



WHY DO WE CARE ABOUT BUFFERS?



What is a buffer?

According to Webster.com, one definition of a buffer is something that serves as a protective barrier, meaning that a buffer acts as a shield reducing the amount of damage possible. Also known as a riparian area, a buffer is vegetated land adjacent to a stream, pond, lake or wetland protecting the land surrounding a body of water. Buffers are important for keeping water clean because they work above and below ground by:

- Cleaning water by filtering out and storing pollutants such as excess phosphorus in addition to filtering out contaminants such as: fertilizers, heavy metals, inorganic materials and organic materials in the water before they reach the watershed.
- Preventing storm damage by storing water during large rain events due to deep roots allowing water to infiltrate and act as a sponge
- Controlling erosion and resulting sedimentation by slowing the flow of water at the ground's surface
- Improving the water quality, it provides valuable habitat for wildlife, improving the population and types of fish in addition to improving the diversity of the bird population that uses the Island as a stopping point on their migratory paths

Why is this important?

The Island is changing before our eyes. Hurricane Sandy was a good example of changes to the waterfront that happen quickly and uncontrollably. Roads were destroyed and homes flooded. One of the locations hit hardest was the Solviken property on Corn Neck Road. The road was completely destroyed and the sand dunes shifted into the Great Salt Pond. The movement of the sand dunes indicated what could happen quickly anywhere on the Island.

If proper vegetation, a buffer, had been integrated into the dunes and not worn down, the dunes might not have been completely destroyed. The installation of proper vegetation is not applicable only to sand dunes but also to any land that has a watershed flowing into a pond, river, or ocean.

What can you do?

Establish a proper buffer – shoreline buffers may help prevent the occurrence of long-term issues. Dense plants can help filter trash, leaves, grass clippings, fertilizers and other debris that can cause excessive nutrient spikes in the Great Salt Pond. Waterbodies that receive large amounts of runoff tend to contain high levels of nitrogen and phosphorus that can cause the growth of toxic algae blooms. Excessive runoff can also cause sediment build-up. Buffers should include a mix of beneficial, native plant species. Shrubs and bushes can retain much more soil in place than grass due to their individualized root systems since water runs much faster over grass than through plants. Many properties on the Island do not have buffers and landowners have cleared their land in an effort to establish a lawn on their property, not realizing that planting grass replaces some of the natural buffers.

Install beneficial, native plants – native plants provide a beneficial vegetative buffer that can protect and enhance the Pond's aquatic ecosystem, stabilize the shoreline, prevent erosion and the accumulation of sediment, and attract desirable wildlife and insects.

Avoid invasive plant species – these species spread rapidly throughout the ecosystem and diminish the growth of beneficial buffer plants. Some species can destabilize the shoreline, drying out the soil, and contributing to the addition of excessive nutrients to the water.

For more information about native plant species in Rhode Island, go to *The Coastal Buffer Zone Planting Guide* by the RI Coastal Resources Management Council in cooperation with the URI College of the Environmental and Life Sciences Outreach Center.

Note: Some of the information in this article was taken from an article by Leah Risom, *Let's talk about buffers*, published in the Block Island Times July 27, 2013.

OUR MISSION: To protect and enhance the environmental quality of the Great Salt Pond, including its shorelines and wetlands, and to promote appropriate and productive uses of the Pond's resources by residents, visitors and local businesses.

FUNDING: Individual contributions, membership dues, special events, program grants. IRS 501(c)3 non-profit. Contributions are tax-deductible to the extent allowed by law.

Please consider becoming a member of The Committee for the Great Salt Pond. For information and details, visit our website at cgspbblockisland.org.