bent out of shape</td>
<td>Any part of tank/pipe is bent out of shape more than 10% of its design shape.</td>
<td>Tank repaired or replaced to design.</td>
</tr>
<tr>
<td></td>
<td>Gaps between sections, damaged joints or cracks or tears in wall</td>
<td>A gap wider than ½-inch at the joint of any tank sections or any evidence of soil particles entering the tank at a joint or through a wall.</td>
<td>No water or soil entering tank through joints or walls.</td>
</tr>
<tr>
<td>Infiltration Vault Structure</td>
<td>Damage to wall, frame, bottom, and/or top slab</td>
<td>Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault is sealed and structurally sound.</td>
</tr>
</tbody>
</table>
## NO. 2 – INFILTRATION FACILITIES

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance Is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet/Outlet Pipes</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place. <strong>Any open manhole requires immediate maintenance.</strong></td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
<tr>
<td>Large access doors/plate</td>
<td>Damaged or difficult to open</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
<tr>
<td></td>
<td>Gaps, doesn’t cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and covers access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
</tr>
<tr>
<td>Infiltration Pond,</td>
<td>Plugged</td>
<td>Filter bag more than ½ full.</td>
<td>Replace filter bag or redesign system.</td>
</tr>
<tr>
<td>Tank, Vault, Trench,</td>
<td>Sediment accumulation</td>
<td>6” or more of sediment has accumulated.</td>
<td>Pre-settling occurs as designed</td>
</tr>
<tr>
<td>or Small Basin Filter Bags</td>
<td>Plugged</td>
<td>High water level on upstream side of filter remains for extended period of time or little or no water flows through filter during heavy rain storms.</td>
<td>Rock filter replaced evaluate need for filter and remove if not necessary.</td>
</tr>
<tr>
<td>Infiltration Pond, Rock Filter</td>
<td>Plugged</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.</td>
<td>Spillway restored to design standards.</td>
</tr>
<tr>
<td>Emergency Overflow Spillway</td>
<td>Rock missing</td>
<td>Tree growth impedes flow or threatens stability of spillway.</td>
<td>Trees removed.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## NO. 3 – DETENTION TANKS AND VAULTS

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site</strong></td>
<td>Trash and debris</td>
<td>Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.</td>
<td>Trash and debris cleared from site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td><strong>Tank or Vault Storage Area</strong></td>
<td>Trash and debris</td>
<td>Any trash and debris accumulated in vault or tank (includes floatables and non-floatables).</td>
<td>No trash or debris in vault.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation</td>
<td>Accumulated sediment depth exceeds 10% of the diameter of the storage area for ½ length of storage vault or any point depth exceeds 15% of diameter. Example: 72-inch storage tank would require cleaning when sediment reaches depth of 7 inches for more than ½ length of tank.</td>
<td>All sediment removed from storage area.</td>
</tr>
<tr>
<td><strong>Tank Structure</strong></td>
<td>Plugged air vent</td>
<td>Any blockage of the vent.</td>
<td>Tank or vault freely vents.</td>
</tr>
<tr>
<td></td>
<td>Tank bent out of shape</td>
<td>Any part of tank/pipe is bent out of shape more than 10% of its design shape.</td>
<td>Tank repaired or replaced to design.</td>
</tr>
<tr>
<td></td>
<td>Gaps between sections, damaged joints or cracks or tears in wall</td>
<td>A gap wider than ½-inch at the joint of any tank sections or any evidence of soil particles entering the tank at a joint or through a wall.</td>
<td>No water or soil entering tank through joints or walls.</td>
</tr>
<tr>
<td><strong>Vault Structure</strong></td>
<td>Damage to wall, frame, bottom, and/or top slab</td>
<td>Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault is sealed and structurally sound.</td>
</tr>
<tr>
<td><strong>Inlet/Outlet Pipes</strong></td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ½-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
### NO. 3 – DETENTION TANKS AND VAULTS

