

Restoring Eelgrass: Identifying best practices for a seed-based approach



Photo by Poonam Narotam

Eelgrass plays a number of critical roles in coastal marine environments. Healthy meadows offer marine species, from fish and shellfish to crabs and snails, protected areas to live and reproduce. The plants improve water quality by acting as a natural filter, absorbing nutrients that can lead to excessive algae growth. Growing in dense beds, eelgrass acts as a natural buffer, reducing the force of waves and currents, which helps to stabilize shorelines and prevent coastal erosion.

Poor water quality, temperature changes and physical disturbance from development and boating have damaged this important habitat, causing about half of Massachusetts' eelgrass to decline over the last few decades. Eelgrass can be restored, especially as the Commonwealth invests in water quality improvements.

Restoration techniques used in Massachusetts so far are resource intensive, involving transplanting eelgrass shoot by shoot, like plants in a garden. Researchers **Jill Carr (MassBays/UMass Boston)**, **Forest Schenck (MA Division of Marine Fisheries)**, and **Alison Frye (Salem Sound Coastwatch)** are working to test and identify methods that could enable large-scale restoration of this crucial marine plant at a lower cost.

Like grasses found on land, eelgrass flowers and produces seeds. Restoring meadows by harvesting and planting seeds has been successful in other regions. The Massachusetts-based research team is investigating all aspects of growing eelgrass from seed, including harvesting seeds from existing beds, germination and viability, and sowing seeds.

Seed-based restoration across Massachusetts embayments requires cooperation from state and federal agencies. Carr and her team are working closely with government partners to facilitate a permitting process. Their research will inform a best practices guide for future restoration efforts.

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Eelgrass seeds, Photo by Poonam Narotam