

OYSTER RESTORATION

BEST PRACTICES | MASSACHUSETTS



Massachusetts hosts over 25 shellfish projects that use oysters, clams, quahogs, and scallops to achieve a range of goals that include denitrification, restoration, mitigation, and population enhancement.



CULTCH

- Before starting the project, substrate must be hardened with cultch; all types of cultch are more beneficial to oysters than bare sediment.
- Oysters prefer to settle on larger pieces of or whole shell over crushed shell.
- Adult oysters can be used in combination with cultch to enhance settlement.

TIMING

- Shell planting should coincide with oyster recruitment within an ecosystem.

ORIGIN & DISEASE

- Non-native species or species from different water bodies can bring disease (Dermo, MSX) or invasive organisms; thus, they should be sterilized or tested for pathogens before moving.
- Maintaining high intraspecific diversity at a site benefits oyster populations and enhances natural recruitment.
- Non-native shell in cultch should be sterilized to prevent the spread of disease or parasites.





For more information and an interactive map of existing projects in Massachusetts, visit seagrant.mit.edu/shellfish-restoration.



ARTIFICIAL STRUCTURE

- Providing or ensuring relief or height $>0.3\text{m}$ is beneficial for the growth and health of the oysters.
- Addition of adult oysters to reefs increases available surface area as live oysters continue to grow.

DEPTH

- Survival of juvenile and adult oysters does not appear to differ with depth.
- At depths $>4.5\text{ m}$, there is a risk of bottom water hypoxia and consequential mass mortality of oysters.

WATER QUALITY

- Oysters help with denitrification, but too much nitrogen in a water body can prevent oyster recovery by causing bottom-water hypoxia.

RECREATIONAL HARVEST

- Destructive harvesting methods, like oyster dredging or raking, should be regulated in the project area.