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.</td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
<tr>
<td>Large access doors/plate</td>
<td>Damaged or difficult to open</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
<tr>
<td></td>
<td>Gaps, doesn't cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and covers access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
</tr>
</tbody>
</table>
### NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure</strong></td>
<td>Trash and debris</td>
<td>Trash or debris of more than ( \frac{1}{2} ) cubic foot which is located immediately in front of the structure opening or is blocking capacity of the structure by more than 10%.</td>
<td>No Trash or debris blocking or potentially blocking entrance to structure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trash or debris in the structure that exceeds ( \frac{1}{3} ) the depth from the bottom of basin to invert the lowest pipe into or out of the basin.</td>
<td>No trash or debris in the structure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deposits of garbage exceeding 1 cubic foot in volume.</td>
<td>No condition present which would attract or support the breeding of insects or rodents.</td>
</tr>
<tr>
<td><strong>Sediment</strong></td>
<td></td>
<td>Sediment exceeds 60% of the depth from the bottom of the structure to the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section or is within 6 inches of the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section.</td>
<td>Sump of structure contains no sediment.</td>
</tr>
<tr>
<td><strong>Damage to frame and/or top slab</strong></td>
<td></td>
<td>Corner of frame extends more than ( \frac{3}{4} ) inch past curb face into the street (If applicable).</td>
<td>Frame is even with curb.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Top slab has holes larger than 2 square inches or cracks wider than ( \frac{1}{4} ) inch.</td>
<td>Top slab is free of holes and cracks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frame not sitting flush on top slab, i.e., separation of more than ( \frac{3}{4} ) inch of the frame from the top slab.</td>
<td>Frame is sitting flush on top slab.</td>
</tr>
<tr>
<td><strong>Cracks in walls or bottom</strong></td>
<td></td>
<td>Cracks wider than ( \frac{1}{2} ) inch and longer than 3 feet, any evidence of soil particles entering structure through cracks, or maintenance person judges that structure is unsound.</td>
<td>Structure is sealed and structurally sound.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cracks wider than ( \frac{1}{2} ) inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering structure through cracks.</td>
<td>No cracks more than ( \frac{1}{4} ) inch wide at the joint of inlet/outlet pipe.</td>
</tr>
<tr>
<td><strong>Settlement/ misalignment</strong></td>
<td></td>
<td>Structure has settled more than 1 inch or has rotated more than 2 inches out of alignment.</td>
<td>Basin replaced or repaired to design standards.</td>
</tr>
<tr>
<td><strong>Damaged pipe joints</strong></td>
<td></td>
<td>Cracks wider than ( \frac{1}{2} )-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the structure at the joint of the inlet/outlet pipes.</td>
<td>No cracks more than ( \frac{1}{4} )-inch wide at the joint of inlet/outlet pipes.</td>
</tr>
<tr>
<td><strong>Contaminants and pollution</strong></td>
<td></td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td><strong>Ladder rungs missing or unsafe</strong></td>
<td></td>
<td>Ladder is unsafe due to missing rungs, misalignment, rust, cracks, or sharp edges.</td>
<td>Ladder meets design standards and allows maintenance person safe access.</td>
</tr>
<tr>
<td><strong>FROP-T Section</strong></td>
<td>Damage</td>
<td>T section is not securely attached to structure wall and outlet pipe structure should support at least 1,000 lbs of up or down pressure.</td>
<td>T section securely attached to wall and outlet pipe.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Structure is not in upright position (allow up to 10% from plumb).</td>
<td>Structure in correct position.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Connections to outlet pipe are not watertight or show signs of deteriorated grout.</td>
<td>Connections to outlet pipe are water tight; structure repaired or replaced and works as designed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Any holes—other than designed holes—in the structure.</td>
<td>Structure has no holes other than designed holes.</td>
</tr>
<tr>
<td><strong>Cleanout Gate</strong></td>
<td>Damaged or missing</td>
<td>Cleanout gate is missing.</td>
<td>Replace cleanout gate.</td>
</tr>
</tbody>
</table>
### NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanout gate</td>
<td>Cleanout gate is not watertight.</td>
<td>Gate is watertight and works as designed.</td>
<td></td>
</tr>
<tr>
<td>Gate</td>
<td>Gate cannot be moved up and down by one maintenance person.</td>
<td>Gate moves up and down easily and is watertight.</td>
<td></td>
</tr>
<tr>
<td>Chain/rod</td>
<td>Chain/rod leading to gate is missing or damaged.</td>
<td>Chain is in place and works as designed.</td>
<td></td>
</tr>
<tr>
<td>Orifice Plate</td>
<td>Damaged or missing</td>
<td>Control device is not working properly due to missing, out of place, or bent orifice plate.</td>
<td>Plate is in place and works as designed.</td>
</tr>
<tr>
<td>Obstructions</td>
<td>Obstructions</td>
<td>Any trash, debris, sediment, or vegetation blocking the plate.</td>
<td>Plate is free of all obstructions and works as designed.</td>
</tr>
<tr>
<td>Overflow Pipe</td>
<td>Obstructions</td>
<td>Any trash or debris blocking (or having the potential of blocking) the overflow pipe.</td>
<td>Pipe is free of all obstructions and works as designed.</td>
</tr>
<tr>
<td>Deformed or damaged lip</td>
<td>Lip of overflow pipe is bent or deformed.</td>
<td>Overflow pipe does not allow overflow at an elevation lower than design</td>
<td></td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
<td></td>
</tr>
<tr>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
<td></td>
</tr>
<tr>
<td>Metal Grates (If Applicable)</td>
<td>Unsafe grate opening</td>
<td>Grate with opening wider than ½ inch.</td>
<td>Grate opening meets design standards.</td>
</tr>
<tr>
<td>Trash and debris</td>
<td>Trash and debris that is blocking more than 20% of grate surface.</td>
<td>Grate free of trash and debris.</td>
<td></td>
</tr>
<tr>
<td>Damaged or missing</td>
<td>Grate missing or broken member(s) of the grate.</td>
<td>Grate is in place and meets design standards.</td>
<td></td>
</tr>
<tr>
<td>Manhole Cover/Lid</td>
<td>Cover/lid not in place</td>
<td>Any open structure requires urgent maintenance.</td>
<td>Cover/lid protects opening to structure.</td>
</tr>
<tr>
<td>Locking mechanism Not Working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
<td></td>
</tr>
<tr>
<td>Cover/lid difficult to Remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
<td></td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Condition When Maintenance is Needed</td>
<td>Results Expected When Maintenance is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Structure</td>
<td>Sediment</td>
<td>Sediment exceeds 60% of the depth from the bottom of the catch basin to the invert of the lowest pipe into or out of the catch basin.</td>
<td>Sump of catch basin contains no sediment.</td>
</tr>
<tr>
<td>Trash and debris</td>
<td>Trash or debris of more than ½ cubic foot which is located immediately in front of the catch basin opening or is blocking capacity of the catch basin by more than 10%.</td>
<td>No trash or debris blocking or potentially blocking entrance to catch basin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trash or debris in the catch basin that exceeds 1/6 the depth from the bottom of basin to invert the lowest pipe into or out of the basin.</td>
<td>No trash or debris in the catch basin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).</td>
<td>No dead animals or vegetation present within catch basin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deposits of garbage exceeding 1 cubic foot in volume.</td>
<td>No condition present which would attract or support the breeding of insects or rodents.</td>
<td></td>
</tr>
<tr>
<td>Damage to frame and/or top slab</td>
<td>Corner of frame extends more than ¾ inch past curb face into the street (if applicable).</td>
<td>Frame is even with curb.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.</td>
<td>Top slab is free of holes and cracks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frame not sitting flush on top slab, i.e., separation of more than ¼ inch of the frame from the top slab.</td>
<td>Frame is sitting flush on top slab.</td>
<td></td>
</tr>
<tr>
<td>Cracks in walls or bottom</td>
<td>Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering catch basin through cracks, or maintenance person judges that catch basin is unsound.</td>
<td>Catch basin is sealed and structurally sound.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.</td>
<td>No cracks more than 1/4 inch wide at the joint of inlet/outlet pipe.</td>
<td></td>
</tr>
<tr>
<td>Settlement/ misalignment</td>
<td>Catch basin has settled more than 1 inch or has rotated more than 2 inches out of alignment.</td>
<td>Basin replaced or repaired to design standards.</td>
<td></td>
</tr>
<tr>
<td>Damaged pipe joints</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the catch basin at the joint of the inlet/outlet pipes.</td>
<td>No cracks more than 1/4-inch wide at the joint of inlet/outlet pipes.</td>
<td></td>
</tr>
<tr>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
<td></td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
## NO. 5 – CATCH BASINS AND MANHOLES

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Grates (Catch Basins)</td>
<td>Unsafe grate opening</td>
<td>Grate with opening wider than 7/8 inch.</td>
<td>Grate opening meets design standards.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris that is blocking more than 20% of grate surface.</td>
<td>Grate free of trash and debris. footnote to guidelines for disposal</td>
</tr>
<tr>
<td></td>
<td>Damaged or missing</td>
<td>Grate missing or broken member(s) of the grate. Any open structure requires urgent maintenance.</td>
<td>Grate is in place and meets design standards.</td>
</tr>
<tr>
<td>Manhole Cover/Lid</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place. Any open structure requires urgent maintenance.</td>
<td>Cover/lid protects opening to structure.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism Not Working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to Remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Conditions When Maintenance is Needed</td>
<td>Results Expected When Maintenance is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Pipes</td>
<td>Sediment &amp; debris accumulation</td>
<td>Accumulated sediment or debris that exceeds 20% of the diameter of the pipe.</td>
<td>Water flows freely through pipes.</td>
</tr>
<tr>
<td></td>
<td>Vegetation/roots</td>
<td>Vegetation/roots that reduce free movement of water through pipes.</td>
<td>Water flows freely through pipes.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Damage to protective coating or corrosion</td>
<td>Protective coating is damaged; rust or corrosion is weakening the structural integrity of any part of pipe.</td>
<td>Pipe repaired or replaced.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Any dent that decreases the cross section area of pipe by more than 20% or is determined to have weakened structural integrity of the pipe.</td>
<td>Pipe repaired or replaced.</td>
</tr>
<tr>
<td>Ditches</td>
<td>Trash and debris</td>
<td>Trash and debris exceeds 1 cubic foot per 1,000 square feet of ditch and slopes.</td>
<td>Trash and debris cleared from ditches.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation</td>
<td>Accumulated sediment that exceeds 20% of the design depth.</td>
<td>Ditch cleaned/flushed of all sediment and debris so that it matches design.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Vegetation</td>
<td>Vegetation that reduces free movement of water through ditches.</td>
<td>Water flows freely through ditches.</td>
</tr>
<tr>
<td></td>
<td>Erosion damage to slopes</td>
<td>Any erosion observed on a ditch slope.</td>
<td>Slopes are not eroding.</td>
</tr>
<tr>
<td></td>
<td>Rock lining out of place or missing (If Applicable)</td>
<td>One layer or less of rock exists above native soil area 5 square feet or more, any exposed native soil.</td>
<td>Replace rocks to design standards.</td>
</tr>
</tbody>
</table>
### NO. 7 – DEBRIS BARRIERS (E.G., TRASH RACKS)

