



# Assessment and Design of Stormwater Management Measures

## Bare Hill Pond Watershed Management Committee

Bare Hill Pond is a 320-acre, municipally-owned lake in the Town of Harvard, Massachusetts. The lake exhibits impaired water quality and eutrophic conditions as a result of excessive phosphorus. The phosphorus loading is derived from a variety of sources including stormwater runoff from the contributing watershed. In addition, bacteria loading from stormwater runoff is also a concern because the Town has a public swimming beach on the pond.

The Bare Hill Pond Watershed Management Committee retained the Horsley Witten Group, Inc. (HW) to conduct a watershed assessment for the 270-acre Harvard Village Center. This assessment identified the best available locations for managing the phosphorus, bacteria, and sediment loading in the watershed stormwater, as well as the most appropriate best management practices (BMPs) for each location.

HW then designed and permitted several community-level BMPs throughout the village center, including gravel-based constructed wetlands, bioretention areas, and water quality swales. These concepts were included in a successful application for a Clean Waters Act Section 319 Grant and were constructed in Summer 2010.

Client Contact:  
Nick Browse, Committee Member  
Bare Hill Pond Watershed Management Committee  
978-456-8281



[www.horsleywitten.com](http://www.horsleywitten.com)

- Civil & Environmental Engineering
- Wetlands Management
- Coastal Management
- Hydrogeology & Water Supply
- Stormwater Management
- Wastewater Management
- Site Assessment & Remediation
- Land Use Planning
- Education & Outreach



### Sandwich, MA

90 Route 6A  
Sandwich, MA 02563  
tel: 508-833-6600

### Newburyport, MA

30 Green Street  
Newburyport, MA 01950  
tel: 978-499-0601

### Providence, RI

370 Ives Street  
Providence, RI 02906  
tel: 401-272-1717

HW Contact:  
Michelle West, P.E.