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# ENVIRONMENTAL Fact Sheet

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## Salt Marsh Monitoring Parameters and Protocols in New Hampshire

The premise behind monitoring these parameters is to provide measures of success for salt marsh restoration projects. Researchers attempting to understand the success of these projects have had to deal with a lack of pre-restoration data. The New Hampshire Coastal Program has written these monitoring requirements for the projects that it funds and has required them for all other salt marsh restoration projects in the state. Over time, these requirements will yield scientific data both about the conditions of New Hampshire's salt marshes and the success of restoration efforts.

This monitoring protocol is narrowly focused on the types of salt marsh restoration likely to occur in New Hampshire, specifically hydrologic modification through the excavation of tidal creeks and restoration/enhancement of tidal connections.

### **Pre-Restoration Monitoring**

The focus of pre-restoration monitoring is on comprehensive mapping and environmental sampling. The sampling is primarily concerned with vegetative assemblages, fish communities, and soil salinity. Mapping the vegetative communities and human impacts on the salt marsh is very important. Without it, the monitoring would be of marginal use.

### **Post-Restoration Monitoring**

Post-restoration monitoring repeats the measurement parameters of the pre-restoration work over a period of five years. The effectiveness of the post-restoration monitoring is contingent upon the quality of the pre-restoration data collection and mapping.

### **Requirements for Monitoring Immediately After Construction**

- Evaluate whether restoration plans were followed as planned.
- Correct map if "as built" is different from the planned work.

### **Requirements for the Five Monitoring Periods**

- Monitoring periods: as built, and peaks of first, second, third, and fifth growing season.
- Describe post-restoration management activities.
- If plantings were included, estimate survival of seedlings.
- Vegetative sampling - use of the same method as in pre-monitoring.
- Photographs from permanent photo locations.
- Animal observations as in pre-monitoring.
- Salinity monitoring as in pre-monitoring.
- Tidal elevations as in pre-monitoring (at a minimum, tidal elevations of spring tide).