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash or debris plugging more than 20% of the area of the barrier.</td>
<td>Barrier clear to receive capacity flow.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation</td>
<td>Sediment accumulation of greater than 20% of the area of the barrier</td>
<td>Barrier clear to receive capacity flow.</td>
</tr>
<tr>
<td>Structure</td>
<td>Cracked broken or loose</td>
<td>Structure which bars attached to is damaged - pipe is loose or cracked or concrete structure is cracked, broken of loose.</td>
<td>Structure barrier attached to is sound.</td>
</tr>
<tr>
<td>Bars</td>
<td>Bar spacing</td>
<td>Bar spacing exceeds 6 inches.</td>
<td>Bars have at most 6 inche spacing.</td>
</tr>
<tr>
<td></td>
<td>Damaged or missing bars</td>
<td>Bars are bent out of shape more than 3 inches.</td>
<td>Bars in place with no bends more than ¾ inch.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bars are missing or entire barrier missing.</td>
<td>Bars in place according to design.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bars are loose and rust is causing 50% deterioration to any part of barrier.</td>
<td>Repair or replace barrier to design standards.</td>
</tr>
</tbody>
</table>
### NO. 8 – ENERGY DISSIPATERS

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash and/or debris accumulation.</td>
<td>Dissipater clear of trash and/or debris.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Rock Pad</td>
<td>Missing or moved rock</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger or any exposure of native soil.</td>
<td>Rock pad prevents erosion.</td>
</tr>
<tr>
<td>Dispersion Trench</td>
<td>Pipe plugged with sediment</td>
<td>Accumulated sediment that exceeds 20% of the design depth.</td>
<td>Pipe cleaned/flushed so that it matches design.</td>
</tr>
<tr>
<td></td>
<td>Not discharging water properly</td>
<td>Visual evidence of water discharging at concentrated points along trench (normal condition is a “sheet flow” of water along trench).</td>
<td>Water discharges from feature by sheet flow.</td>
</tr>
<tr>
<td></td>
<td>Perforations plugged.</td>
<td>Over 1/4 of perforations in pipe are plugged with debris or sediment.</td>
<td>Perforations freely discharge flow.</td>
</tr>
<tr>
<td></td>
<td>Water flows out top of “distributor” catch basin.</td>
<td>Water flows out of distributor catch basin during any storm less than the design storm.</td>
<td>No flow discharges from distributor catch basin.</td>
</tr>
<tr>
<td></td>
<td>Receiving area over-saturated</td>
<td>Water in receiving area is causing or has potential of causing landslide problems.</td>
<td>No danger of landslides.</td>
</tr>
<tr>
<td>Gabions</td>
<td>Damaged mesh</td>
<td>Mesh of gabion broken, twisted or deformed so structure is weakened or rock may fall out.</td>
<td>Mesh is intact, no rock missing.</td>
</tr>
<tr>
<td></td>
<td>Corrosion</td>
<td>Gabion mesh shows corrosion through more than ¼ of its gage.</td>
<td>All gabion mesh capable of containing rock and retaining designed form.</td>
</tr>
<tr>
<td></td>
<td>Collapsed or deformed baskets</td>
<td>Gabion basket shape deformed due to any cause.</td>
<td>All gabion baskets intact, structure stands as designed.</td>
</tr>
<tr>
<td></td>
<td>Missing rock</td>
<td>Any rock missing that could cause gabion to lose structural integrity.</td>
<td>No rock missing.</td>
</tr>
<tr>
<td>Manhole/Chamber</td>
<td>Worn or damaged post, baffles or side of chamber</td>
<td>Structure dissipating flow deteriorates to ½ or original size or any concentrated worn spot exceeding one square foot which would make structure unsound.</td>
<td>Structure is in no danger of failing.</td>
</tr>
<tr>
<td></td>
<td>Damage to wall, frame, bottom, and/or top slab</td>
<td>Cracks wider than ½-inch or any evidence of soil entering the structure through cracks, or maintenance inspection personnel determines that the structure is not structurally sound.</td>
<td>Manhole/chamber is sealed and structurally sound.</td>
</tr>
<tr>
<td></td>
<td>Damaged pipe joints</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the structure at the joint of the inlet/outlet pipes.</td>
<td>No soil or water enters and no water discharges at the joint of inlet/outlet pipes.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Conditions When Maintenance is Needed</td>
<td>Results Expected When Maintenance is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Site</td>
<td>Erosion or holes under fence</td>
<td>Erosion or holes more than 4 inches high and 12-18 inches wide permitting access through an opening under a fence.</td>
<td>No access under the fence.</td>
</tr>
<tr>
<td>Wood Posts, Boards and Cross Members</td>
<td>Missing or damaged parts</td>
<td>Missing or broken boards, post out of plumb by more than 6 inches or cross members broken</td>
<td>No gaps on fence due to missing or broken boards, post plumb to within 1½ inches, cross members sound.</td>
</tr>
<tr>
<td></td>
<td>Weakened by rotting or insects</td>
<td>Any part showing structural deterioration due to rotting or insect damage</td>
<td>All parts of fence are structurally sound.</td>
</tr>
<tr>
<td></td>
<td>Damaged or failed post foundation</td>
<td>Concrete or metal attachments deteriorated or unable to support posts.</td>
<td>Post foundation capable of supporting posts even in strong wind.</td>
</tr>
<tr>
<td>Metal Posts, Rails and Fabric</td>
<td>Damaged parts</td>
<td>Post out of plumb more than 6 inches.</td>
<td>Post plumb to within 1½ inches.</td>
</tr>
<tr>
<td></td>
<td>Top rails bent more than 6 inches</td>
<td></td>
<td>Top rail free of bends greater than 1 inch.</td>
</tr>
<tr>
<td></td>
<td>Any part of fence (including post, top rails, and fabric) more than 1 foot out of design alignment.</td>
<td></td>
<td>Fence is aligned and meets design standards.</td>
</tr>
<tr>
<td></td>
<td>Missing or loose tension wire</td>
<td></td>
<td>Tension wire in place and holding fabric.</td>
</tr>
<tr>
<td>Deteriorated paint or protective coating</td>
<td>Part or parts that have a rusting or scaling condition that has affected structural adequacy.</td>
<td></td>
<td>Structurally adequate posts or parts with a uniform protective coating.</td>
</tr>
<tr>
<td>Openings in fabric</td>
<td>Openings in fabric are such that an 8-inch diameter ball could fit through.</td>
<td></td>
<td>Fabric mesh openings within 50% of grid size.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Conditions When Maintenance is Needed</td>
<td>Results Expected When Maintenance is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Chain Link Fencing Gate</td>
<td>Damaged or missing members</td>
<td>Missing gate.</td>
<td>Gates in place.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broken or missing hinges such that gate cannot be easily opened and closed by a maintenance person.</td>
<td>Hinges intact and lubed. Gate is working freely.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gate is out of plumb more than 6 inches and more than 1 foot out of design alignment.</td>
<td>Gate is aligned and vertical.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Missing stretcher bar, stretcher bands, and ties.</td>
<td>Stretcher bar, bands, and ties in place.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism does not lock gate</td>
<td>Locking device missing, no-functioning or does not link to all parts.</td>
<td>Locking mechanism prevents opening of gate.</td>
</tr>
<tr>
<td></td>
<td>Openings in fabric</td>
<td>Openings in fabric are such that an 8-inch diameter ball could fit through.</td>
<td>Fabric mesh openings within 50% of grid size.</td>
</tr>
<tr>
<td>Bar Gate</td>
<td>Damaged or missing cross bar</td>
<td>Cross bar does not swing open or closed, is missing or is bent to where it does not prevent vehicle access.</td>
<td>Cross bar swings fully open and closed and prevents vehicle access.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism does not lock gate</td>
<td>Locking device missing, no-functioning or does not link to all parts.</td>
<td>Locking mechanism prevents opening of gate.</td>
</tr>
<tr>
<td></td>
<td>Support post damaged</td>
<td>Support post does not hold cross bar up.</td>
<td>Cross bar held up preventing vehicle access into facility.</td>
</tr>
<tr>
<td>Bollards</td>
<td>Damaged or missing</td>
<td>Bollard broken, missing, does not fit into support hole or hinge broken or missing.</td>
<td>No access for motorized vehicles to get into facility.</td>
</tr>
<tr>
<td></td>
<td>Does not lock</td>
<td>Locking assembly or lock missing or cannot be attached to lock bollard in place.</td>
<td>No access for motorized vehicles to get into facility.</td>
</tr>
<tr>
<td>Boulders</td>
<td>Dislodged</td>
<td>Boulders not located to prevent motorized vehicle access.</td>
<td>No access for motorized vehicles to get into facility.</td>
</tr>
<tr>
<td></td>
<td>Circumvented</td>
<td>Motorized vehicles going around or between boulders.</td>
<td>No access for motorized vehicles to get into facility.</td>
</tr>
</tbody>
</table>
## NO. 11 – GROUNDS (LANDSCAPING)

