



Pond Shore Buffer Plantings



THREATS ADDRESSED

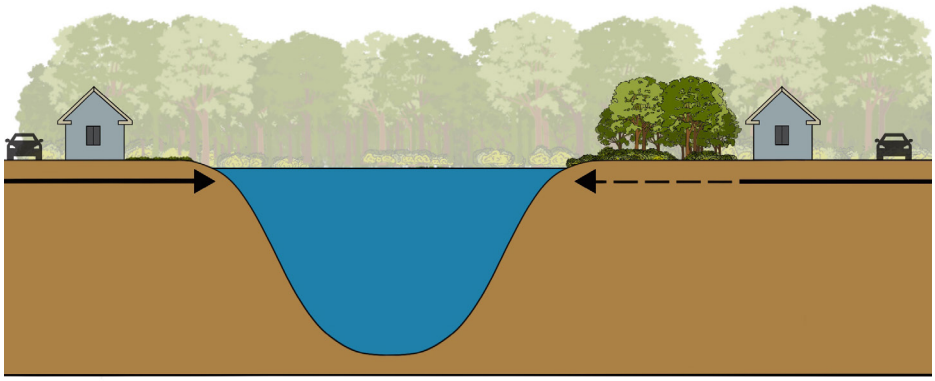
- ✓ Excess Nutrients
- ✓ Pollutant Inputs
- ✓ Algal Blooms
- ✓ Erosion
- ✓ Invasive/Nuisance Species

STRATEGY GOALS

- Protect ✓
- Manage ✓
- Rehabilitate ✓

STRATEGY CO-BENEFITS

- Habitat ✓ Improve
- Aesthetics ✓ Improve
- Recreation ✓ Improve



- ✓ **Permittable in Massachusetts**
Local review through the Conservation Commission may be required. 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**

DURATION OF BENEFITS

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

MAINTENANCE REQUIREMENTS

- Monthly
- Annually
- Infrequent

DESCRIPTION

Pond shore buffer planting involves the planting of native, beneficial plants within a buffer area along a pond shoreline or within the pond littoral (nearshore) zone. It may include enhancing existing pond shore plantings or replacing lawn, invasive species, and impervious surfaces within a certain distance (e.g., 100'-300') of the pond with native plants suitable for the pond shore environment. In a pond, vegetation may be planted to enhance existing in-pond vegetation or to establish plants in a pond where there are none. Through pond shore buffer planting, plant roots and associated soils prevent erosion, intercept sediments, absorb stormwater, nutrients and other pollutants and prevent these from entering and degrading ponds. The roots and associated soils of in-pond vegetation will absorb pollutants and nutrients to help reduce excess levels of algae.

ADVANTAGES

- Simple to implement
- Low-maintenance if native plants used, "right plant, right place" principle followed, and once plants are established
- Enhances pond shore aesthetics and habitat value
- Depending on scale, may provide recreational opportunities, such as walking trails through restored areas or through enhanced fishing opportunities with in-pond vegetation planting

CONSTRAINTS

- Need to source or grow appropriate plants - experience/expertise with aquatic plant propagation may be less available than for terrestrial plants
- Up-front costs to purchase and install plants
- Plants require monitoring and maintenance
- Competition among plants will affect results, so expectations need to be managed and the choice of appropriate plants is important
- Invasive or aggressive species may need to be monitored and controlled to ensure success of desirable native species



IMPLEMENTATION

POTENTIAL ACTORS



Towns: Towns may protect or plant vegetated buffers on town-managed shorelines



Pond Groups: May collaborate on pond shore buffer plantings and provide a supportive role through education



Private Landowners: Installing and maintaining vegetated buffers is something the private homeowner can do to protect ponds



Land Trusts: Land trusts with pond shore properties can protect or install, and maintain vegetated buffers and provide a supportive role through education

SITING REQUIREMENTS

- All ponds, especially those with developed or altered pond shores
- Ponds with inadequate vegetation to support desired aquatic community
- Ponds where invasive species have been minimized but recolonization potential is high

INFORMATION NEEDS

- Shoreline and/or aquatic vegetation survey
- Landscape/restoration plan



Credit: Alison Leschen

IMPLEMENTATION EXAMPLES

A homeowner on Nyes Pond in Falmouth installed a pond shore buffer of native trees, shrubs and perennials. The project required an Order of Conditions from the local Conservation Commission. After the plants were established, the homeowner reported a noticeable increase in bird and insect activity.

RESOURCES

- The Cape Cod Commission and partners developed the [Cape Cod Freshwater Pond Buffer Guidance](#) to help homeowners and municipalities preserve and protect ponds through responsible landscape management.
- Other agencies and states also have buffer guidance including the [Massachusetts Buffer Manual](#), [Maine's Buffer Handbook](#), Vermont's [Guide to Healthy Lakes Using Lakeshore Landscaping](#), and the Southeast New England Program's [Buffer Restoration Guide](#).
- The Massachusetts' Department of Conservation and Recreation's [Lakes and Ponds Program](#) provides related resources.

COST ESTIMATE

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Relative to other in-pond strategies

Variable depending on extent of planting area, sourcing of desired vegetation, planting method, monitoring level, and labor



ADDITIONAL FINANCIAL CONSIDERATIONS

Assessment: Planning, design, and permitting (if applicable)

Implementation: Plants, equipment and installation

Maintenance: Monitoring plants, landscape maintenance, and replacement plants, as needed



POTENTIAL FUNDING SOURCES

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

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