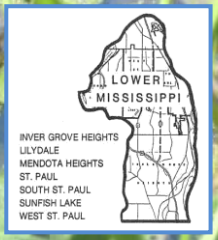
Self-Guided Driving Tour

Projects and Practices in the

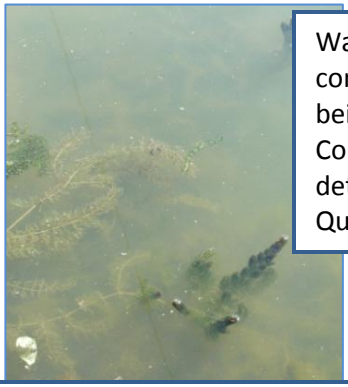
Lower Mississippi River Watershed Management Organization



DAKOTA COUNTY SOIL AND WATER CONSERVATION DISTRICT

1. Pickerel Lake, Lilydale

A 90-acre lake within the floodplain of the Mississippi River in Lilydale-Harriet Island Regional Park. During high water, River water enters the Lake.



Water quality appears to be poor but consistent data is lacking. The lake is being assessed by the MN Pollution Control Agency in 2010 and 2011 to determine if it's meeting State Water Quality Standards.

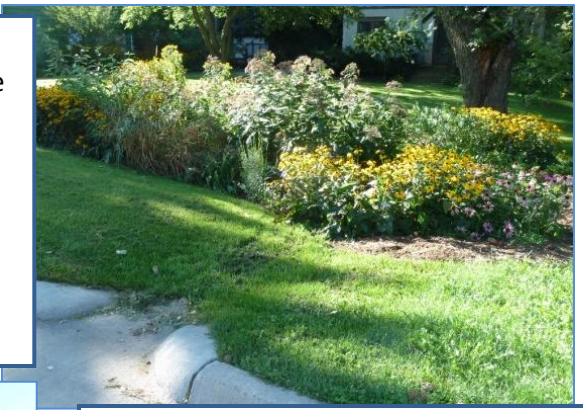
A shoreline restoration project on the northern shore was initiated in 2009 with work continuing in 2010 with native plantings. The shoreline was stabilized with staked biologs. A rodent-control fence will be removed once plants are established.

Directions: From 494 - Take 35E north; exit Hwy. 13 and turn right; turn right immediately on Lilydale Rd; travel to parking lot and canoe launch on right.

Recreationally, the lake is often used for canoeing, kayaking, fishing and ice fishing.

2. Residential Raingardens, Mendota Heights

These beautiful and mature raingardens were installed by the City in 2007 as part of a street reconstruction project. Thirteen gardens were installed in residential yards throughout this neighborhood.



Cuts were made within the street curbs (called curb cuts) to route stormwater into the gardens. Three different garden designs hold runoff from a 0.5 to a 2.8 inch rain, depending on the garden. The stormwater then seeps into the ground over the next two days. The gardens are maintained by the homeowners. Sand and debris that build up in the curb cuts should also be cleaned out by homeowners.

In 2008 and 2010, the city continued to install raingardens during street reconstruction projects wherever feasible. Reconstruction projects offer a unique opportunity to retrofit best management practices in older neighborhoods.

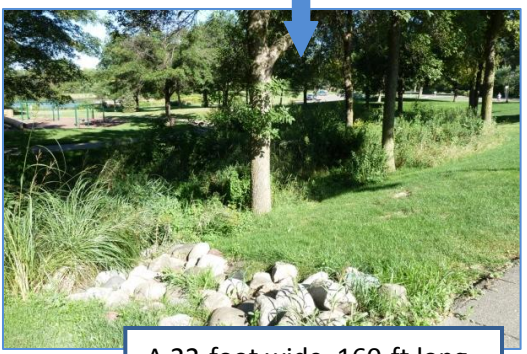
Directions: From 35E, exit Hwy. 110 East; after 2.5 mi, turn left on Delaware Ave.; after 1.5 mi, turn left on Emerson Ave.

3. Thompson Lake County Park, West St. Paul

In 2003, with a grant and technical assistance from the Soil and Water Conservation District, Dakota County installed several practices to improve stormwater management in Thompson Lake County Park.

A 175-foot shoreline improvement project stabilized the bank and added wildlife habitat and water quality benefits with the addition of shoreland plantings.

Raingardens were also incorporated into the landscape during parking lot reconstruction. This garden between the parking lot and the shoreline can capture and hold 15,000 gallons of runoff before overflowing into an emergency outlet.