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash or litter</td>
<td>Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.</td>
<td>Trash and debris cleared from site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
<td></td>
</tr>
<tr>
<td>Trees and Shrubs</td>
<td>Hazard</td>
<td>Any tree or limb of a tree identified as having a potential to fall and cause property damage or threaten human life. <strong>A hazard tree identified by a qualified arborist must be removed as soon as possible.</strong></td>
<td>No hazard trees in facility.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Limbs or parts of trees or shrubs that are split or broken which affect more than 25% of the total foliage of the tree or shrub.</td>
<td>Trees and shrubs with less than 5% of total foliage with split or broken limbs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trees or shrubs that have been blown down or knocked over.</td>
<td>No blown down vegetation or knocked over vegetation. Trees or shrubs free of injury.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trees or shrubs which are not adequately supported or are leaning over, causing exposure of the roots.</td>
<td>Tree or shrub in place and adequately supported; dead or diseased trees removed.</td>
</tr>
</tbody>
</table>
# NO. 12 – ACCESS ROADS

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash and debris exceeds 1 cubic foot per 1,000 square feet (i.e., trash and debris would fill up one standards size garbage can).</td>
<td>Roadway drivable by maintenance vehicles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debris which could damage vehicle tires or prohibit use of road.</td>
<td>Roadway drivable by maintenance vehicles.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Blocked roadway</td>
<td>Any obstruction which reduces clearance above road surface to less than 14 feet.</td>
<td>Roadway overhead clear to 14 feet high.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Any obstruction restricting the access to a 10- to 12 foot width for a distance of more than 12 feet or any point restricting access to less than a 10 foot width.</td>
<td>At least 12-foot of width on access road.</td>
</tr>
<tr>
<td>Road Surface</td>
<td>Erosion, settlement, potholes, soft spots, ruts</td>
<td>Any surface defect which hinders or prevents maintenance access.</td>
<td>Road drivable by maintenance vehicles.</td>
</tr>
<tr>
<td></td>
<td>Vegetation on road surface</td>
<td>Trees or other vegetation prevent access to facility by maintenance vehicles.</td>
<td>Maintenance vehicles can access facility.</td>
</tr>
<tr>
<td>Shoulders and Ditches</td>
<td>Erosion</td>
<td>Erosion within 1 foot of the roadway more than 8 inches wide and 6 inches deep.</td>
<td>Shoulder free of erosion and matching the surrounding road.</td>
</tr>
<tr>
<td></td>
<td>Weeds and brush</td>
<td>Weeds and brush exceed 18 inches in height or hinder maintenance access.</td>
<td>Weeds and brush cut to 2 inches in height or cleared in such a way as to allow maintenance access.</td>
</tr>
<tr>
<td>Modular Grid Pavement</td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Damaged or missing</td>
<td>Access surface compacted because of broken on missing modular block.</td>
<td>Access road surface restored so road infiltrates.</td>
</tr>
</tbody>
</table>
## NO. 13 – BASIC BIOFILTRATION SWALE (GRASS)

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash and/or debris accumulated on the bioswale site.</td>
<td>No trash or debris on the bioswale site.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Swale Section</td>
<td>Sediment accumulation</td>
<td>Sediment depth exceeds 2 inches in 10% of the swale treatment area.</td>
<td>No sediment deposits in grass treatment area of the bioswale.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment inhibits grass growth over 10% of swale length.</td>
<td>Grass growth not inhibited by sediment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment inhibits even spreading of flow.</td>
<td>Flow spreads evenly through swale.</td>
</tr>
<tr>
<td></td>
<td>Erosion/scouring</td>
<td>Eroded or scoured swale bottom due to channelization or high flows.</td>
<td>No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.</td>
</tr>
<tr>
<td></td>
<td>Poor vegetation coverage</td>
<td>Grass is sparse or bare or eroded patches occur in more than 10% of the swale bottom.</td>
<td>Swale has no bare spots and grass is thick and healthy.</td>
</tr>
<tr>
<td></td>
<td>Grass too tall</td>
<td>Grass excessively tall (greater than 10 inches), grass is thin or nuisance weeds and other vegetation has taken over.</td>
<td>Grass is between 3 and 4 inches tall, thick and healthy. No clippings left in swale. No nuisance vegetation present.</td>
</tr>
<tr>
<td></td>
<td>Excessive shade</td>
<td>Grass growth is poor because sunlight does not reach swale.</td>
<td>Health grass growth or swale converted to a wet bioswale.</td>
</tr>
<tr>
<td></td>
<td>Constant baseflow</td>
<td>Continuous flow through the swale, even when it has been dry for weeks or an eroded, muddy channel has formed in the swale bottom.</td>
<td>Baseflow removed from swale by a low-flow pea-gravel drain or bypassed around the swale.</td>
</tr>
<tr>
<td></td>
<td>Standing water</td>
<td>Water pools in the swale between storms or does not drain freely.</td>
<td>Swale freely drains and there is no standing water in swale between storms.</td>
</tr>
<tr>
<td></td>
<td>Channelization</td>
<td>Flow concentrates and erodes channel through swale.</td>
<td>No flow channels in swale.</td>
</tr>
<tr>
<td>Flow Spreader</td>
<td>Concentrated flow</td>
<td>Flow from spreader not uniformly distributed across entire swale width.</td>
<td>Flows are spread evenly over entire swale width.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than 1/8-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than 1/8-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
## NO. 14 – WET BIOFILTRATION SWALE

