

## Bioswale Inspection and Maintenance Plan Recommendations

Inspection and Maintenance Activity	Inspection & Maintenance Schedule
<p><b><u>Debris accumulation</u></b>  <b>Inspect:</b> for fallen leaves, debris, and litter accumulation  <b>Maintain:</b> remove these materials, especially before winter and in early spring, remove sediment especially when a few inches deep or is impacting growth of vegetation</p>	<p><b>Inspect:</b> Monthly during growing season and after major storm events  <b>Maintain:</b> Spring and fall, monthly during growing season and after major storm events</p>
<p><b><u>RECP and TRMs</u></b>  <b>Inspect:</b> if used, inspect rolled erosion control blankets or TRMs to ensure they are staying in place, according to the manufacturer’s recommendation and providing the desired erosion protection  <b>Maintain:</b> repair and revegetate when needed</p>	<p><b>Inspect:</b> Annually  <b>Maintain:</b> When needed</p>
<p><b><u>Entry Points and Pretreatment</u></b>  <b>Inspect:</b> these areas such as filter strips, and the bioswale floor for excessive deposition of sediment; inspect for erosion at the points of inflow or within the ponding area  <b>Maintain:</b> Remove sediment with a shovel, rake or vac out, stabilize any eroded areas using appropriate methods, reestablish vegetation if needed, reseed or resod filter strips</p>	<p><b>Inspect:</b> Monthly and after major storm events, especially important in spring and fall  <b>Maintain:</b> Spring and fall, monthly during growing season and after major storm events</p>
<p><b><u>Culverts</u></b>  <b>Inspect:</b> inspect if culverts are part of the bioswale system to ensure erosion does not occur at the outfall of culverts  <b>Maintain:</b> repair eroded areas, replace revetment stone</p>	<p><b>Inspect:</b> Annually  <b>Maintain:</b> When needed</p>
<p><b><u>Check Dams</u></b>  <b>Inspect:</b> if used, inspect check dams for excessive deposition of sediment, also, inspect the choker layer materials on the front side of rock checks.  <b>Maintain:</b> repair eroded dams when needed, replace rock and choker materials when used and needed</p>	<p><b>Inspect:</b> Annually  <b>Maintain:</b> When needed</p>
<p><b><u>Newly Established Plants</u></b>  <b>Inspect:</b> (may have to keep biocell offline until plants have sufficient growth) inspect for at least 50 percent of specified vegetation cover at end of first growing season and at least 90 percent of specified vegetation cover after the end of the third growing season  <b>Maintain:</b> supplement plantings to meet minimum cover objectives, pull undesired vegetation, minimize herbicide use</p>	<p><b>Inspect:</b> Monthly during growing season  <b>Maintain:</b> Spring and fall, monthly during growing season</p>
<p><b><u>Established Plants and Trees</u></b>  <b>Inspect:</b> plant and tree health and for wilting plants, weeds, and undesirable plants spreading from the edge into desired plants  <b>Maintain:</b> remove undesirable plants, weeds, and tree saplings throughout growing season by pulling or trimming,</p>	<p><b>Inspect:</b> Monthly during the summer  <b>Maintain:</b> Spring and fall, monthly during growing season, if desired trim back plant vegetation in the fall, prune trees during the fall or winter</p>

prune and thin out plants as needed, replace plants when needed, herbicide use should be minimized	
<p><b><u>Inlets and Outlets</u></b>  <b>Inspect:</b> to insure inlets, overflows, and outlets all free flowing and working properly, check outlet of the subdrain if it daylight to ensure animal guard is in place and it is unrestricted and free flowing  <b>Maintain:</b> remove any sediment, debris and litter, repair or replace if damaged, replace damaged animal guard and remove any restrictions to ensure free flowing</p>	<p><b>Inspect:</b> Monthly  <b>Maintain:</b> Annually especially during spring and fall</p>
<p><b><u>Observation Ports</u></b>  <b>Inspect:</b> if applicable, look for evidence of standing water in the observation port or outlet structure, standing water may be a sign of hydraulic failure  <b>Maintain:</b> an evaluation of the cause for standing water is needed when there is standing water, modified soil may need to be replaced entirely or partially depending on the extent of plugging</p>	<p><b>Inspect:</b> Annually  <b>Maintain:</b> As needed</p>
<p><b><u>Mulch</u></b>  <b>Inspect:</b> for lack of mulch or displacement that might smother plants or clog outlets  <b>Maintain:</b> replace mulch to maintain a 3 inch layer, rake to redistribute</p>	<p><b>Inspect:</b> Monthly  <b>Maintain:</b> Annually, spring or fall</p>
<p><b><u>Runoff</u></b>  <b>Inspect:</b> to ensure runoff that is supposed to flow into the bioswale is getting into the cell as intended  <b>Maintain:</b> remove any accumulated sediment and debris, make sure surrounding areas (soils) are stabilized using appropriate methods</p>	<p><b>Inspect:</b> Annually, spring or fall  <b>Maintain:</b> Annually, spring or fall</p>
<p><b><u>Water Infiltration</u></b>  <b>Inspect:</b> to ensure the water infiltrates in a timely manner and that ponding does not occur for more than 12-24 hours  <b>Maintain:</b> conduct simple infiltration test using a can on soil surface and addition of water to observe drainage  <b>Maintain:</b> replace modified soil layer when ponding greatly exceeds the design drainage time.</p>	<p><b>Inspect:</b> Annually, spring or fall  <b>Maintain:</b> When needed</p>
<p><b><u>Erosion</u></b>  <b>Inspect:</b> for any erosion or gulleying issues  <b>Maintain:</b> fix any erosion immediately and take measures to re-establish vegetative cover, stabilize erosion along drainage paths using appropriate methods.</p>	<p><b>Inspect:</b> Annually, spring or fall and after major storm events  <b>Maintain:</b> When needed</p>
<p><b><u>Signage</u></b>  <b>Inspect:</b> signage at the site for condition issues  <b>Maintain:</b> replace when needed</p>	<p><b>Inspect:</b> Annually  <b>Maintain:</b> When needed</p>

**Native Planting Considerations:**

Provide the necessary care to keep native plantings weed free and to maintain a pleasing appearance (applies to short or tall; low or high diversity plantings). Avoid fertilization of native plantings. If native turf is installed, mow as needed or as desired to a minimum height of 4 inches (mowing can be eliminated after establishment, if desired). If allowed by local code, consider annual prescribed fire management for diverse native plantings or for un-mowed native turf to maintain vigor of the plant community and maintain a pleasing appearance.

**Watering guidelines during initial establishment of plants:** Young plants are susceptible to stress. Depending on the size of the planting, water plants regularly until established. After establishment watering is generally not needed for native plants.