

Restoration and Management of Declining Habitats

Conservation Practice Job Sheet – Oyster Monitoring

RI-643

Owner/Operator _____ Farm No. _____ Tract No. _____ Field No. _____



Oysters. Maggie Payne, RI NRCS.

Definition

Restoring and conserving rare or declining native vegetated communities and associated wildlife species.

Where used

This practice may be used on any landscape which once supported or currently supports the habitat to be restored or managed.

Purpose (check all planned purposes)

To restore land or aquatic habitats degraded by human activity, provide habitat for rare and declining

wildlife species by restoring and conserving native plant communities, increase native plant community diversity, and manage unique or declining native habitats. (Note: NRCS uses the term “wildlife” to include all animals, terrestrial and aquatic).

- Restore land or aquatic habitats degraded by human activity.
- Provide habitat for rare and declining wildlife species by restoring and conserving native plant communities.
- Increase native plant community diversity.
- Management of unique or declining native habitats.

Specifications

Habitat management activities should be prioritized, initiated, and orchestrated in concert with an existing state or regional conservation plan for the habitat, species and associated relationships.

Confer with other agencies and organizations to develop guidelines and specifications for conserving declining habitats.

Follow up habitat assessments shall be performed on a regular basis.

All plant materials should comply with the minimum standards, established by the American Nursery and Landscape Association, 1250 I Street Northwest, Suite 500, Washington, DC.

Plant materials centers and commercial growers should be encouraged to develop plant materials for habitat restorations.

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**This monitoring protocol follows the recommendations of the Rhode Island Oyster Restoration Minimum Monitoring Metrics and Assessment Protocols as established by the Rhode Island Shellfish Technical Working Group.

DATE: _____

1. SITE DESCRIPTION

a. Physical/Chemical: Measure during each site visit

Temperature (degrees C)	
Salinity (ppt)	
Dissolved O ₂ (mg/L)	

b. Depth: Intertidal or sub-tidal – Depth at mean low water (m). _____

c. Benthic substrate:

% cover of substrate type (Mud, Sand/Silt, Sand/Cobble, Rocky)	
NRCS Subaqueous Soil Mapunit Name (from Web Soil Survey)	
Submerged Aquatic Vegetation (species names)	
% cover of dominant micro-algae	

d. Substrate enhancement:

Date of enhancement & material used	
Density (volume of material/sq. meter)	
Vertical relief (at every quadrant location, plus at least 3 representative locations.	
Total area (sq. meter) enhanced - Actual area, not project footprint:	

e. Seeding History:

Date & number seeded	
Average size of seed (mm)	
Approximate seeding density (# oysters/sq. meter)	
Origin of seed (i.e., hatchery)	

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f. Location: e.g., Bissel Cove, Bed 1, 41.54615 N, 71.42942W _____

g. Footprint: Dive to determine extent of oyster seed or cultched area of each bed. Record lat/long coordinates or mark corners of each bed. Measure dimensions of boundary (m.) _____
Observe site boundaries annually, re-establish when necessary.

2. Quadrat sampling: Oyster Density & Length Distribution

a. Quadrat Size: (to be determined by qualified professionals, based on local conditions) _____

b. Sampling Effort:

o Optimize sample allocations based on variance of the sampled mean

c. Sampling Design:

o Distribute quadrats evenly in haphazard manor – within each oyster bed

o Number of live and recently dead (hinge still intact) oysters in each quadrat _____

o Number of recruits in each quadrat – separate tally _____

o Number of oysters with drill holes or boring sponge _____

o Valve length (mm) sample number depends on quadrat size shown above _____

o Return oysters to quadrat

3. Disease Monitoring

o 30 oysters (60-90 mm valve length) sampled within each restoration site

o Collect samples mid-August through September annually

o Test for Dermo, MSX and SSO

o Coordinate with local pathologists