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash and/or debris accumulated at the site.</td>
<td>No trash or debris at the site.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Swale Section</td>
<td>Sediment accumulation</td>
<td>Sediment depth exceeds 2 inches in 10% of the swale treatment area.</td>
<td>No sediment deposits in treatment area.</td>
</tr>
<tr>
<td></td>
<td>Erosion/scouring</td>
<td>Eroded or scoured swale bottom due to channelization or high flows.</td>
<td>No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.</td>
</tr>
<tr>
<td></td>
<td>Water depth</td>
<td>Water not retained to a depth of about 4 inches during the wet season.</td>
<td>Water depth of 4 inches throughout swale for most of wet season.</td>
</tr>
<tr>
<td></td>
<td>Vegetation ineffective</td>
<td>Vegetation sparse, does not provide adequate filtration or crowded out by very dense clumps of cattail or nuisance vegetation.</td>
<td>Wetland vegetation fully covers bottom of swale and no cattails or nuisance vegetation present.</td>
</tr>
<tr>
<td></td>
<td>Insufficient water</td>
<td>Wetland vegetation dies due to lack of water.</td>
<td>Wetland vegetation remains healthy (may require converting to grass lined bioswale)</td>
</tr>
<tr>
<td>Flow Spreader</td>
<td>Concentrated flow</td>
<td>Flow from spreader not uniformly distributed across entire swale width.</td>
<td>Flows are spread evenly over entire swale width.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than (1/2)-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than (1/2)-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
## NO. 15 – FILTER STRIP

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash and debris accumulated on the filter strip site.</td>
<td>Filter strip site free of any trash or debris</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Grass Strip</td>
<td>Sediment accumulation</td>
<td>Sediment accumulation on grass exceeds 2 inches depth.</td>
<td>No sediment deposits in treatment area.</td>
</tr>
<tr>
<td></td>
<td>Erosion/scouring</td>
<td>Eroded or scoured swale bottom due to channelization or high flows.</td>
<td>No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.</td>
</tr>
<tr>
<td></td>
<td>Grass too tall</td>
<td>Grass excessively tall (greater than 10 inches), grass is thin or nuisance weeds and other vegetation has taken over.</td>
<td>Grass is between 3 and 4 inches tall, thick and healthy. No clippings left in swale. No nuisance vegetation present.</td>
</tr>
<tr>
<td></td>
<td>Vegetation ineffective</td>
<td>Grass has died out, become excessively tall (greater than 10 inches) or nuisance vegetation is taking over.</td>
<td>Grass is healthy, less than 9 inches high and no nuisance vegetation present.</td>
</tr>
<tr>
<td>Flow Spreader</td>
<td>Concentrated flow</td>
<td>Flow from spreader not uniformly distributed across entire swale width.</td>
<td>Flows are spread evenly over entire swale width.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ½-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Condition When Maintenance is Needed</td>
<td>Results Expected When Maintenance Is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash and debris accumulated on the wetpond site.</td>
<td>Wetpond site free of any trash or debris.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td>Side Slopes of Dam, Berm, internal berm or Embankment</td>
<td>Rodent holes</td>
<td>Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.</td>
<td>Rodents removed or destroyed and dam or berm repaired.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td>Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm or embankment integrity, are not interfering with access or maintenance or leaves do not cause a plugging problem they do not need to be removed.</td>
<td>Trees do not hinder facility performance or maintenance activities.</td>
</tr>
<tr>
<td></td>
<td>Erosion</td>
<td>Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.</td>
<td>Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.</td>
</tr>
<tr>
<td>Top or Side Slopes of Dam, Berm, internal berm or Embankment</td>
<td>Settlement</td>
<td>Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.</td>
<td>Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.</td>
</tr>
<tr>
<td></td>
<td>Irregular surface on internal berm</td>
<td>Top of berm not uniform and level.</td>
<td>Top of berm graded to design elevation.</td>
</tr>
<tr>
<td>Pond Areas</td>
<td>Sediment accumulation (except first wetpool cell)</td>
<td>Accumulated sediment that exceeds 10% of the designed pond depth.</td>
<td>Sediment cleaned out to designed pond shape and depth.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation (first wetpool cell)</td>
<td>Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.</td>
<td>Sediment storage contains no sediment.</td>
</tr>
<tr>
<td></td>
<td>Liner damaged (If Applicable)</td>
<td>Liner is visible or pond does not hold water as designed.</td>
<td>Liner repaired or replaced.</td>
</tr>
<tr>
<td></td>
<td>Water level (first wetpool cell)</td>
<td>First cell empty, doesn't hold water.</td>
<td>Water retained in first cell for most of the year.</td>
</tr>
<tr>
<td></td>
<td>Algae mats (first wetpool cell)</td>
<td>Algae mats develop over more than 10% of the water surface should be removed.</td>
<td>Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)</td>
</tr>
<tr>
<td></td>
<td>Gravity Drain</td>
<td>Inoperable valve</td>
<td>Valve opens and closes normally.</td>
</tr>
<tr>
<td></td>
<td>Valve won’t seal</td>
<td>Valve does not seal completely.</td>
<td>Valve completely seals closed.</td>
</tr>
<tr>
<td></td>
<td>Emergency Overflow Spillway</td>
<td>Tree growth</td>
<td>Trees removed.</td>
</tr>
</tbody>
</table>

### NO. 16 – WETPOND

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock missing</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.</td>
<td></td>
<td>Spillway restored to design standards.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than 1/8-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
## NO. 17 – WETVAULT

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash and debris accumulated on facility site.</td>
<td>Trash and debris removed from facility site.</td>
</tr>
<tr>
<td>Treatment Area</td>
<td>Trash and debris</td>
<td>Any trash and debris accumulated in vault (includes floatables and non-floatables).</td>
<td>No trash or debris in vault.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation</td>
<td>Sediment accumulation in vault bottom exceeds the depth of the sediment zone plus 6 inches.</td>
<td>No sediment in vault.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Vault Structure</td>
<td>Damage to wall, frame, bottom, and/or top slab</td>
<td>Cracks wider than ½-inch, any evidence of soil entering the structure through cracks, vault does not retain water or qualified inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault is sealed and structurally sound.</td>
</tr>
<tr>
<td></td>
<td>Baffles damaged</td>
<td>Baffles corroding, cracking, warping and/or showing signs of failure or baffle cannot be removed.</td>
<td>Repair or replace baffles or walls to specifications.</td>
</tr>
<tr>
<td></td>
<td>Ventilation</td>
<td>Ventilation area blocked or plugged.</td>
<td>No reduction of ventilation area exists.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Gravity Drain</td>
<td>Inoperable valve</td>
<td>Valve will not open and close.</td>
<td>Valve opens and closes normally.</td>
</tr>
<tr>
<td></td>
<td>Valve won’t seal</td>
<td>Valve does not seal completely.</td>
<td>Valve completely seals closed.</td>
</tr>
<tr>
<td>Access Manhole</td>
<td>Access cover/lid damaged or difficult to open</td>
<td>Access cover/lid cannot be easily opened by one person. Corrosion/deformation of cover/lid.</td>
<td>Access cover/lid can be opened by one person.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Access doors/plate has gaps, doesn't cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and covers access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
</tbody>
</table>
### NO. 18 – STORMWATER WETLAND

