



# Stormwater Management (Non-Structural)



STRATEGY SCALE

**THREATS ADDRESSED**

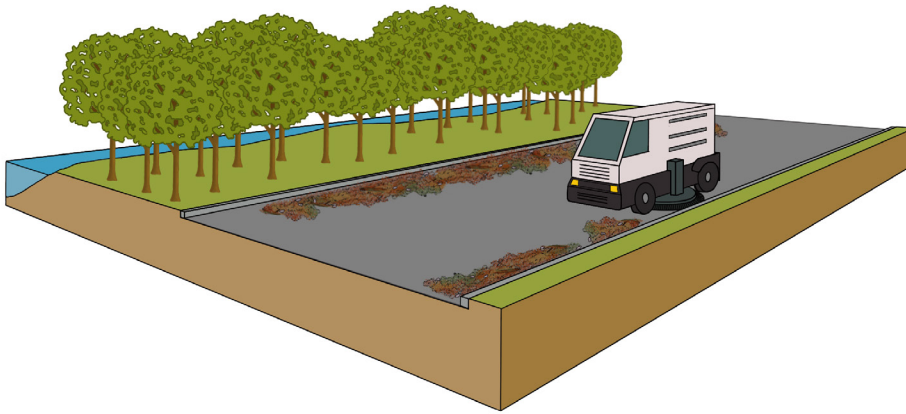
- Excess Nutrients
- Pollutant Inputs
- Algal Blooms
- Erosion
- Invasive/Nuisance Species

**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**  
Some methods, for example fertilizer mgt. Local review and permitting may be required.
- Nature-based Solution**  
Some measures are nature-based.

**DURATION OF BENEFITS**

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

**MAINTENANCE REQUIREMENTS**

- Monthly
- Annually
- Infrequent

## DESCRIPTION

Non-structural stormwater management measures are planning and design approaches to prevent or reduce point or non-point source pollutants from entering surface waters or ground waters. Non-structural stormwater control measures are used to protect water quality and quantity by preventing pollution from stormwater and controlling and infiltrating it at its source. Non-structural stormwater management includes measures such as impervious disconnection, pollution prevention measures, and source controls including materials management at industrial sites, fertilizer and pest management in residential areas, reduced road salting in winter and snow management, and street sweeping. It also includes developing and implementing a bylaw or regulation promoting smart growth, low impact development, or nature based solutions focused on benefits and protection for water quality.

## ADVANTAGES

- Helps control sources of water quality degradation
- Helps prevent stormwater and all the contaminants it carries from entering ponds
- Local governments may be rewarded with regulatory credits and incentives by the State and EPA for incorporating smart growth practices within their stormwater plans

## CONSTRAINTS

- Requires the review, drafting, adoption and enforcement of stormwater bylaws and regulations
- An implied requirement of comprehensive stormwater management practice implementation is that all parties, properties, and stakeholders will implement, maintain, and monitor practices



## IMPLEMENTATION

### POTENTIAL ACTORS

- Towns:** Towns may develop stormwater bylaws and regulations, and implement non-structural stormwater practices
- Pond Groups:** May propose or support non-structural stormwater management and provide a supportive role through education
- Private Landowners:** May propose or support non-structural stormwater management practices
- Land Trusts:** May support non-structural stormwater management practices and provide a supportive role through education

### SITING REQUIREMENTS

- All ponds with stormwater inputs

### INFORMATION NEEDS

- Stormwater sources and catchment area
- Review of existing stormwater bylaws, regulations, and practices



### IMPLEMENTATION EXAMPLES

The [Taunton River Watershed project](#), conducted by EPA, examined headwater stream segments to understand the impacts of, and potential approaches for managing impervious cover. Through this study a Watershed Protection Standard was developed to provide communities with resilient alternative site development stormwater management performance standards designed to protect and restore watershed and water resource health from impacts associated with development activities.

### RESOURCES

- The Environmental Protection Agency maintains information and resources for [Stormwater Discharges from Municipal Sources](#) and [Stormwater Tools in New England](#).
- The [Massachusetts Stormwater Management Handbook](#) provides detailed information on a wide variety of erosion control strategies.

### COST ESTIMATE

# Variable

Varies widely depending on approach and scale



### ADDITIONAL FINANCIAL CONSIDERATIONS

**Assessment:** Planning, design, and permitting

**Implementation:** Implementing practice(s)

**Maintenance:** Depends on approach



### POTENTIAL FUNDING SOURCES

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

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