BSC GROUP

803 SUMMER STREET, BOSTON, MA 02127 - www.bscgroup.com
TEL 617-896-4300 - 800-288-8123

Nature-Based Solutions Implementation Resource Guide

Nature-based Solution (NbS): New Wetland or Floodplain Construction/Expansion

Project Number per matrix: **(5)**

PREREQUISITES

- Coordinate restoration with funder (e.g., MA MVP), if applicable, and Local Master Plan.
- Obtain Town or City Conservation Commission/landowner approval.
- Obtain necessary regulatory permits from local, state, and federal regulators and funder approvals.
- Complete permitted excavation adjacent to wetlands and/or water bodies.
- Conduct soil testing for structural feasibility and contamination.
- Ensure availability of Licensed Site Professional) (LSP) for unexpected hazards.

RECOMMENDED IMPLEMENTATION STEPS

- **Project Planning and Administration**
  - Evaluate water table and soil profile for effective wetland establishment, and groundwater monitoring well(s).
  - Evaluate existing native shrub/tree species for effective naturalization/introduction.
  - Assess potential erosion contamination impacts.
  - Assess invasive soil seed bank & rootstock.
  - Assess bordering threats such as the proximity of established invasive seed sources.
  - Assess opportunities for coordinated habitat enhancement, flood storage, and stormwater controls.
  - Ensure clear communication and understanding of maintenance personnel. Allocate costs for oversight.
  - Plan for the construction period and post-construction period environmental monitoring.
- **NbS Installation**
  - Install access control measures where required.
  - Conduct site preparation to include erosion control and mobilizing a staging area.
  - Plant selected native tree species, along with mulching, watering, and weeding during the maintenance period.
  - Leverage volunteer efforts and stackable improvements.
- **Maintenance**
  - Support 2-year establishment period to include biannual removal of invasive plants and weeds, annual replacement of failed plantings, and watering as needed to naturalize plantings.
  - Maintain stability through critical mass and coordinated invasive control.

NATURE-BASED SOLUTION SPECS

- Typical project size 3,000 sq.ft.
- Minimum/maximum size 300 sq. ft.

BUDGET ESTIMATE

- Typical project budget (order of magnitude): $15,000-$20,000
- Use the BSC Group Nature-based Solutions budget tool to develop more detailed concept budgets

SCHEDULE ESTIMATE

- Pre-construction monitoring of groundwater table (minimum 1 growing season, preferably multiple growing seasons)

- 2 days of construction per unit
- 2 year establishment period