

# SHOREWOOD

is surrounded by two awesome waterways:

the **MILWAUKEE RIVER** and

**LAKE MICHIGAN**. The key to keeping these waters healthy is keeping the land clean and finding innovative ways to handle dirty storm water that flows over the land when it rains.

## WHAT IS STORM WATER?

Rain and snowmelt washes over the land and mixes with dirt, garbage, pet and yard waste and chemicals in our yards and streets. This dirty mix is "storm water runoff" and flows into storm sewers and often directly to Lake Michigan and the Milwaukee River. Don't forget we get our drinking water from Lake Michigan!

The Village of Shorewood and area businesses have installed innovative and natural ways to manage storm water and reduce flooding – these steps are called Green Infrastructure. Shorewood's Green Infrastructure Initiative was developed in 2012 to provide a road map for all projects in the Village.

Begin your Water Walk inside...



## WHAT CAN YOU DO TO MAKE A DIFFERENCE?

**What's on the land ends up in our waters**

**Leaves** - Keep grass clippings and chopped up leaves on your lawn - its natural fertilizer. Keep them out of sewers.

**Car washing** - Take your car to a car wash that can better handle soap and cleaners.

**Oil** - Never pour oil or chemicals down the drain or sewer.

- ✓ *Don't litter, and pick up litter you see*
- ✓ *Do a beach or river cleanup*
- ✓ *Pick up your dog's waste*

Check-out the

### SHOREWOOD WATERS PROJECT

[VillageofShorewood.org/watersproject](http://VillageofShorewood.org/watersproject)

The **Shorewood Waters Project** includes a series of Atwater Beach and Milwaukee River improvements and educational outreach to empower residents with solutions to protect, enhance and enjoy Shorewood's waterways.

Check-out ideas to reduce storm water in your yard at the Fresh Coast Guardians Resource Center at [www.freshcoastguardians.com](http://www.freshcoastguardians.com)

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Questions? Contact Kae @ 414-588-0617 or the Dept. of Public Works: 414-847-2650



# SHOREWOOD WATER WALK AND MAP

Take a neighborhood stroll to see native plants and unique ways Shorewood treats and manages storm water.



# TAKE A STROLL THROUGH SHOREWOOD'S GREEN INFRASTRUCTURE

## 1. Rainwater Collection Tanks: 3801 N. Morris Blvd.

In the Department of Public Works yard. These two large grey tanks, installed in 2013, have a combined capacity of 10,000 gallons. The rainwater collected is used to maintain landscape plantings throughout the Village. A one-inch rain can fill both of these tanks!



## 2. Milwaukee River Bank Restoration: South side of Capitol Drive

Follow the stone staircase to Shorewood's Riparian Trail. A 2018 project, funded in part by the Knowles-Nelson Stewardship Program, created a walking path and restored the area with native plantings to stabilize the slope and improve stormwater infiltration.



## 3. Median Bioswale: 1225 E. Olive St.

A rain garden in the middle of the street! This structure, installed in 2012, is designed to capture and filter street run-off before it reaches the Milwaukee River. With the ability to handle wet conditions and road salt, these plants are tough: Joe Pye Weed (*Eutrochium*), Catmint (*Nepeta*), Russian sage (*Perovskia*), Karl Forester Feather Reed grass (*Calamagrostis acutiflora*) and Chinese Silvergrass (*Miscanthus sinensis*).



## 4. Wilson Drive Stormwater Features:

In 2019, Wilson Drive was reconstructed and updated with improved lighting, trees and landscaping, bike lanes, bus pull-outs and improved pedestrian crossings and Oak Leaf Trail access. The bioretention swales and medians, along with added catch basins, have the ability to remove approximately 1,500 pounds of total suspended solids (TSS) each year.