A 22-foot wide, 160-ft long bioswale off the visitor center parking lot slows runoff and allows some of it to infiltrate before flowing over lawn and into the lake.

Directions: Travel north on Delaware Ave. to Butler Ave; turn right; after 2 mi turn right on Stassen Lane into park.

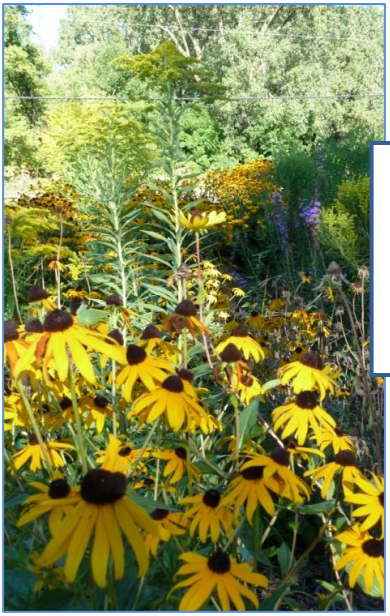
4. Garlough Elementary School, West St. Paul

Garlough Elementary is an environmental magnet school in West St. Paul. In 2007, their front lawn was converted into a 600 sq. ft. raingarden capable of storing and infiltrating 6,290 ga. of runoff.


Before Project


After Project

Three hundred hours of volunteer labor from parents and students contributed to the total project cost of $8,700. A $4,000 grant from the Dakota County Soil and Water Conservation District paid for the materials and technical assistance needed.



Native plants and flowers within the raingarden and since planted throughout the rest of the front lawn now attract butterflies, bees, and other wildlife while significantly reducing stormwater from this site.

Directions: From Hwy. 52 south, exit on Wentworth Ave. and turn right; after 2 mi turn left on Charlton St. School is across from Dodge Nature Center.

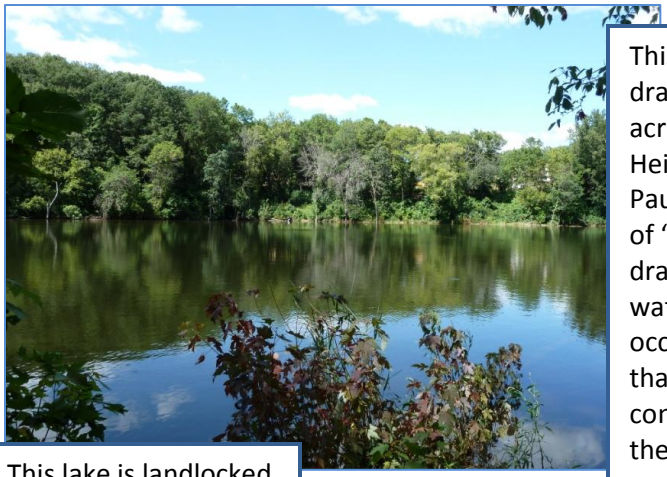
5. Cub Foods Commercial Area, West St. Paul

With much of the watershed developed into commercial or industrial uses, large areas of impervious surfaces like this one are common. Due to their age, while many of these areas control the *rate* of stormwater runoff into local waterbodies, few areas actually *reduce* or *treat* the stormwater to reduce pollutants before entering a waterbody. And, it doesn't take a huge storm to generate a big problem: a 1-inch rain falling over a 1-acre parking lot can produce over 27,000 gallons of runoff.

As areas like this redevelop, opportunities arise to include practices that reduce stormwater volumes and treat stormwater runoff. Also known as Low Impact Development, or LID, these practices can also conserve groundwater, enhance the site aesthetically and may even include food and habitat for butterflies, bees and other beneficial insects and animals. Visit http://www.lowimpactdevelopment.org/ for more information on LID.

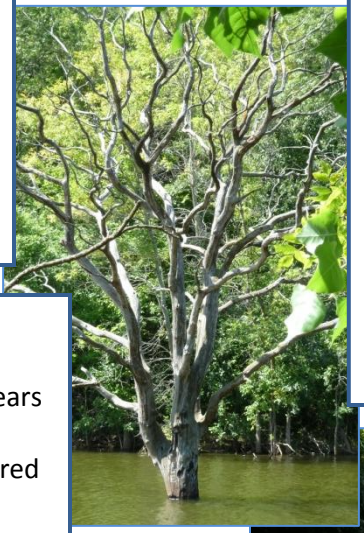
Directions: Follow Charlton St. south to Marie Ave., turn left; after 1 mile, turn right on S. Robert St.; in half-mile the shopping center is on right in NW corner of Mendota Rd. and S. Robert St.

