

2010 Best Management Practice Site Visit Summary Report



Improving and protecting water quality in New Hampshire's watersheds



*Funding for this project was provided by the US Environmental Protection Agency
under Section 319 of the Clean Water Act*

Introduction

Each year the Environmental Protection Agency provides states with grant funding to address nonpoint source pollution issues through Section 319 of the Clean Water Act. Since 1993, the New Hampshire Department of Environmental Services has provided financial and technical support to local organizations that wish to implement nonpoint source related Best Management Practices (BMP's). The BMP's are designed to improve and/or maintain the water quality of a water body and ultimately the entire watershed that the water body lies within. BMP's may be behaviors or on the ground structures designed to reduce the amount of nonpoint source pollution entering a water body. The functions of BMP's include but are not limited to; reducing the amount of sediment, nutrients, bacteria or pollutants entering a water body, erosion control or reducing the volume of runoff entering a water body.



Grassed waterway to dissipate stormwater volume, reduce erosion and stop harmful pollutants and nutrients from entering the surface water.

In 2008 the NH DES Watershed Assistance Section began conducting BMP site visits as part of the implemented Section 319 projects. The purpose of a site visit is to monitor the success of structural BMP's and track any required maintenance and repairs. In addition, site visit results will aid in future BMP selection decisions. During the 2010 field season minor revisions were made to BMP site visit methodologies. The goal was to simplify and improve accuracy of the site visit inspection program. These revisions included changes to the field data collection sheet and the Nonpoint Source database.

2010 Site Visit Results

During the 2010 season, 26 BMP projects were visited by a field technician (see figure 1). The field technician found some of the BMP areas to have erosion on slopes near the BMP structure, though many of these were not having a notably negative effect on the BMP itself. In some cases, the cause of erosion was from the BMP working ineffectively while at other sites it was simply due to steep slopes at the BMP site. Another reoccurring

issue was that many of the information kiosks visited lacked any educational materials and listings of project funding sources. The field technician found eight sites that will require a follow up visit.

During the 2010 BMP site inspection season there were no pervasive problems or issues noted. Most of the BMP's visited this year involved physical changes to the landscape such as swales and different aspects of stream channel stabilization, whereas in 2009 most of the sites visited were catch basins or other water control devices. Many of the issues that were noted were unique to the BMP at hand and could not be generally categorized.

In conclusion, the majority of BMP's visited in 2010 were in good condition and functioning well. Recommendations were to develop a system for routine maintenance when applicable, and also remain in periodic contact with the grantees via phone or email to insure that the appropriate work is being performed in a timely and effective manner. Continued inspections of BMP's and maintaining working relationships with towns and organizations will ensure that implemented BMP's continue to function properly.

There were a number of BMP follow up repairs that took place in 2010 based on site visits from 2008 and 2009. One BMP site visit revealed swales that had significant erosion and sediment accumulation and one level spreader that was filled with sediment. The grantee had the swales lined with rip rap and cement reinforcing blocks and had the level spreader emptied. One Section 319 grantee organized the mechanical removal of a stand of the invasive plant species phragmites (*Phragmites australis*). In 2009, DES staff noted erosion resulting from stormwater that was diverting around a catch basin because of poor road grading and curb design. The grantee had the curbing replaced to divert the stormwater into the catch basin. This repair reduced the amount of stormwater volume entering the surface water and erosion at the BMP site.