## 5. Capitol Drive Biofiltration Structures:

These structures, installed in 2010 from Woodburn Street to Prospect Avenue, capture stormwater from a rain event or snow melt. Flow enters the structure and engineered soils and native plants and shrubs filter pollutants before the water enters the storm sewer system. Sites: Near Culvers: planted with Heavy Metal Switchgrass (*Panicum virgatum* 'Heavy Metal'). Corner of Woodburn Ave. planted with Red Twig Dogwood (*Cornus alba*), Heavy Metal Switchgrass and Fireworks Goldenrod (*Solidago rugosa*). Shorewood High School: 2 structures near the football field planted with Shenandoah Switchgrass (*Panicum virgatum* 'Shenandoah') and by the corner of Oakland and Capitol that contain New England and Alma Putschke Aster (*Symphotrichum novae-angliae* 'Alma Putschke'), Karl Foerster Feather Reed Grass and Heavy Metal Switchgrass.



## 6. Library Raingarden: 3930 N. Murray Ave.

This planting area was installed in 2005 to filter runoff from the upper plaza area. The garden contains a beautiful variety of native plants including Butterfly Weed (*Asclepias tuberosa*) which is Shorewood's Official Native Plant, Culver's Root (*Veronicastrum virginicum*), Great Blue Lobelia (*Lobelia siphilitica*), Joe Pye Weed (*Eupatorium purpureum*), (*Eutrochium dubium*), Nodding Pink Onion (*Allium cernuum*), Purple Cone Flower (*Echinacea purpurea*), Smooth Penstemon (*Penstemon digitalis*), Fox Sedge (*Carex vulpinoidea*) and Prairie Dropseed grass (*Sporobolus heterolepis*).



Butterfly Weed is Shorewood's Official Native Plant!



## 7. StormGUARDen:

This is a new innovative stormwater storage structure that combines a rain garden and a rain barrel. It was installed by Stormwater Solutions Engineering as part of an MMSD project in summer 2018. Water from the downspout spills into planting containers where special soils filter the water and plants absorb contaminants. It will store over 6 rain barrels of rainwater and filter it before it overflows. An additional unit can be found on the west side of the building. These devices can be installed in your yard too. Contact the Shorewood DPW for more information.



## 8. Green Parking Lots:

Constructed in 2015, both the Village Hall and Atwater School (west) parking lots are green! Water enters below-grade stone trenches that hold and filter the water before its slow release to the area's combined sewer system.



## 9. Biofiltration Structures: Atwater School, 2100 E. Capitol Drive:

These two structures, similar to the features in stop #4, are located by the school near Maryland Ave. They contain New England and Alma Putschke Aster (*Aster novae-angliae*) and Shenandoah and Heavy Metal Switchgrass (*Panicum virgatum*).



## 10. Biofiltration Structures: Metro Market

These structures, installed with the construction of the store, contain Iroquois Black Beauty shrub (*Aronia melanocarpa*), Blazing Star (*Liatris spicata*), Little Joe Pye Weed (*Eutrochium dubium*) and Caesar's Brother Siberian Iris.



## 11. Oakland Green Alley:

A series of storm drains in this alley between Kensington and Glendale Ave. direct the water to a sub-grade stone trench which infiltrates the water before its release to the storm system and ultimately the Milwaukee River.



## 12. Permeable Pavers:

The crosswalks on Kensington. These permeable pavers allow water to filter into the ground instead of running off like most pavement parking lots and sidewalks.

## 13. The Monarch Way Station Native Plants:

Atwater Park and the slope to the beach and sand dunes. In July of 2010 a major portion of this bluff collapsed from a large storm with heavy rains. Areas of the bluff have been planted with native plants and shrubs whose long root systems help stabilize the slope to the beach.



## 14. Green Alleys 1200 block E. Capitol Dr. and 4200 Block N. Wilson Dr.

The design of these alleys, located between Sheffield and Marlborough Dr., utilize ribbons of permeable pavers to capture stormwater and help improve water quality. They were installed in 2019.

