



**PROTECTING AND ENHANCING THE NATURAL ENVIRONMENT THROUGH COMPREHENSIVE ENVIRONMENTAL PROGRAMS**

**CONSTRUCTED WETLANDS**

Wetlands treat stormwater physically, chemically, and biologically. Physical removal of pollutants occurs as water moves slowly through the system as a result of resistance from plantings. In the case of biological removal, plants take up pollutants through their root systems, break them down and release them into the atmosphere. Constructed Surface Flow Wetlands are man-made with the plants used normally planted manually or sometimes naturally through plant colonization. Normally, the plants used in this system are adaptable to changes in water levels as well as the water quality. Unlike natural treatment wetlands, which treat water based on how much the natural plants can handle in a given time, constructed surface flow wetlands are designed to regulate the depth of water and how long the water remains in the system.

**Who is responsible for this maintenance?**

As the property owner, you are responsible for all maintenance of your constructed wetland.

**WHY IT'S IMPORTANT TO MAINTAIN YOUR CONSTRUCTED WETLAND**

An unmaintained constructed wetland area may:

- Create stagnant water, which decreases nutrient removal and increases the likelihood of mosquitoes, other insects and cause unsightly conditions.
- Allow sediment to buildup and accumulate.



*Constructed wetland at Carolina Forest Recreation Center*

**MAINTENANCE AND MONITORING**

FREQUENCY*	ACTIVITY*
One time – after first year	<ul style="list-style-type: none"> <li>• Replant vegetation as needed.</li> </ul>
Monthly to Quarterly	<ul style="list-style-type: none"> <li>• Mow embankments – minimum Spring and Fall.</li> <li>• Remove debris.</li> <li>• Repair eroded or bare soil areas.</li> </ul>
Several times per hot/warm season	<ul style="list-style-type: none"> <li>• Check mosquitoes by controlling plant population and water flow into the wetland.</li> </ul>
Semi-annually to annually	<ul style="list-style-type: none"> <li>• Set-up a trash and debris clean-up day.</li> <li>• Remove invasive plants.</li> <li>• Remove selected wetland plant materials or replant vegetation (as needed).</li> <li>• Repair broken mechanical components if needed.</li> </ul>
Every 1 to 3 years	<ul style="list-style-type: none"> <li>• Complete forebay maintenance and sediment removal when needed.</li> </ul>
*Follow manufacturer's guidelines	

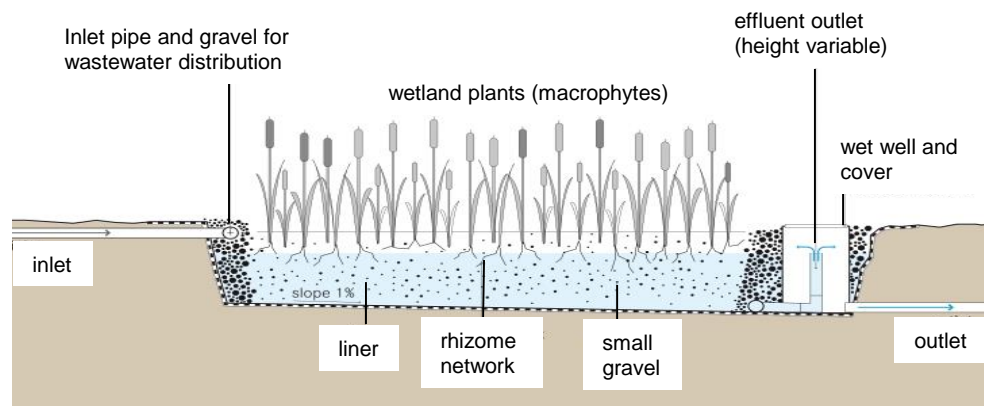
# Troubleshooting Issues

Symptom	Possible Cause	Solution
Stagnant water	Buildup of debris that blocks water flow paths.	Remove any visible debris. Check to ensure that water is moving through all parts of the wetland. Ensure that debris does not block flow paths.
Dead or dying plants	Invasive species taking over planted vegetation.	Regularly inspect vegetation. Remove invasive species. Herbicides should only be used for extreme circumstances.
Mosquitoes	Stagnant water	Ensure that water is moving through all parts of the wetland. Shade the water surface (females avoid shaded water for egg laying).

## INVASIVE PLANTS

“Invasive” describes a species that, when introduced into an ecosystem aggressively establishes itself at the expense of native plants or animals (*Maryland Department of Natural Resources*). Regularly inspect vegetation and remove invasive/nuisance plant species. For more information on invasive plants in Maryland, please go to the Maryland Department of Natural Resources website at: <http://dnr.maryland.gov/invasives/Pages/default.aspx>.

## Constructed Wetland



Source: *The online Compendium of Sanitation Systems and Technologies*