

Ontario-Wayne Stormwater Coalition

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Spring 2015

The Macedon Village Pride Committee restoration of the Butterfly Nature Trail at Canal Park was a project that involved removal of non-native and invasive plant species and establishment of a native meadow/ savannah plant community.



This project will improve the ecosystem, provide environmental education opportunities, and enhance the public enjoyment of the Nature Trail.

The site was previously dominated by non-native and invasive herbaceous and woody vegetation including:

Black Locust (*Robinia pseudoacacia*),
Tatarian Honeysuckle (*Lonicera tatarica*),
European Buckthorn (*Rhamnus cathartica*),
Black Swallow-wort (*Cynanchum louseae*),
Common Reed (*Phragmites australis*), and
Mugwort (*Artemisia vulgaris*). .

Several methods of removing the non-native invasive species were utilized:

- Mechanical cutting of invasive woody species was followed by a cut stump herbicide treatment with an approved glyphosate product.
- Foliar application of glyphosate was accomplished throughout the site to prepare for native seeding.
- Foliar spot application of glyphosate or triclopyr was directed to the remaining invasive species during the establishment period of native vegetation

Maintenance spot application of glyphosate or triclopyr will keep invasive species from recolonizing the site.

Native species require 3-5 years to fully mature and establish. Many of the native seedlings have been observed after the first growing season, which is a positive indication that the native seeding was successful.



RAIN GARDEN INSTALLATION IN VICTOR

A bit of snow and ice did not deter Town of Victor Highway Department crews from preparing for spring snow melt and runoff. A rain garden was prepared near the Swap Shop building. Native plants will be established to filter runoff, infiltrate precipitation to the soil, provide bird and butterfly habitat, and make a beautiful installation to be enjoyed by residents. Signage is being designed to identify the purpose of the project.

This installation was a joint effort of the Town of Victor Highway Department and Ontario County Soil and Water Conservation District. Grant funding was provided through the Finger Lakes-Lake Ontario Watershed Protection Alliance.



Ice on the puddles.



Outlet pipe from rain garden.



Placing stone and soil.



Topsoil application



Ready for planting.



Draft of a sign for the Rain Garden.




Rain gardens are applicable to home settings as well as large commercial or municipal structures.

Rain gardens are sited about 10 feet from a foundation, usually in the direction of natural water flow. The size of the garden is related to the amount of impervious surface drained.

Soils that have been compacted by heavy construction equipment will need to be amended by the addition of sand and compost. A shallow depression is created, with attention being paid to placing pervious soils or materials in the depression to allow infiltration of runoff.

Native, non-invasive, perennial or self-seeding plant species that tolerate intermittent wet and dry conditions are the best selections for rain gardens. Native plants are adapted to local soils, pests and climate conditions; therefore they need less care and need no applications of fertilizer or pesticides.

Rain gardens are designed to be low maintenance after they are established. Shallow (2") mulch helps maintain constant moisture during the first years of the garden.

Some suitable plants:	
	Purple Coneflower
	Summer Sweet
	Ninebark Shrub

LIVING NEAR A STORMWATER POND

The purpose of stormwater ponds is to collect, store, and purify stormwater runoff. They are built to improve water quality and prevent downstream flooding.

Construction of commercial and residential developments greatly increases the amount of impervious surface. Water from pavement, sidewalks, roofs, parking lots, patios and hardscapes can't infiltrate to the ground, so it runs off in increasing amounts at increased velocity. These factors cause soil erosion and resulting sedimentation of receiving surface water bodies.

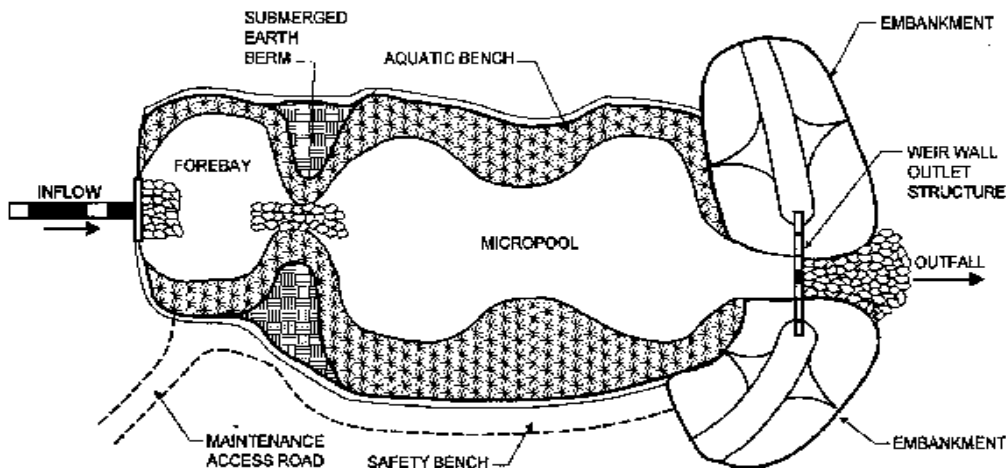
Contaminants from construction, polluted runoff from streets and driveways, lawn chemicals and other unwanted materials are also carried in stormwater. Deteriorating water quality in streams and lakes is the result.

