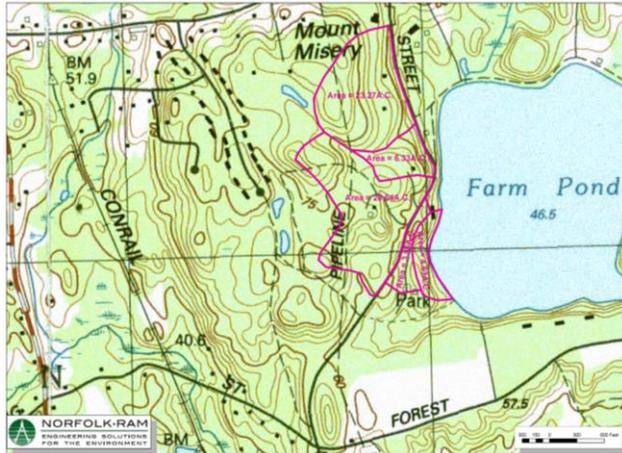


Farm Pond Water Quality

The Town of Sherborn has long recognized that stormwater run-off, erosion and other sources lead to some pollution of Farm Pond. The Town has been working diligently with its citizens and property owners to prevent this kind of pollution.



Farm Pond Locus and Drainage Area

Stormwater Treatment and Erosion Control Projects at Farm Pond

The Town recently implemented the “Farm Pond Stormwater Improvement Project” to prevent and reduce widely dispersed or “non-point source” pollutants (many of which are attached to sediment) contained in stormwater run-off from entering Farm Pond.

Using “best management practices” or BMPs, the Town installed rain gardens on Lake Street and the main walking paths to the beach to help control erosion, a new improved catch basin on Lake Street that captures sediment, and grates across the boat ramp road to re-direct run-off to capture sediment and divert to groundwater infiltration. All of these measures improve the quality of water entering into Farm Pond.

The steeply sloped cart path from the parking area to the beach is the most recently completed project and has been financed with Federal Funds from the Environmental Protection Agency (EPA) to the Massachusetts Department of Environmental Protection (the Department) under an s. 319 competitive grant.

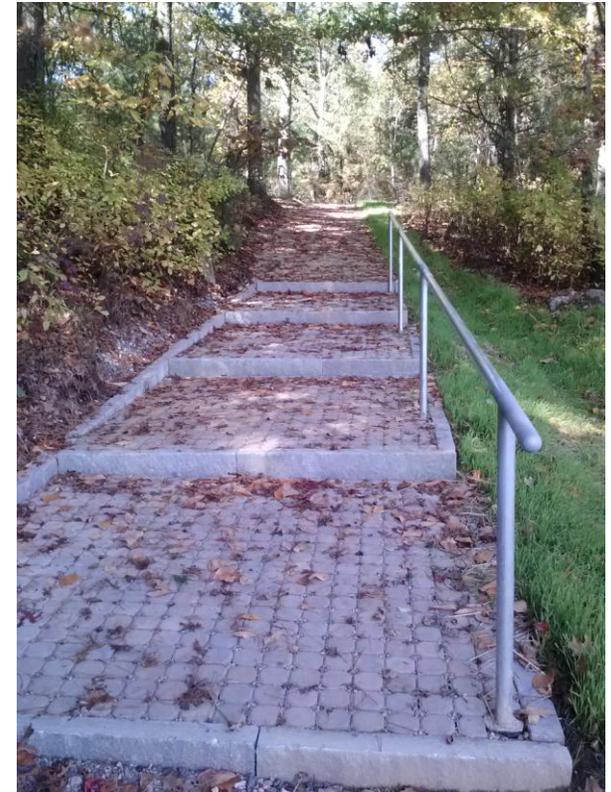
The existing cart path was retro-fitted with a reinforced geotextile mesh to stabilize the soils and the path was super-elevated to direct runoff to a vegetated swale on the downstream side of the path. The swale will filter sediment from the stormwater run-off. Crushed stone check dams within the swale will reduce the run-off velocity. At the base of the swale is a pre-cast concrete sediment trap for further sediment removal. The sediment trap will ultimately discharge to underground recharge chambers. At the base of the path, four new steps were constructed from patio stone pavers with a permeable sub-grade.

The swale, sediment trap, and underground recharge system will allow stormwater to be filtered and infiltrate into the ground, removing additional sediment and other pollutants, and reducing its erosive velocities before final discharge into Farm Pond.

