#3 – Maintenance Standards for Closed Detention Systems (BMP D.02: Detention Tanks, BMP D.03: Detention Vaults):

| $\sqrt{}$ | Drainage System Feature | Defect or Problem | Condition When Maintenance is Needed | Results Expected When Maintenance is Performed |
|-----------|-------------------------------|--|--|--|
| | Storage Area | Plugged Air Vents | One-half of the cross-section of a vent is blocked at any point or the vent is damaged. | Vents open and functioning. Remove blockage or replace air vent if damaged. |
| | Storage Area | Debris and Sediment | Accumulated sediment depth exceeds 10 percent of the diameter of the storage area for one-half length of storage vault or any point depth exceeds 15 percent of diameter. | All sediment and debris removed from storage area. |
| | Storage Area | Joints Between Tank/Pipe Section | Any openings or voids allowing material to be transported into facility. (Will require engineering analysis to determine structural stability.) | All joint between tank/pipe sections are sealed. |
| | Storage Area | Tank Pipe Bent Out of Shape | Any part of tank/pipe is bent out of shape more than 10 percent of its design shape. (Review required by engineer to determine structural stability.) | Tank/pipe repaired or replaced to design. |
| | Storage Area | Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab | Cracks wider than one-half 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. | Vault replaced or repaired to design specifications and is structurally sound. |
| | Storage Area | Vault Structure Includes Cracks in Wall, Bottom, Damage to Frame and/or Top Slab | Cracks wider than one-half inch at the joint of any inlet/outlet pipe or any evidence of soil particles entering the vault through the walls. | No cracks more than one-fourth inch wide at the joint of the inlet/outlet pipe. No water or soil entering vault through joints or walls. |
| | Crest Gauge | Crest Gauge Missing/Broken | Crest gauge is not functioning properly, has been vandalized, or is missing. | Crest gauge present and functioning. Repair/replace crest gauge if missing or broken. |
| | Manhole | Cover Not in Place | Cover is missing or only partially in place. Any open manhole requires maintenance. | Manhole access cover/ lid is in place and secure. |
| | Manhole | Locking Mechanism Not Working | Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than one-half inch of thread (may not apply to self-locking lids). | Mechanism opens with proper tools. |

#3 – Maintenance Standards for Closed Detention Systems (BMP D.02: Detention Tanks, BMP D.03: Detention Vaults):

| √ | Drainage System Feature | Defect or Problem | Condition When Maintenance is Needed | Results Expected When Maintenance is Performed |
|----------|-------------------------------|------------------------------|--|--|
| | Manhole | Cover Difficult to Remove | One maintenance person cannot remove lid after applying normal lifting pressure. Intent is to keep cover from sealing off access to maintenance. | Cover can be removed and reinstalled by one maintenance person. |
| | Manhole | Ladder Rungs Unsafe | Ladder is unsafe due to missing rungs, misalignment, not securely attached to structure wall, rust, or cracks. | Ladder meets design standards. Allows maintenance person safe access. |