6. Seidl's Lake, South St. Paul



This 6.5-acre lake drains an area of 412 acres in Inver Grove Heights and South St. Paul. It is an example of "intercommunity drainage" within the watershed which occurs when more than one community contributes runoff to the same waterbody.

This lake is landlocked, meaning there is no outlet to allow water to drain from the lake. Therefore, all the stormwater from its watershed stays in the basin until it evaporates.



Dead trees ringing the shoreline and trails underwater are a testament to high water levels. If stormwater is not infiltrated or diverted within its watershed, the lake needs an outlet.

The water quality of Seidl's Lake, has been monitored for many years and appears to be declining. It is considered a "Category II" by the LMRWMO; used for non-contact recreation.

Directions: Follow Mendota Rd. east, go under Hwy 52, road becomes Southview Blvd. Continue and turn right on 14th Ave. S, drive two blocks, turn right on 4th St. S., park on street at Seidl's Lake Park.

7. Bridgepoint Business Park, South St. Paul

Ponds like the two found in the new Bridgepoint Business Park are a common feature in urban landscapes. These basins, also called NURP (Nationwide Urban Runoff Program) ponds, capture and detain stormwater for a certain period of time. The ponds offer some water quality benefits because heavier particles and the pollutants that attach to them settle to the bottom of the pond. Water is then slowly metered out via an outlet pipe. This is considered stormwater rate control, as opposed to volume control, because the rate of runoff to a downstream waterbody is slowed, but the volume of runoff remains the same. These ponds need regular maintenance to remove the sediment that builds up over time.

The second pond features a 320-foot swale at its outlet which helps filter stormwater leaving the pond and allows some water to infiltrate before entering the stormsewer system and downstream waterbodies.

Directions: From Southview Blvd, drive east, turn left on 3rd Ave. S., turn right on Grand Ave., turn right on Concord St. S., turn left on Bridgepoint Dr. As road curves left, ponds and swale are on right.

8. Wakota Ice Arena, South St. Paul

In 2010, the City of South St. Paul received cost share and technical assistance from the Dakota County Soil and Water Conservation District to treat stormwater at the Ice Arena during reconstruction of the parking lot.

Runoff from the 5.5 acres of impervious surface was previously untreated but is now captured within two bioretention cells (raingardens). Additionally, a 2,100 sq. ft. area was converted into a designated snowmelt area for rink ice shavings and parking lot snow removal.

Directions: From Concord St. S., travel south, turn right on 6th St. S. at stoplights, turn right up the hill then left into the arena parking lot. Ponds at front end and back end of parking lot.

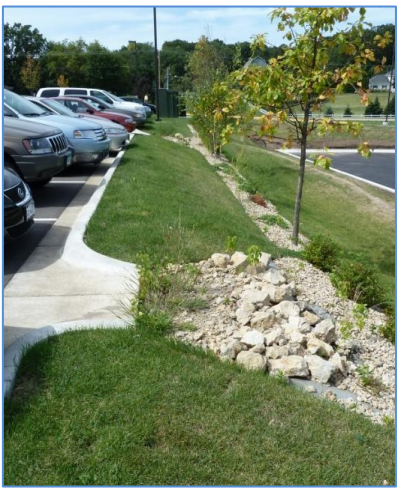
9. Inver Glen Senior Living, Inver Grove Heights

In December 2006, the City of Inver Grove Heights adopted its Northwest Area (NWA) Stormwater Manual which is a unique approach to stormwater management compared to many areas in the Twin Cities. The 3,410-acre area in the northwest portion of the city contains numerous landlocked basins. Rather than routing stormwater to the Mississippi River through a regional pipe system, the City works to mimic the natural hydrology of the site, infiltrating stormwater as close to the source as possible.

Key Goals of the NWA Stormwater Approach:

- ✓ Minimize connected impervious surfaces
- ✓ Increase flow path and time over pervious surfaces
- ✓ Decentralize stormwater treatment
- ✓ Protect natural systems and processes

An example of this stormwater management approach can be seen at the Inver Glen Senior Living Center. Curb cuts in the parking lot direct flow to raingardens and swales landscaped into the setting.