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site</strong></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated on facility site.</td>
<td>Trash and debris removed from facility site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td><strong>Side Slopes of Dam, Berm, internal berm or Embankment</strong></td>
<td>Rodent holes</td>
<td>Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.</td>
<td>Rodents removed or destroyed and dam or berm repaired.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td>Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.</td>
<td>Trees do not hinder facility performance or maintenance activities.</td>
</tr>
<tr>
<td></td>
<td>Erosion</td>
<td>Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.</td>
<td>Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.</td>
</tr>
<tr>
<td></td>
<td>Settlement</td>
<td>Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.</td>
<td>Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.</td>
</tr>
<tr>
<td></td>
<td>Irregular surface on internal berm</td>
<td>Top of berm not uniform and level.</td>
<td>Top of berm graded flat to design elevation.</td>
</tr>
<tr>
<td><strong>Pond Areas</strong></td>
<td>Sediment accumulation (first cell/forebay)</td>
<td>Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.</td>
<td>Sediment storage contains no sediment.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation (wetland cell)</td>
<td>Accumulated sediment that exceeds 10% of the designed pond depth.</td>
<td>Sediment cleaned out to designed pond shape and depth.</td>
</tr>
<tr>
<td></td>
<td>Liner damaged (If Applicable)</td>
<td>Liner is visible or pond does not hold water as designed.</td>
<td>Liner repaired or replaced.</td>
</tr>
<tr>
<td></td>
<td>Water level (first cell/forebay)</td>
<td>Cell does not hold 3 feet of water year round.</td>
<td>3 feet of water retained year round.</td>
</tr>
<tr>
<td></td>
<td>Water level (wetland cell)</td>
<td>Cell does not retain water for at least 10 months of the year or wetland plants are not surviving.</td>
<td>Water retained at least 10 months of the year or wetland plants are surviving.</td>
</tr>
<tr>
<td></td>
<td>Algae mats (first cell/forebay)</td>
<td>Algae mats develop over more than 10% of the water surface should be removed.</td>
<td>Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)</td>
</tr>
<tr>
<td></td>
<td>Vegetation</td>
<td>Vegetation dead, dying, or overgrown (cattails) or not meeting original planting specifications.</td>
<td>Plants in wetland cell surviving and not interfering with wetland function.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Condition When Maintenance is Needed</td>
<td>Results Expected When Maintenance Is Performed</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------</td>
<td>----------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Gravity Drain</td>
<td>Inoperable valve</td>
<td>Valve will not open and close.</td>
<td>Valve opens and closes normally.</td>
</tr>
<tr>
<td></td>
<td>Valve won’t seal</td>
<td>Valve does not seal completely.</td>
<td>Valve completely seals closed.</td>
</tr>
<tr>
<td>Emergency Overflow Spillway</td>
<td>Tree growth</td>
<td>Tree growth impedes flow or threatens stability of spillway.</td>
<td>Trees removed.</td>
</tr>
<tr>
<td></td>
<td>Rock missing</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.</td>
<td>Spillway restored to design standards.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ½-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
# NO. 19 – SAND FILTER POND

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash and debris accumulated on facility site.</td>
<td>Trash and debris removed from facility site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover (not in the treatment area)</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td>Pre-Treatment (if applicable)</td>
<td>Sediment accumulation</td>
<td>Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.</td>
<td>Sediment storage contains no sediment.</td>
</tr>
<tr>
<td></td>
<td>Liner damaged (If Applicable)</td>
<td>Liner is visible or pond does not hold water as designed.</td>
<td>Liner repaired or replaced.</td>
</tr>
<tr>
<td></td>
<td>Water level</td>
<td>Cell empty, doesn't hold water.</td>
<td>Water retained in first cell for most of the year.</td>
</tr>
<tr>
<td></td>
<td>Algae mats</td>
<td>Algae mats develop over more than 10% of the water surface should be removed.</td>
<td>Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)</td>
</tr>
<tr>
<td>Pond Area</td>
<td>Sediment accumulation</td>
<td>Sediment or crust depth exceeds ½-inch over 10% of surface area of sand filter.</td>
<td>No sediment or crust deposit on sand filter that would impede permeability of the filter section.</td>
</tr>
<tr>
<td></td>
<td>Grass (if applicable)</td>
<td>Grass becomes excessively tall (greater than 6 inches) or when nuisance weeds and other vegetation start to take over or thatch build up occurs.</td>
<td>Mow vegetation and/or remove nuisance vegetation.</td>
</tr>
<tr>
<td></td>
<td>Rodent holes</td>
<td>Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.</td>
<td>Rodents removed or destroyed and dam or berm repaired.</td>
</tr>
<tr>
<td></td>
<td>Tree growth</td>
<td>Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.</td>
<td>Trees do not hinder facility performance or maintenance activities.</td>
</tr>
<tr>
<td></td>
<td>Erosion</td>
<td>Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.</td>
<td>Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.</td>
</tr>
</tbody>
</table>
## NO. 19 – SAND FILTER POND

