

Stormwater Wetland Maintenance Requirements

Important operation and maintenance procedures:

- Immediately following construction of the stormwater wetland, conduct bi-weekly inspections and water wetland plants bi-weekly until vegetation becomes established (commonly six weeks).
- Before and immediately after plant installation, monitor water level and adjust to ensure that plants are not completely inundated.
- No portion of the stormwater wetland will be fertilized after the initial fertilization that is required to establish the wetland plants.
- Stable groundcover will be maintained in the drainage area to reduce the sediment load to the wetland.
- At least once annually, a dam safety expert will inspect the embankment. Any problems that are found will be repaired immediately.

After the wetland is established, it shall be inspected **quarterly and within 24 hours after every storm event greater than 1.0 inches**. Records of operation and maintenance shall be kept in a known set location and shall be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

| SCM element: | Potential problem: | How I will remediate the problem: |
|-------------------------------------|---|--|
| The entire wetland | Trash/debris is present. | Remove the trash/debris. |
| The perimeter of the wetland | Areas of bare soil and/or erosive gullies have formed. | Regrade the soil if necessary to remove the gully, plant ground cover and water until it is established. Provide lime and a one-time fertilizer application. |
| The inlet device | The inlet pipe is clogged (if applicable). | Unclog the pipe. Dispose of the sediment off-site. |
| | The inlet pipe is cracked or otherwise damaged (if applicable). | Repair or replace the pipe. |
| | Erosion is occurring in the swale (if applicable). | Regrade the swale if necessary and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion. |
| The forebay | Sediment has accumulated in the forebay to a depth of less than 15" or that inhibits the forebay from functioning well. | Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM. |
| | Erosion has occurred. | Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems. |
| | Weeds are present. | Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying. |
| Embankment | A tree has started to grow on the embankment. | If the tree is <6" in diameter, remove the tree. If the tree is >6" in diameter, consult a dam safety specialist to remove the tree. |
| | An annual inspection by an appropriate professional shows that the embankment needs repair. | Make all needed repairs immediately. |
| | Evidence of muskrat or beaver activity is present. | Consult a professional to remove muskrats or beavers and repair any holes or erosion. |

Stormwater Wetland Maintenance Requirements (Continued)

| SCM element: | Potential problem: | How I will remediate the problem: |
|--|---|---|
| Deep pool, shallow water and shallow land areas | Algal growth covers over 30% of the deep pool and shallow water areas. | Consult a professional to remove and control the algal growth. |
| | Cattails, phragmites or other invasive plants cover 30% of the deep pool and shallow water areas. | Remove the plants by hand or by wiping them with pesticide (do not spray) - consult a professional. |
| | The temporary inundation zone remains flooded more than 5 days after a storm event. | Unclog the outlet device immediately. |
| | Plants are dead, diseased or dying. | Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if necessary. |
| | Best professional practices show that pruning is needed to maintain optimal plant health. | Prune according to best professional practices. |
| | Sediment has accumulated and reduced the depth to 75% of the original design depth of the deep pools. | Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM. |
| Micropool | Sediment has accumulated and reduced the depth to 75% of the original design depth. | Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM. |
| The outlet device | Clogging has occurred. | Clean out the outlet device. Dispose of the sediment in a location where it will not cause impacts to streams or the SCM. |
| | The outlet device is damaged | Repair or replace the outlet device. |
| The receiving water | Erosion or other signs of damage have occurred at the outlet. | Repair the damage and improve the flow dissipation structure. |
| | Discharges from the wetland are causing erosion or sedimentation in the receiving water. | Contact Wake County Watershed Management and the NCDEQ Raleigh Regional Office. |