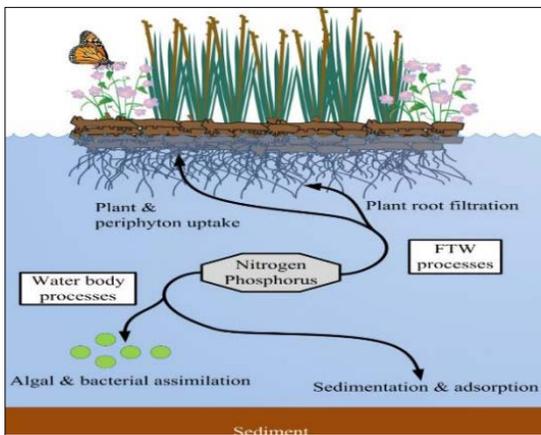


## Floating Wetlands

Water quality of our local waterways can be impacted in many ways. Excess nutrients (particularly nitrogen and phosphorus), sediment/silt, trash, litter have a negative impact on water quality. Removing these elements from local and regional waterways require natural and engineered approaches.

Wetlands are an efficient natural resource for cleaning polluted water, preventing floods, and providing groundwater recharge. They are found near and around water bodies, and can be completely saturated year round or experience only periodic inundation. They are home to a variety of plant species that are adapted to tolerate flooded conditions. The plants act as biofilters to remove nutrients and toxic substances from the water, as well as provide food for aquatic and terrestrial animals.

Floating wetland islands are rafts constructed with a mesh matting base and a buoyant frame. They are planted with wetland-tolerant plants designed to mimic the positive water quality effects of wetlands on open water surfaces. The plants' roots grow through the matting base into the water below where they uptake excess nutrients, trap sediment and other pollutants, and provide a medium for beneficial water-filtering microorganisms to grow.



Source: Chesapeake Stormwater Network

### Where can I spot a floating wetlands in action?

You don't have to go far. The Medical and Environmental Management Division (MEMD) deployed a floating wetland during the summer of 2016 in the stormwater retention pond behind building 32 to improve water quality of the pond. A total of 250 wetland plants, including Shallow Sedge, Joe-Pye Weed, Swamp Rose Mallow, Blueflag Iris, and Soft Stem Rush, were planted on the floating



wetland island. The floating wetland is anchored in place using steel cable, steel connectors, and concrete filled buckets.



### Where are other floating wetlands?

Many parks have added floating wetlands to improve the water quality of their ponds. On a larger scale, the National Aquarium assembled, planted, and launched a floating wetland island in August 2010 on Baltimore's Inner Harbor. The Aquarium monitors the island's plant species and animal colonization, and has worked with the University of Maryland's Maryland Sea Grant program to perform nutrient up-take experiments. Since the initial installation, more

floating wetlands have been installed in different areas around the Harbor.

The placement of floating wetlands is gaining steam across this country. Projects are being developed by universities, school districts, and state and local governments. Keep an eye out for floating wetlands in your local stormwater ponds. Better yet, if you know of a stormwater pond in your area, discuss the aesthetic benefits of adding a floating wetland with your neighborhood association or local government!



GSFC Floating Wetland

*For more information on this and similar topics visit these sites:*

- [GSFC Environmental Bulletins](#)
- [National Aquarium Floating Wetland Island](#)
- [Waterfront Partnership of Baltimore](#)
- [Chesapeake Stormwater Network](#)