



THREATS ADDRESSED

- Excess Nutrients
- Pollutant Inputs
- Algal Blooms
- Erosion
- Invasive/Nuisance Species

STRATEGY GOALS

- Protect
- Manage
- Rehabilitate

STRATEGY CO-BENEFITS

- Habitat (Neutral)
- Aesthetics (Neutral)
- Recreation (Neutral)



- Permittable in Massachusetts**
Local planning process. List of potential permits available [here](#).
- Implemented on Cape Cod**
See examples of pond projects implemented on Cape Cod [here](#).
- Listed in 208 Plan Technologies Matrix**
Learn more about the nutrient management strategies in the Tech Matrix [here](#).
- Can be Performed at Homeowner Scale**
Local review and permitting may be required.
- Nature-based Solution**
If natural products used, not hard engineered structures

DURATION OF BENEFITS

- Less than one month
- One season or year
- Multiple seasons or years

MAINTENANCE REQUIREMENTS

- Monthly
- Annually
- Infrequent

DESCRIPTION

Sediments from land disturbance activities, including but not limited to development, grading, and vegetation clearing, can carry nutrients and other pollutants into ponds through erosion and stormwater. Sediments in runoff can reduce water levels in ponds, cloud aquatic habitats, and limit plant growth. These sediments can also carry nutrients and other attached pollutants that can further harm water quality and habitats and pose a health hazard at swimming beaches. Erosion and sediment controls include methods that reduce erosion of exposed soils, capture sediments and attached pollutants, and slow or redirect the flow of stormwater. Erosion and sediment control options—such as covering exposed soils with erosion control blankets, redirecting runoff to vegetated areas using water bars, and blocking runoff using straw wattles—can help prevent these impacts.

ADVANTAGES

- Scalable
- Can be inexpensive depending on which mechanism used
- Can be easy to install depending on mechanism, scale of project, and site conditions
- If properly installed, should be low maintenance

CONSTRAINTS

- Can get expensive as scale of project expands
- Requires adequate space to work within to install control measures
- Erosion controls must be designed to ensure that stormwater is infiltrated onsite, not transferred offsite, to avoid impacting neighboring properties or transferring the problem elsewhere



IMPLEMENTATION

POTENTIAL ACTORS



Towns: Towns may install erosion controls around town-managed ponds



Pond Groups: May propose or support erosion control projects around public or private ponds and provide a supportive role through education



Private Landowners: May propose or support erosion control projects



Land Trusts: May propose or support erosion control projects and provide a supportive role through education

SITING REQUIREMENTS

- All ponds, and especially those with steeper slopes
- Wherever land disturbance (e.g., development, human social trails to ponds) is a concern

INFORMATION NEEDS

- Identification of sources of erosion
- Determining extent of erosion which may require surveying the pond shore during rainfall / runoff events
- Space requirements for proper installation

IMPLEMENTATION EXAMPLES

Cape Cod National Seashore, with the assistance of AmeriCorps Cape Cod Service Members, assessed the condition of freshwater ponds within the Seashore, developed action plans to fix erosion hot spots, and installed erosion controls, as documented in their [Pond Condition Progress Report and Work Plan](#). Restoration work included placing jute netting along steep banks to hold soil in place, planting native vegetation to help stabilize the soil, and the installation of water bars to direct runoff.



RESOURCES

- The Massachusetts Office of Coastal Zone Management developed a [stormwater solutions for homeowners fact sheet](#) for preventing erosion.
 - The [Massachusetts Stormwater Management Handbook](#) provides detailed information on a wide variety of erosion control strategies.
 - The Environmental Protection Agency has a [menu of Best Management Practices](#) for controlling stormwater runoff from construction sites.
-

COST ESTIMATE

Variable

Varies depending on method used and scale of project

.....

ADDITIONAL FINANCIAL CONSIDERATIONS

Assessment: Planning, design, and permitting, including erosion source studies

Implementation: Materials and installation

Maintenance: Regular monitoring as site stabilizes and during storm events - once site stabilizes, minimal maintenance

.....

POTENTIAL FUNDING SOURCES

- Community Preservation Act
- Capital Budget
- Grants
- Private Funding

Additional information regarding potential funding sources is available [here](#).