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance Is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand Filter Media</td>
<td>Plugging</td>
<td>Drawdown of water through the sand filter media, takes longer than 24 hours, and/or flow through the overflow pipes occurs frequently. A sieve analysis of &gt;4% -100 or &gt;2% -200 requires replacing sand filter media.</td>
<td>Sand filter media surface is aerated and drawdown rate is normal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prolonged flows Sand is saturated for prolonged periods of time (several weeks) and does not dry out between storms due to continuous base flow or prolonged flows from detention facilities.</td>
<td>Excess flows bypassed or confined to small portion of filter media surface.</td>
</tr>
<tr>
<td></td>
<td>Short circuiting</td>
<td>Flows become concentrated over one section of the sand filter rather than dispersed or drawdown rate of pool exceeds 12 inches per hour.</td>
<td>Flow and percolation of water through the sand filter is uniform and dispersed across the entire filter area and drawdown rate is normal.</td>
</tr>
<tr>
<td>Media thickness</td>
<td></td>
<td>Sand thickness is less than 6 inches.</td>
<td>Rebuild sand thickness to a minimum of 6 inches and preferably to 18 inches.</td>
</tr>
<tr>
<td>Underdrains and Clean-Outs</td>
<td>Sediment/debris</td>
<td>Underdrains or clean-outs partially plugged or filled with sediment and/or debris. Junction box/cleanout wyes not watertight.</td>
<td>Underdrains and clean-outs free of sediment and debris and are watertight.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ¼-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Rock Pad</td>
<td>Missing or out of place</td>
<td>Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil.</td>
<td>Rock pad restored to design standards.</td>
</tr>
<tr>
<td>Maintenance Component</td>
<td>Defect or Problem</td>
<td>Condition When Maintenance is Needed</td>
<td>Results Expected When Maintenance is Performed</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Trash and debris accumulated on facility site.</td>
<td>Trash and debris removed from facility site.</td>
</tr>
<tr>
<td></td>
<td>Noxious weeds</td>
<td>Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.</td>
<td>Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Grass/groundcover</td>
<td>Grass or groundcover exceeds 18 inches in height.</td>
<td>Grass or groundcover mowed to a height no greater than 6 inches.</td>
</tr>
<tr>
<td>Pre-Treatment Chamber</td>
<td>Sediment accumulation</td>
<td>Sediment accumulation exceeds the depth of the sediment zone plus 6 inches.</td>
<td>Sediment storage contains no sediment.</td>
</tr>
<tr>
<td>Sand Filter Media</td>
<td>Sediment accumulation</td>
<td>Sediment depth exceeds 1/4-inch on sand filter media.</td>
<td>Sand filter freely drains at normal rate.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in vault (floatables and non-floatables).</td>
<td>No trash or debris in vault.</td>
</tr>
<tr>
<td>Plugging</td>
<td>Drawdown of water through the sand filter media, takes longer than 24 hours, and/or flow through the overflow pipes occurs frequently. A sieve analysis of &gt;4% -100 or &gt;2% -200 requires replacing sand filter media.</td>
<td>Sand filter media drawdown rate is normal.</td>
<td></td>
</tr>
<tr>
<td>Short circuiting</td>
<td>Seepage or flow occurs along the vault walls and corners. Sand eroding near inflow area. Cleanout wyes are not watertight.</td>
<td>Sand filter media section re-laid and compacted along perimeter of vault to form a semi-seal. Erosion protection added to dissipate force of incoming flow and curtail erosion.</td>
<td></td>
</tr>
<tr>
<td>Vault Structure</td>
<td>Damaged to walls, frame, bottom and/or top slab.</td>
<td>Cracks wider than 1/2-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault replaced or repaired to provide complete sealing of the structure.</td>
</tr>
<tr>
<td></td>
<td>Ventilation</td>
<td>Ventilation area blocked or plugged.</td>
<td>No reduction of ventilation area exists.</td>
</tr>
<tr>
<td>Underdrains and Cleanouts</td>
<td>Sediment/debris</td>
<td>Underdrains or clean-outs partially plugged, filled with sediment and/or debris or not watertight.</td>
<td>Underdrains and clean-outs free of sediment and debris sealed.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than 1/2-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than 1/2-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
</tbody>
</table>
## NO. 20 – SAND FILTER VAULT

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.</td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
<tr>
<td>Large access doors/plate</td>
<td>Damaged or difficult to open</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
<tr>
<td></td>
<td>Gaps, doesn't cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and covers access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
</tr>
</tbody>
</table>
**NO. 21 – STORMFILTER (CARTRIDGE TYPE)**

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash or debris which impairs the function of the facility.</td>
<td>Trash and debris removed from facility.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Any evidence of contaminants or pollution such as oils, gasoline, concrete slurries or paint.</td>
<td>Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td></td>
<td>Life cycle</td>
<td>System has not been inspected for three years.</td>
<td>Facility is re-inspected and any needed maintenance performed.</td>
</tr>
<tr>
<td>Vault Treatment Area</td>
<td>Sediment on vault floor</td>
<td>Greater than 2 inches of sediment.</td>
<td>Vault is free of sediment.</td>
</tr>
<tr>
<td></td>
<td>Sediment on top of cartridges</td>
<td>Greater than ½ inch of sediment.</td>
<td>Vault is free of sediment.</td>
</tr>
<tr>
<td></td>
<td>Multiple scum lines above top of cartridges</td>
<td>Thick or multiple scum lines above top of cartridges. Probably due to plugged canisters or underdrain manifold.</td>
<td>Cause of plugging corrected, canisters replaced if necessary.</td>
</tr>
<tr>
<td>Vault Structure</td>
<td>Damage to wall, Frame, Bottom, and/or Top Slab</td>
<td>Cracks wider than ½-inch and any evidence of soil particles entering the structure through the cracks, or qualified inspection personnel determines the vault is not structurally sound.</td>
<td>Vault replaced or repaired to design specifications.</td>
</tr>
<tr>
<td></td>
<td>Baffles damaged</td>
<td>Baffles corroding, cracking warping, and/or showing signs of failure as determined by maintenance/inspection person.</td>
<td>Repair or replace baffles to specification.</td>
</tr>
<tr>
<td>Filter Media</td>
<td>Standing water in vault</td>
<td>9 inches or greater of static water in the vault for more than 24 hours following a rain event and/or overflow occurs frequently. Probably due to plugged filter media, underdrain or outlet pipe.</td>
<td>No standing water in vault 24 hours after a rain event.</td>
</tr>
<tr>
<td></td>
<td>Short circuiting</td>
<td>Flows do not properly enter filter cartridges.</td>
<td>Flows go through filter media.</td>
</tr>
<tr>
<td>Underdrains and Clean-Outs</td>
<td>Sediment/debris</td>
<td>Underdrains or clean-outs partially plugged or filled with sediment and/or debris.</td>
<td>Underdrains and clean-outs free of sediment and debris.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ½-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place.</td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
<tr>
<td></td>
<td>Large access doors/plate</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
</tbody>
</table>
## NO. 21 – STORMFILTER (CARTRIDGE TYPE)

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaps, doesn't cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and cover access opening completely.</td>
<td></td>
</tr>
<tr>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
<td></td>
</tr>
</tbody>
</table>
## NO. 22 – BAFFLE OIL/WATER SEPARATOR

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash or debris which impairs the function of the facility.</td>
<td>Trash and debris removed from facility.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Floating oil in excess of 1 inch in first chamber, any oil in other chambers or other contaminants of any type in any chamber.</td>
<td>No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Vault Treatment Area</td>
<td>Sediment accumulation</td>
<td>Sediment accumulates exceeds 6 inches in the vault.</td>
<td>No sediment in the vault.</td>
</tr>
<tr>
<td></td>
<td>Discharge water not clear</td>
<td>Inspection of discharge water shows obvious signs of poor water quality- effluent discharge from vault shows thick visible sheen.</td>
<td>Effluent discharge is clear.</td>
</tr>
<tr>
<td></td>
<td>Trash or debris accumulation</td>
<td>Any trash and debris accumulation in vault (floatables and non-floatables).</td>
<td>Vault is clear of trash and debris.</td>
</tr>
<tr>
<td></td>
<td>Oil accumulation</td>
<td>Oil accumulations that exceed 1 inch, at the surface of the water in the oil/water separator chamber.</td>
<td>No visible oil depth on water.</td>
</tr>
<tr>
<td>Vault Structure</td>
<td>Damage to Wall, Frame, Bottom, and/or Top Slab</td>
<td>Cracks wider than ¼-inch or evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault replaced or repaired to design specifications.</td>
</tr>
<tr>
<td></td>
<td>Baffles damaged</td>
<td>Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance inspection personnel.</td>
<td>Repair or replace baffles to specifications.</td>
</tr>
<tr>
<td>Gravity Drain</td>
<td>Inoperable valve</td>
<td>Valve will not open and close.</td>
<td>Valve opens and closes normally.</td>
</tr>
<tr>
<td></td>
<td>Valve won’t seal</td>
<td>Valve does not seal completely.</td>
<td>Valve completely seals closed.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ¼-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place.</td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allows maintenance person safe access.</td>
</tr>
<tr>
<td>Large access doors/plate</td>
<td>Damaged or difficult to open</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
<tr>
<td></td>
<td>Gaps, doesn't cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and cover access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or cover/lid.</td>
<td>Lifting rings sufficient to lift or remove cover/lid.</td>
</tr>
</tbody>
</table>
## NO. 23 – COALESCING PLATE OIL/WATER SEPARATOR