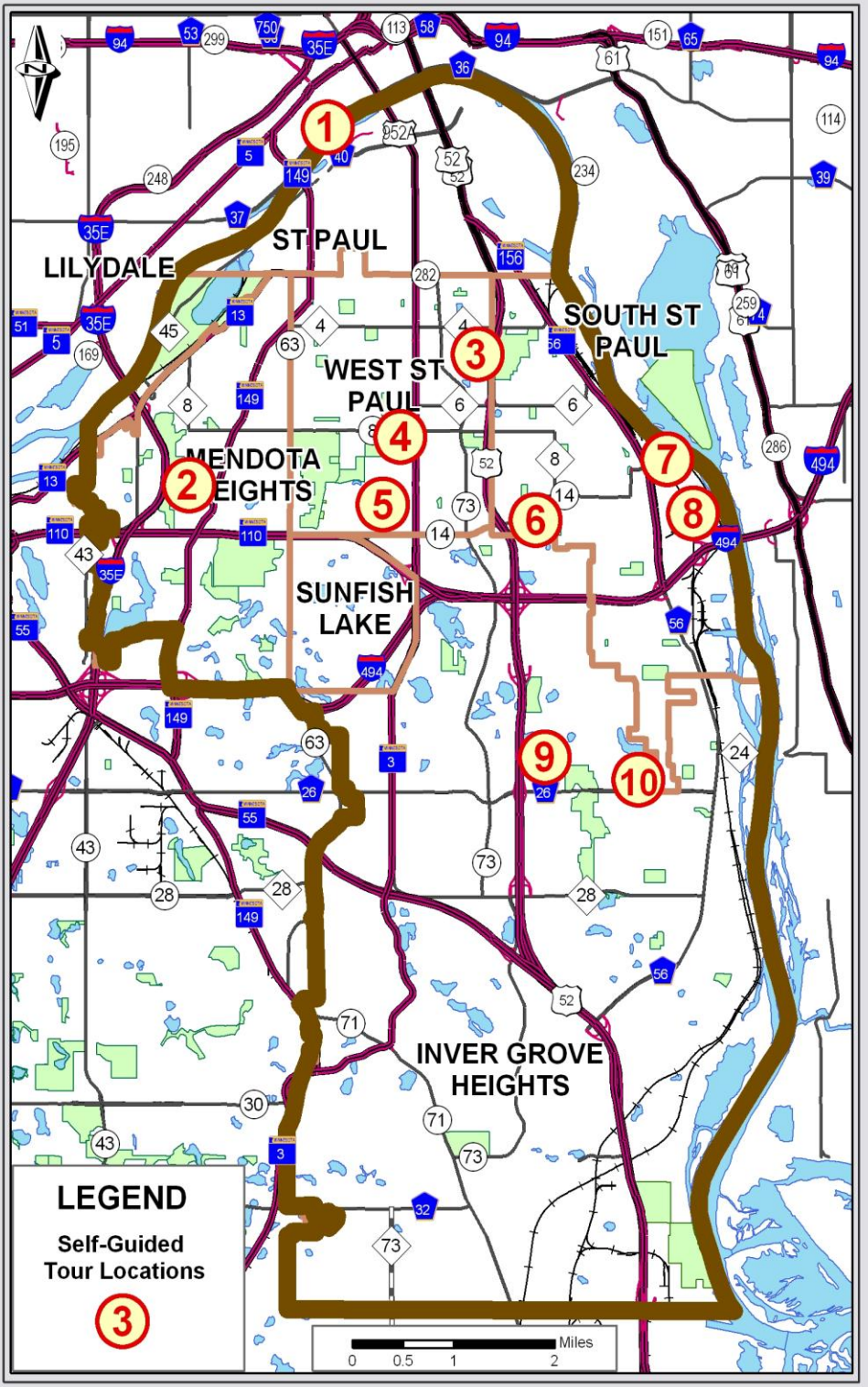
Directions: From Concord St. S., go south – then head west on Hwy. 494, exit Hwy. 52 south, exit Lone Oak Rd (70th St.), head west, after 1.25 mi, turn left on Allen Way. Senior Center is on your left after curve in road.

10. Bohrer Pond, Inver Grove Heights

Directions: Head east on Lone Oak Rd., turn left on Clayton Ave., turn right on 67th St. E and follow this around – turns into Clomen Way. Pond is on your right – park on street when no homes are between street and pond.

The southern shore of Bohrer Pond was restored through a large project with the Dakota County Soil and Water Conservation District, the City of Inver Grove Heights and the homeowners association.

Over 1300 feet of shoreline was graded to reduce concentrated flow from runoff, stabilized from erosion with rock and plants, seeded with native grasses and flowers, and planted with shrubs in a 25-foot wide buffer or filter strip along the shore. These practices reduce erosion, improve water quality by filtering nutrients, pesticides and other pollutants from runoff, improve riparian wildlife habitat, and improve aesthetics. The total project cost of $45,320 came from a State grant with local match from the City.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