The Impact of Stormwater

- Stormwater picks up debris, chemicals, dirt, animal waste, nutrients and other pollutants and washes it into our waters.
- Sediments cloud water, impair aquatic plant growth and destroy habitats. Sediment comes from run-off from roads, driveways and land, especially un-vegetated areas, around the pond. Studies show that various pollutants attach to sediment making it even more important to limit sediment run-off into the pond.

- Excess nutrients (often from lawn fertilizers) cause algae blooms. Algae decomposition removes oxygen from the water killing fish and aquatic life.
- Bacteria and other pathogens create health hazards and can make contact with water unhealthy resulting in beach closures.
- Debris -- bags, six-pack rings, bottles, and cigarette butts -- choke, suffocate and disable aquatic life including ducks, fish, turtles and birds.
- Household hazardous wastes - insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life.



Cart Path: new permeable walkway and swale to reduce erosion and increase stormwater infiltration

What About Bacteria Affecting The Pond

Over the past several seasons, the Farm Pond beach area has been occasionally closed, due to elevated levels of bacteria in the water, making it unsafe for swimming. The bacteria may come from several sources: flocks of Canada Geese that spend their season at the Pond, horses and dogs on the Reservation, human use of the Recreation Area, and septic systems surrounding the Pond.

What Can Residents Do?

- Residents with property on the Pond can create a physical barrier such as plantings along the water's edge to discourage the Goose population from hanging around Farm Pond.
- Make sure your septic system is properly maintained, including regularly pumping the septic tank.
- Protect the performance of your septic system by being careful about what goes down the drain, avoiding its use for disposal of most household chemicals, such as paints, solvents, auto fluids, and chlorine bleach. Many chemicals can harm the beneficial bacteria in your septic system needed to treat your sewerage.
- Educate young children about the importance of using the restroom facilities at the bathhouse.
- Clean up after animals in areas surrounding the Pond, including dogs and horses. Animal waste should be disposed of properly. Please note, no animals are allowed on the Farm Pond Reservation.

Stormwater Strategies

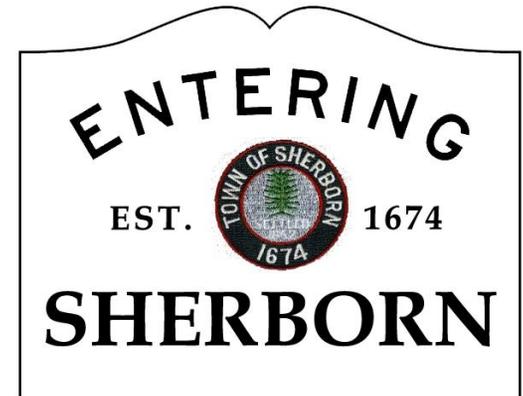
This project will reduce pollutants entering Farm Pond by taking advantage of Low Impact Development (LID) strategies. LID helps maintain or restore healthy water bodies and groundwater levels by mimicking natural patterns. LID techniques infiltrate, filter, store, evaporate and/or detain run-off. LID techniques tend to be small-scale and manage stormwater run-off close to its source.

Stormwater Improvement Project Team

The Town of Sherborn Board of Selectmen, the Farm Pond Advisory Committee, the Sherborn Conservation Commission and Community Maintenance and Development (CM&D), working with Norfolk Ram, applied for and received, a "Section 319 Water Quality Grant" from the EPA and Massachusetts Department of Environmental Protection to design and install the Cart Path stormwater treatment project for Farm Pond. The grant program runs for three years and was awarded in 2011. The grant also partly covered the costs of the other improvements. The Sherborn CM&D has participated in the installation and maintenance of the project as part of the Town's contribution to the grant.

The contents of this pamphlet do not necessarily reflect the views and policies of the EPA or of Massachusetts Department of Environmental Protection, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.

FARM POND STORMWATER IMPROVEMENT PROJECT TOWN OF SHERBORN



Sherborn Board of Selectmen

Tom Twining
Paul R. DeRensis
Peter D. Caruso

19 Washington Street
Sherborn, MA 01770
(508) 651-7850

<http://www.sherbornma.org>

Prepared by



NORFOLK-RAM

ENGINEERING SOLUTIONS
FOR THE ENVIRONMENT

One Roberts Road
Plymouth, MA 02360
(508) 747-7900

<http://www.norfolkram.com>
Email: wperry@norfolkram.com

