



Operation & Maintenance Plan for Residential Rain Garden 10 Martins Cove Lane, Hingham

This document identifies the required stormwater maintenance activities associated with the proposed single-family home located at 10 Martins Cove, Lane. Below is an outline of an inspection and maintenance program to ensure the continued effectiveness of the proposed rain garden facility.

PROJECT OVERVIEW:

The proposed project, located at the above-referenced address, consists of the construction of a new single-family home, septic system, rain garden, and associated site grading. Runoff from the roof and is directed to a rain garden area that is sized in accordance with the Town of Hingham’s guidelines.

Rain Garden Maintenance:

The failure of rain garden areas is a significant issue caused by the lack of regular maintenance. Ensuring the long-term function of the rain garden involves careful attention while plants are being established and after that. The table below summarizes the maintenance activities that are necessary for the rain garden facility.

Rain Garden Maintenance Schedule		
Activity	Time of Year	Frequency
Water Plants (recommended 1-inch/week during the 1st year)	As needed	Right after planting, during the 1st season, and during time of drought
Fertilize & Pesticide	None	Never
Inspect & remove trash	Year-round	Monthly
Mulch	Spring	Annually
Remove dead vegetation	Fall or Spring	Annually
Replace dead vegetation	Spring	Annually
Weeding / Pruning	Spring or Fall	Annually
Perimeter Mowing - Do not blow grass clippings into the rain garden (may add extra nutrients)	As needed	As needed
Removal of Invasive species	As needed	As needed
Replace entire media & all vegetation	Late Spring/early Summer	As needed*

* Paying careful attention to pretreatment and operation & maintenance can extend the life of the soil media.

A landscaping contractor or the homeowner may complete the maintenance as mentioned above. Inspect pretreatment devices and rain garden regularly for sediment build-up, structural damage, and standing water. Inspect soil and repair eroded areas monthly. Apply mulch to void areas as needed. Remove litter and debris monthly. Treat diseased vegetation as needed. Remove and replace dead vegetation twice per year, spring and fall, with the same approved species. Replanting shall always be with native species. Cultivars, non-native species or invasive species are not permitted. During replanting, if plant confirmation is needed, consult with the Conservation Commission office before planting.

The use of pesticides, herbicides, and fertilizers is prohibited due to the proximity to Hingham Harbor. The proposed rain garden is designed to absorb excess nutrients; however, excess fertilization compromises the rain garden's pollutant reduction effectiveness, leading to weak plant growth, promotes disease and pest outbreaks, and inhibits soil life.

Remove invasive species as needed to prevent these species from spreading into the rain garden area. Replace mulch altogether every two years, in the early spring. Upon failure due to invasive species, excavate rain garden area, scarify bottom and sides, replace filter fabric and soil, replant, and mulch.

Because the soil medium filters contaminants from runoff, the cation exchange capacity of the soil media will eventually be exhausted. When the cation exchange capacity of the soil media decreases, change the soil media to prevent contaminants from migrating to the groundwater, or from being discharged via an underdrain outlet. The soil cation exchange capacity has a life expectancy of 5-10 years.

Plant maintenance is critical. Removal of dead vegetation each spring and replanting with native species is necessary for the effectiveness of the rain garden.

Cold Climate Considerations:

Never store snow in rain garden areas. All snow dumps must comply with MassDEP's guidance.