BMP Examples



Rain garden



Healthy vegetation buffer

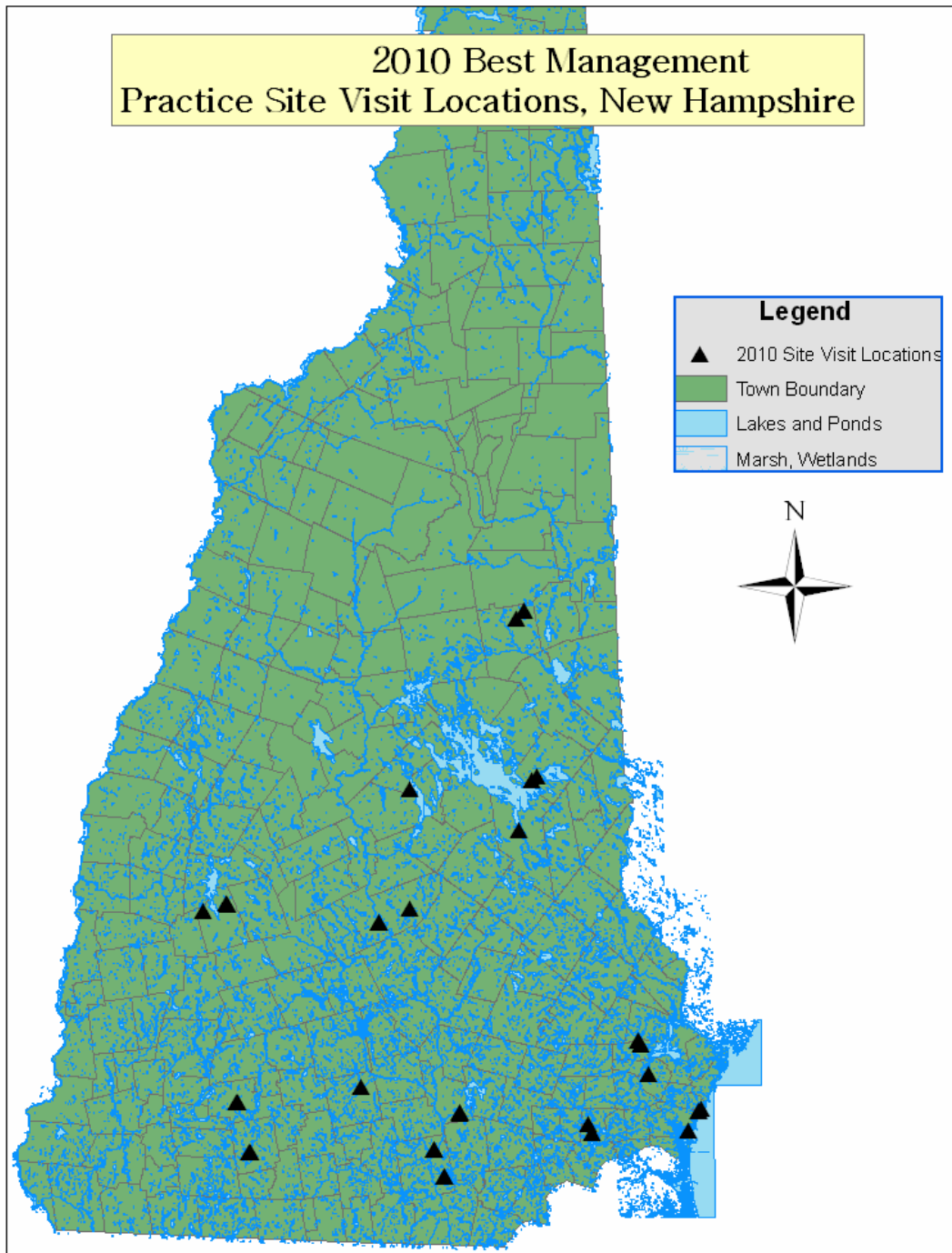


Vegetated Swale



Pervious paver boat ramp

Figure 1.



2010 Project Site Visits

Coastal Watershed

Project Number	Project Name	BMP Type	Town
R-99-C-01	Highland Avenue Stormwater BMP Project	Oil and Grit Separator	Hampton
R-99-C-02	Heron Point and Sliding Rock Restoration Project	Recreation Area Improvement, Grassed swale, Vegetative Barrier	Newmarket
R-99-C-04	Little River Salt Marsh Restoration Project	Wetland Enhancement	North Hampton
R-00-C-02	Stratham Circle Mill Pond Restoration Project	Dredging	Stratham

Connecticut Watershed

Project Number	Project Name	BMP Type	Town
B-99-CT-09	Beck Brook Runoff Response Program	Grade Stabilization Structure	Newbury
R-07-CT-01	Stream Restoration at Lower Mohawk and Colebrook Industrial Park	Stream Channel Stabilization	Colebrook

Merrimack Watershed

Project Number	Project Name	BMP Type	Town
R-99-S-01	The Chocorua Lake Project	Ditch Stabilization	Tamworth
R-00-S-02	Chocorua Lake Restoration Phase II	Road Crowning/ Ditching	Chocorua
B-00-M-02	Great Pond Watershed Protection Project	Ditch Stabilization, Kiosk	Kingston
B-01-M-09	Piscataquog River Riparian Restoration	Stream Channel Stabilization	New Boston

B-01-M-13	Chalk Pond Sediment and Erosion Control Plan and Outreach Program	Kiosk, Ditch Stabilization	Newbury
R-99-M-04	Depot Street Stormwater Runoff Project	Critical Area Planting, Urban Grassed Swale	Merrimack
R-99-M-05	Mast Landing	Vortech Units	Wolfeboro
R-00-M-04	Mine Falls Park Bank Erosion	Grade Stabilization Structure	Nashua
R-00-M-05	Mill Street: Install Stormwater Treatment & Replace Stormwater Drains	Urban Filtration Basin	Wolfeboro
R-01-M-07	Keewaydin Dredging Project	Dredging	Londonderry
R-01-M-08	Batchelder Hill Road Drainage Improvements	Ditch Stabilization	Meredith
R-01-M-10	Darrah Pond Erosion and Sediment Control Project	Kiosk, Grassed Waterway, Urban Catch Basin	Litchfield
R-02-M-04	Crystal Lake Water Quality Improvement Projects	Urban Catch Basin, Urban Grassed Swale, Urban Filtration Basin	Manchester
R-04-M-01	Lake Horace Marsh Restoration Project	Wetland Enhancement	Weare
R-05-M-01	Nutts Pond Watershed Improvement Project	Sediment Forebay, Water and Sediment Control basin, Urban Stormwater Wetland, Water and Sediment Control Basin	Manchester
R-05-M-04	Pemigewasset River Restoration Plan Implementation	Stream Channel Stabilization	Woodstock

B-06-M-03	Contoocook River Stormwater Improvements and LID Demo Project	Urban Porous Pavement, Urban Catch Basin, Raingarden/ Bioretention Basin	Peterborough
B-06-M-04	Jamie Welch Car-Top Access Erosion Control Project	Recreation Area Improvement, Recreation Land Grading and Shaping, Kiosk	Boscawen
B-07-M-04	Hancock Village Stormwater Management & Water Quality Improvement	Water and Sediment Control Basin, Recreation Area Improvement	Hancock
R-08-M-02	Griffin Beach Sedimentation Restoration Project	Urban Porous Pavement, Critical Area Planting, Recreation Area Improvement	Franklin