Simple Answers to Frequently Asked Questions

What are wetlands?
Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and around wetlands. (EPA)

What is a tidal wetland?
Tidal wetlands are found in coastal area where tidal activity causes sea water to combine with fresh water. (EPA)

What is a non-tidal wetland?
Non-tidal wetlands are commonly found along rivers and streams, and in low-lying areas where groundwater connects with the soil surface. (EPA)

What is the Clean Water Act (the part related to wetlands)?
Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into water of the United States, including wetlands. (EPA)

What is the Chesapeake Bay Preservation Act (Bay Act)?
The Chesapeake Bay Preservation Act was enacted by the Virginia General Assembly in 1988 and is designed to improve water quality in the Chesapeake Bay and other waters of the State. The Bay Act Program is the only program in Virginia state government that deals comprehensively with the relationships between water quality, and land use planning and development. (DEQ)

What is a Resource Protection Area (RPA)?
The Bay Act Regulations establish the Resource Protection Area (RPA) as the "shoreward" component of the Chesapeake Bay Preservation Area and is not less than 100 feet wide. Activities in this area are subject to land use regulations. (DCR)

What is a Riparian Buffer?
Riparian buffers are vegetated area adjacent to water bodies such as streams, lakes, rivers, marshes and shorelines. These areas stabilize shorelines and stream banks, filter pollutants from storm water runoff and provide critical habitat for aquatic species and wildlife. (DCR)

Do I have an erosion problem?
Erosion is a natural process occurring along most Chesapeake Bay shorelines. Bare soil areas without vegetation, numerous fallen trees, collapsing banks, and gradual shoreline retreat are all signs of erosion. Not all erosion is a problem that needs to be corrected. If the erosion rate is very slow and the risk is low if the erosion continues, then consider leaving the shoreline in a natural condition. (VIMS)

What is a living shoreline?
A living shoreline is a shoreline management system that is designed to protect or restore natural shoreline ecosystems through the use of natural elements and, if appropriate, manmade elements. (Restore America's Estuaries)

What kind of living shoreline project is most suitable for my property?
The best project type depends on location and the type of erosion. Shoreline features indicate suitable growing condition for plants and can be enhanced to improve erosion protection. (VIMS) Techniques may include the use of fiber coir logs, sills, groins, breakwater or other natural components used in combination with sand and/or marsh plantings. (MD DNR)

What plants are suitable for living shorelines?
Waterfront landscape designs should include plants that can tolerate high winds, salt water flooding and salt air. (VIMS) The Master Gardener *Shoreline Erosion Program* and the Northern Neck Chapter of the *Virginia Native Plant Society* publish comprehensive lists of plants suitable for living shorelines.

What types of marsh grass are generally planted?
If the shoreline has no existing marsh grasses, then the growing conditions may not be suitable. Water depth, tidal activity and sunlight affect growing conditions. (VIMS). The types of grasses generally planted are *Spartina alterniflora*, *Spartina patens* and *Panicum virgatum*. (MD DNR)

How much does a living shoreline cost?
Construction costs for shoreline stabilization projects vary widely depending on shoreline length, protection needed, materials and labor. Non-structural methods cost an average of $50-$100 per foot. Projects with sand fill and/or stone structures typically cost $150-$500 per foot. (VIMS)

How long does it take for the planted marsh to fully grow into a completed living shoreline?
It takes approximately three seasons of growth to become a mature living shoreline. (MD DNR)

How do living shorelines perform during a nor'easter or hurricane?
Severe storms cause catastrophic erosion in a short period of time and all shoreline stabilization structures have a limited tolerance for storm damage, including revetments and bulkheads. Living shorelines with gradual slopes and integrated vegetation buffers are surprisingly resilient. The project must be properly designed for the expected conditions. (VIMS)

Is there on-going maintenance associated with a living shoreline?
Maintenance is critical for the success of a living shoreline project. Maintenance includes removal of leaves and/or debris and periodic pruning of shoreline overhanging branches that interfere with sunlight transmission to marsh grasses. (MD DNR).