



Monitoring Terms & Tips

Terminology	Definition
Goal-Setting	A statement about the reasoning for a project, with specific outcomes that define the desired conditions. Typical living shoreline project goals include a reduced rate of chronic erosion, a percent cover of plants by a certain time, and attracting more fish and wildlife.
Monitoring Site	A user-defined, general location where monitoring activities will take place. Defines monitoring boundaries. It should include all living shoreline project features to be included with monitoring. Best judgment may be required.
Monitoring Features	Defined areas within the Monitoring Site with unique characteristics, e.g. natural shoreline, planted tidal marsh with stone sill, stand-alone oyster sill, construction access restoration areas, etc.
Baseline Reference	A fixed baseline approximately parallel to the shoreline established on the upland with horizontal and vertical controls. The horizontal control may be local. The vertical control should be MLW. The baseline should be marked by permanently driven steel or concrete pipes on the upland.
Biological Benchmark	Spot elevations or elevation range occupied by a natural feature. Biological benchmarks for living shorelines may include the elevation range occupied by low marsh, high marsh, and upland transition plants. Used to indicate minimum target elevations for created or restored features. May provide more accurate site conditions than historic tide station data.
Fixed Photo Points	Places where repeated photos are taken of an area of interest to document visual changes at a fixed point through time with reference marker in background.
Transects or Profiles	Lines drawn perpendicular to the water's edge through representative monitoring features, with the landward and channelward points marked.
Assessment Points	Points along each transect representative of surrounding area, e.g. marsh edge, low-high marsh transition, high marsh-upland transition, upland bank. Over time, monitoring assessment points along transects may become inaccessible but should not be deleted or moved to a new location.
Plot or Quadrat	A small habitat sampling area usually located at pre-determined assessment points along an elevation transect. Portable quadrats constructed with PVC are used or plot is marked with meter sticks.



Monitoring Terms & Tips

Day 3: Construction & Maintenance

Terminology	Definition
Baseline Monitoring	Collecting data before project installation to record existing conditions against which future data can be compared
As-Built to Establishment Monitoring	Document how project was actually constructed, when planted areas become established, and when temporary construction materials can be removed
Plant Establishment	Evidence that planted stock has become well-rooted into the substrate and adjusted to local soil and environmental conditions, e.g., increasing plant height, fruit and seed production, increased number of stems.
Performance Monitoring	Watching to see how well the living shoreline system works and changes over time after it becomes established
Monitoring Protocols	Actual techniques used to collect data for a metric, either in the field or on a computer. Hi-Resolution methods are the most precise, yet can be costly or require specialized equipment and skills. Low-Resolution Methods are less precise, but can be carried out by more people.
Core Metrics	Essential indicators that should be evaluated for all projects.
Conditional Metrics	Additional, project-specific metrics that may involve more cost, time, or user skills to implement.
Percent Cover	Percent of the ground surface covered by plant leaves and stems when viewed from above.
Wreck Lines	Debris fields deposited on shore by waves and tidal currents often in distinct lines. The highest elevation wreck line can be used as a proxy for high water levels.
Large Woody Debris	Pieces of natural wood, trees, and branches at least 3 feet long by 1-inch diameter.