Stormwater ponds intercept runoff, allow sediments and contaminants to settle out, and decrease velocity of flows to protect water quality, municipal infrastructure and private property

Stormwater ponds are built with a forebay to catch and settle out the greatest amount of sediment. Water leaving the forebay enters the larger storage area. An outlet structure and outfall area permit water to leave the pond in a controlled flow. Shallow areas near the shore – the safety benches and aquatic benches – create places for plants to grow and provide a margin of safety for people and pets.

The forebay usually needs to be cleaned periodically to retain capacity as sediments settle out of stormwater flows. Access to the pond will be necessary.

Components of a stormwater pond:



FAQs: STORMWATER POND MANAGEMENT CONCERNS

Cattails:

Cattails and other emergent plants are good for the stormwater pond. They stabilize shorelines, filter sediments, take up nutrients (nitrogen and phosphorus) and provide habitat for desirable wildlife. Cattail stems host colonies of micro-organisms that clean contaminants from the water. Cattails will not spread over upland lawns; they grow where their roots stay wet.

Geese :

Allowing cattails to grow on the aquatic benches will keep geese from entering adjacent lawns. Geese relish eating freshly mowed grass, but will avoid walking through tall plants where they can't see predators approaching.

Mosquitoes :

Mosquitoes breed in stagnant water. Properly designed and maintained stormwater ponds minimize stagnant water. Frogs, other amphibians and birds that live in the cover provided by cattails and other plants will help control insect populations.

Mosquitoes are more likely to breed in old tires, clogged roof gutters and other stagnant water sources than in stormwater ponds.

Algae Blooms :

Reduce or eliminate fertilizer runoff from adjacent lawns to prevent algae blooms. Phosphorus-free fertilizers are available (lawn grasses can't use phosphorus after they are established). At a minimum, leave a buffer of unfertilized lawn around the pond.

Keep grass clippings and pet droppings out of the pond. Use a NYSDEC approved dye (Aquashadow®) or barley straw to reduce algae growth. Wash vehicles on the lawn, not the driveway, to prevent soap from entering the pond.

Erosion and Siltation:

Plant shrubs and grasses and protect existing ones near the water's edge. Watch for invasive plants such as purple loosestrife and remove it before it becomes established. Watch for muskrat and beaver activity that might undermine the dam. Contact NYS DEC for control methods.

A Good Idea:

Maximize The Pleasure Of The Pond.

Stormwater ponds can be a beautiful as well as useful part of the community landscape. Native plants that require no fertilizer or pesticide will do well in a pond area.

Button bush, elderberry, witch hazel, New England Aster, monarda (bee balm), Joe Pye and other native shrubs and forbs will entice birds and butterflies to the pond.

Little care is needed after these plants are established as they are adapted to native soils and climate. Bluebird and purple martin houses will add to the richness of the setting.



ONTARIO-WAYNE STORMWATER COALITION STANDARD OPERATING PROCEDURES BEING DRAFTED

In order to better fulfill the purpose and function of the Ontario-Wayne Stormwater Coalition, a series of Standard Operating Procedures are being drafted to provide a rubric for necessary inspections, handling of potentially polluting materials, housekeeping standards, and other issues related to the tasks common to stormwater management.

The fifteen Standard Operating Procedures currently in draft form are being reviewed by a committee of the Ontario-Wayne Stormwater Coalition to determine their applicability to stormwater management in the two counties.

A series of check-off inspection and reporting sheets accompany the Standard Operating Procedures and will be helpful in both identifying and assessing the scope of problems; and in reporting remediation or steps taken to ensure any issues are resolved.

Sharing services, expertise and information allows the members of the Ontario-Wayne Stormwater Coalition to function quickly, efficiently and cost-effectively to protect the water quality of the areas they serve.



Pollution prevention is the goal.

(Draft) INDEX OF STANDARD OPERATING PROCEDURES

Outfall Inspections:

- SOP 1: Dry Weather Outfall Inspection
- SOP 2: Wet Weather Outfall Inspection

Housekeeping

- SOP 3: Catch Basin Inspection and Cleaning
- SOP 4: Spill Response and Cleanup Procedures
- SOP 5: Fuel and Oil Handling Procedures
- SOP 6: Oil/Water Separator Maintenance
- SOP 7: Storage and Use of Pesticides and Fertilizers

Construction:

- SOP 8: Construction Site Inspection
- SOP 9: Inspecting Constructed Best Management practices
- SOP 10: Erosion and Sediment Control

Illicit Discharges

- SOP 11: Locating Illicit Discharges
- SOP 12: Water Quality Screening in the Field

Training

- SOP 13: Stormwater Pollution Prevention and Good Housekeeping
- SOP 14: Minimizing the spread of Alien Invasive Species
- SOP 15: Private Drainage Connections



**Ontario–Wayne Stormwater Coalition
Members:**



**Town of Victor
Town of Farmington
Town of Macedon
Town of Ontario
Town of Walworth
Village of Victor
Village of Macedon
Wayne County Highway Department
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Ontario County Soil and Water
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