







ShoreWatch Screenshot

Portion of Ryan Resilience Lab Living Shoreline



- | | |
|---|--|
|  Rock Sill |  Transect Plot Points |
|  Low Marsh Planted Area |  Low Marsh Zone |
|  High Marsh Planted Area |  High Marsh Zone |



ShoreWatch Monitoring App Demo

Day 3: Materials, Design, Maintenance, & Monitoring

ShoreWatch data form for Low Marsh Planted Area

Data for Planted Marsh Areas includes the date, configuration, phase (initial or replanting) and planted species. The same form, with alternate species types, is used for high marsh planted areas. Multiple forms can be submitted for initial plantings and any re-plantings to capture information on why the initial plantings were not sufficient.

Field Maps 1:11 PM Mon Jun 24

Planted Marsh Areas

Marsh Zone:
Low Marsh

▼ **Date of Low Marsh Planting**
Date Planted:

The date plantings were installed allows for tracking how long it takes for marsh to establish.

▼ **Phase of this Planting**
Phase:
☐ Initial Planting ☒ Replanting ☐ Unknown

If replanting, what was the reason for replanting (Select all that apply):

- ☐ Storm Damage
- ☐ Wrong Elevation
- ☐ Marsh not draining at low tide
- ☐ Wildlife Activity
- ☐ Human Activity
- ☐ Plant Death
- ☐ Too much shade
- ☐ Unknown

Recording the reason(s) for replanting can help to avoid similar situations in the future.

▼ **Extent of New Plant Coverage in Low Marsh**
Coverage in marsh:
☐ Complete coverage
☐ Spot plantings
☐ Unknown

▼ **Configuration of Plantings**
Configuration:
☐ Rows
☐ Clumping
☐ Unknown

Recording the coverage extent and configuration of plantings supplies a baseline for monitoring marsh establishment.



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ShoreWatch data form for Low Marsh Planted Area (cont.)

▼ **Who planted the Low Marsh?**

Planting Labor (Select all that apply):

☐ Volunteers

☐ Professionals

☐ Property Owner

☐ Unknown

☐ Other

Knowing who did the planting might help explain variable establishment patterns.

▼ **Source of Plantings**

Where were the plantings sourced? (Select all that apply)

☐ Nursery stock

☐ Transplants


☐ Self-Propagated

☐ Seed Banks


☐ Unknown

▼ **Species Planted in Low Marsh**


Species Planted (Select all that apply):




☐ Saltmarsh cordgrass (*Spartina Alterniflora*)




☐ Black Needlerush (*Juncus romerianus*)




☐ Big cordgrass (*Spartina cynosuroides*)




☐ Saltmeadow hay (*Spartina patens*)




☐ Salt grass (*Distichlis spicata*)




☐ Sea lavender (*Limonium carolinianum*)



☐ Saltmarsh aster (*Symphyotrichum tenuifolium*)



☐ Glasswort (*Salicornia*)



☐ Saltmarsh bulrush (*Bolboschoenus robustus*)

☐ Other

Recording the species planted supplies a baseline for monitoring species diversity in the marsh zone.



ShoreWatch Monitoring App Demo

Day 3: Materials, Design, Maintenance, & Monitoring

ShoreWatch data form for Low Marsh Planted Area (cont.)

▼ Sand Fill

Was Sand Fill Applied?

☐ Yes

☐ No

☐ Uncertain

▼ Substrate of Low Marsh Planting Area

Material Type:

☐ Sand

☐ Mud

☐ Sand-Mud Mix

☐ Peat

☐ Cobble



▼ Low Marsh Planting Area Notes

Notes


Any additional relevant information about the marsh plantings can be recorded as notes.

▼ Take Photos of Low Marsh

Use Camera Icon to take photos. You may take multiple photos.

Photos of the planted marsh area can be attached to each form.



Details of the marsh planted area plan can be found in the Joint Permit Application (JPA) for the Living Shoreline project, which can be consulted if the person performing the monitoring is unfamiliar with the specifics of the project. Joint Permit Applications, and additional project documentation, can be found on the Virginia Marine Resources Commission (VMRC) website.



ShoreWatch Monitoring App Demo

Day 3: Materials, Design, Maintenance, & Monitoring

ShoreWatch data form for Low Marsh Vegetation Zone

By tracking marsh vegetation zone characteristics, shifts in marsh structure and function can be documented. Data for marsh vegetation zone characteristics include total percent vegetative cover, dominant plant species, and presence of Phragmites in the marsh zone. The same form, with alternate species types, is used for high marsh zones.

Field Maps 10:11 AM Mon Jun 24

Marsh Measures

Date/Time:
Monday, June 24, 2024
10:11 AM

Marsh Zone:
Low Marsh

▼ Vegetative Cover in Low Marsh
Specify Total Percent Cover:
☐ 0%
☐ 1-5%
☐ 5.1-25%
☐ 25.1-50%
☐ 50.1-75%
☐ >75%

▼ Dominant Plant Species In Low Marsh
Specify the DOMINANT Plant Species:
In the Low Marsh

☐ Saltmarsh cordgrass (*Spartina alterniflora*)
☐ Saltmeadow hay (*Spartina patens*)
☐ Black needlerush (*Juncus roemerianus*)
☐ Big cordgrass (*Spartina cynosuroides*)
☐ Saltmarsh bulrush (*Bolboschoenus robustus*)
☐ Salt grass (*Distichlis spicata*)
☐ Sea lavender (*Limonium carolinianum*)
☐ Saltmarsh aster (*Symphyotrichum tenuifolium*)
☐ Common reed (*Phragmites australis*)
☐ Other

Date and time are automatically recorded.

A rough visual estimate of Total percent vegetation cover indicates marsh establishment, stability, health, and ecosystem function.

The dominant plant species (i.e., >50% of total cover) indicates marsh stability and function, and water levels in the marsh.
(NOTE: Other will have to include when no species is dominant)



ShoreWatch Monitoring App Demo

Day 3: Materials, Design, Maintenance, & Monitoring

ShoreWatch data form for Low Marsh Vegetation Zone (cont.)

11:12 AM Mon Jun 24 68%

Marsh Measures

▼ **Phragmites in Low Marsh**

Specify Percent Cover:

☐ 0%

☐ 1-5%

☐ 5.1-25%

☐ 25.1-50%

☐ 50.1-75%

☐ >75%

Phragmites percent cover indicates invasive species colonization and marsh stress.

▼ **Has data been collected (or going to be collected) in transect plots for this marsh?**

Answer:

☐ Yes

☒ No

☐ Unsure

If Monitoring will NOT include Transects: Please Characterize Marsh Fauna Present in the Marsh

Please Select All Observed in Marsh:

☐ Live Mussels

☐ Live Periwinkle Snails

☐ Fiddler Crab Burrows

☐ Live Oysters

Presence of key marsh fauna species indicates positive ecosystem function and development.

▼ **Low Marsh Notes**

Notes:

Any additional relevant information about the marsh zone can be recorded as notes, e.g, heavy wrack lines that trigger maintenance.

▼ **Photos of Low Marsh**

Use camera icon below. You may take multiple pictures.

Photos of the marsh zone can be attached to each form.

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