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Trash and debris</td>
<td>Any trash or debris which impairs the function of the facility.</td>
<td>Trash and debris removed from facility.</td>
</tr>
<tr>
<td></td>
<td>Contaminants and pollution</td>
<td>Floating oil in excess of 1 inch in first chamber, any oil in other chambers or other contaminants of any type in any chamber.</td>
<td>No contaminants present other than a surface oil film.</td>
</tr>
<tr>
<td>Vault Treatment Area</td>
<td>Sediment accumulation in the forebay</td>
<td>Sediment accumulation of 6 inches or greater in the forebay.</td>
<td>No sediment in the forebay.</td>
</tr>
<tr>
<td></td>
<td>Discharge water not clear</td>
<td>Inspection of discharge water shows obvious signs of poor water quality - effluent discharge from vault shows thick visible sheen.</td>
<td>Repair function of plates so effluent is clear.</td>
</tr>
<tr>
<td></td>
<td>Trash or debris accumulation</td>
<td>Trash and debris accumulation in vault (floatables and non-floatables).</td>
<td>Trash and debris removed from vault.</td>
</tr>
<tr>
<td></td>
<td>Oil accumulation</td>
<td>Oil accumulation that exceeds 1 inch at the water surface in the in the coalescing plate chamber.</td>
<td>No visible oil depth on water and coalescing plates clear of oil.</td>
</tr>
<tr>
<td>Coalescing Plates</td>
<td>Damaged</td>
<td>Plate media broken, deformed, cracked and/or showing signs of failure.</td>
<td>Replace that portion of media pack or entire plate pack depending on severity of failure.</td>
</tr>
<tr>
<td></td>
<td>Sediment accumulation</td>
<td>Any sediment accumulation which interferes with the operation of the coalescing plates.</td>
<td>No sediment accumulation interfering with the coalescing plates.</td>
</tr>
<tr>
<td>Vault Structure</td>
<td>Damage to Wall, Frame, Bottom, and/or Top Slab</td>
<td>Cracks wider than ¼-inch and any evidence of soil particles entering the structure through the cracks, or maintenance inspection personnel determines that the vault is not structurally sound.</td>
<td>Vault replaced or repaired to design specifications.</td>
</tr>
<tr>
<td></td>
<td>Baffles damaged</td>
<td>Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance/inspection person.</td>
<td>Repair or replace baffles to specifications.</td>
</tr>
<tr>
<td>Ventilation Pipes</td>
<td>Plugged</td>
<td>Any obstruction to the ventilation pipes.</td>
<td>Ventilation pipes are clear.</td>
</tr>
<tr>
<td>Shutoff Valve</td>
<td>Damaged or inoperable</td>
<td>Shutoff valve cannot be opened or closed.</td>
<td>Shutoff valve operates normally.</td>
</tr>
<tr>
<td>Inlet/Outlet Pipe</td>
<td>Sediment accumulation</td>
<td>Sediment filling 20% or more of the pipe.</td>
<td>Inlet/outlet pipes clear of sediment.</td>
</tr>
<tr>
<td></td>
<td>Trash and debris</td>
<td>Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).</td>
<td>No trash or debris in pipes.</td>
</tr>
<tr>
<td></td>
<td>Damaged</td>
<td>Cracks wider than ¼-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.</td>
<td>No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.</td>
</tr>
<tr>
<td>Access Manhole</td>
<td>Cover/lid not in place</td>
<td>Cover/lid is missing or only partially in place.</td>
<td>Manhole access covered.</td>
</tr>
<tr>
<td></td>
<td>Locking mechanism not working</td>
<td>Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.</td>
<td>Mechanism opens with proper tools.</td>
</tr>
<tr>
<td></td>
<td>Cover/lid difficult to remove</td>
<td>One maintenance person cannot remove cover/lid after applying 80 lbs of lift.</td>
<td>Cover/lid can be removed and reinstalled by one maintenance person.</td>
</tr>
<tr>
<td></td>
<td>Ladder rungs unsafe</td>
<td>Missing rungs, misalignment, rust, or cracks.</td>
<td>Ladder meets design standards. Allow maintenance person safe access.</td>
</tr>
</tbody>
</table>
### NO. 23 – COALESCING PLATE OIL/WATER SEPARATOR

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect</th>
<th>Condition When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large access doors/plate</td>
<td>Damaged or difficult to open</td>
<td>Large access doors or plates cannot be opened/removed using normal equipment.</td>
<td>Replace or repair access door so it can opened as designed.</td>
</tr>
<tr>
<td></td>
<td>Gaps, doesn’t cover completely</td>
<td>Large access doors not flat and/or access opening not completely covered.</td>
<td>Doors close flat and cover access opening completely.</td>
</tr>
<tr>
<td></td>
<td>Lifting Rings missing, rusted</td>
<td>Lifting rings not capable of lifting weight of door or plate.</td>
<td>Lifting rings sufficient to lift or remove door or plate.</td>
</tr>
</tbody>
</table>
## NO. 24 – CATCH BASIN INSERT

<table>
<thead>
<tr>
<th>Maintenance Component</th>
<th>Defect or Problem</th>
<th>Conditions When Maintenance is Needed</th>
<th>Results Expected When Maintenance is Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Insert</td>
<td>Visible Oil</td>
<td>Visible oil sheen passing through media</td>
<td>Media insert replaced.</td>
</tr>
<tr>
<td></td>
<td>Insert does not fit</td>
<td>Flow gets into catch basin without going through media.</td>
<td>All flow goes through media.</td>
</tr>
<tr>
<td></td>
<td>catch basin properly</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Filter media plugged</td>
<td>Filter media plugged.</td>
<td>Flow through filter media is normal.</td>
</tr>
<tr>
<td></td>
<td>Oil absorbent media</td>
<td>Media oil saturated.</td>
<td>Oil absorbent media replaced.</td>
</tr>
<tr>
<td></td>
<td>saturated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water saturated</td>
<td>Catch basin insert is saturated with water, which</td>
<td>Insert replaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no longer has the capacity to absorb.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service life exceeded</td>
<td>Regular interval replacement due to typical</td>
<td>Media replaced at manufacturer’s recommended interval.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>average life of media insert product, typically one</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>month.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seasonal maintenance</td>
<td>When storms occur and during the wet season.</td>
<td>Remove, clean and replace or install new insert after</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>major storms, monthly during the wet season or at</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>manufacturer’s recommended interval.</td>
</tr>
</tbody>
</table>

| **Table Notes:**

- Visible Oil: Visible oil sheen passing through media.
- Insert does not fit catch basin properly: Flow gets into catch basin without going through media.
- Filter media plugged: Filter media plugged.
- Oil absorbent media saturated: Media oil saturated.
- Water saturated: Catch basin insert is saturated with water, which no longer has the capacity to absorb.
- Service life exceeded: Regular interval replacement due to typical average life of media insert product, typically one month.
- Seasonal maintenance: When storms occur and during the wet season.