



Our Mission

The Sherburne Soil & Water Conservation District is dedicated to working directly with landowners and agencies in order to promote the wise and sustainable use of our land and water related resources; to educate and inform the public about these uses; to help solve the resource problems within the District and to serve as a county wide natural resource information referral center.

Sherburne Soil & Water Conservation District
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Elk River, MN 55330
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www.sherburneswcd.org



SHERBURNE
SOIL & WATER
CONSERVATION DISTRICT



2012

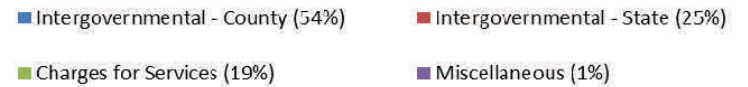
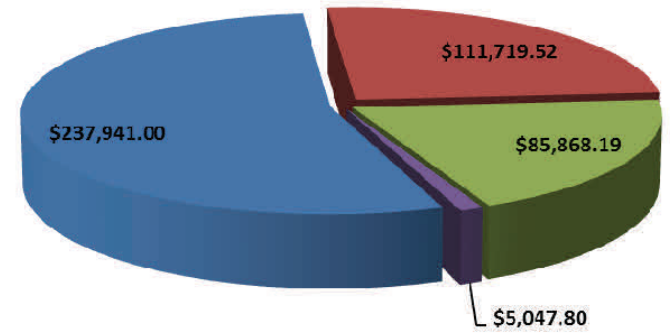
Sherburne SWCD Highlights

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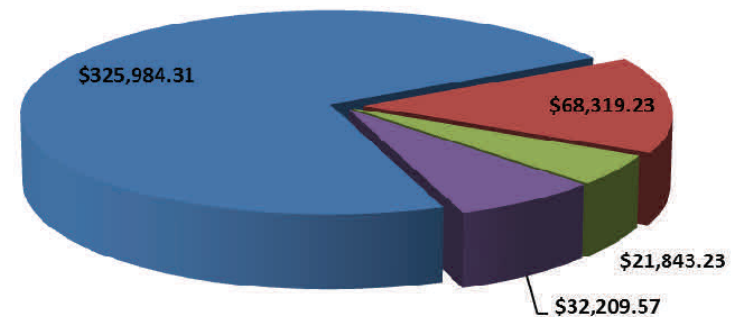
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Financial Summary

Revenue Summary



Expense Summary



Sherburne SWCD Services

There are fees associated with some of the services we offer. Please contact our office for more information

- Tree Planting
- Prairie Restoration/Planting
- Pasture Restoration/Planting
- Annual Tree Sale
- Forest Stewardship Plans
- Wetland Delineations
- Rotational Grazing Plans
- Manure Management Plans



Tree Planting



Tree Sale

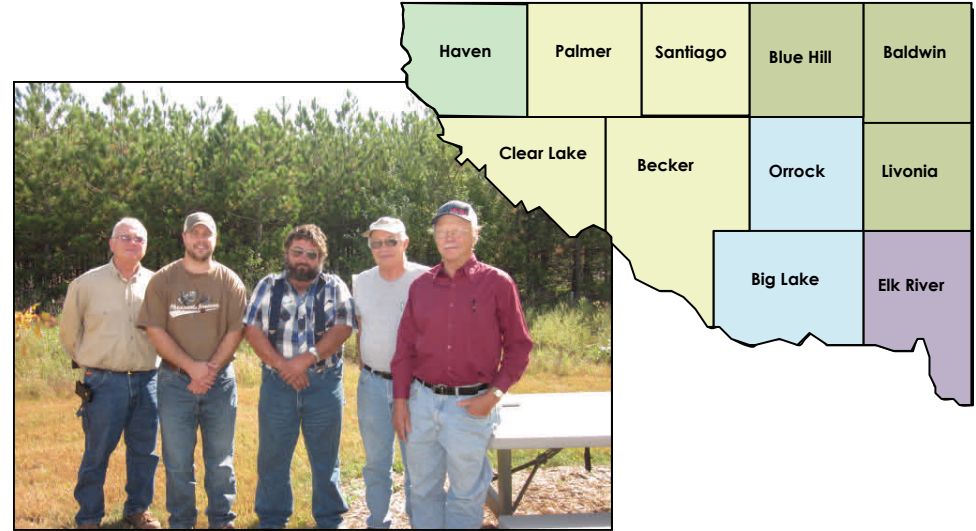


Forestry



Native Prairie

Sherburne SWCD Supervisors



From Left: David Berg, Jason Selvog, Larry Goenner, Doug Hipsag, Roger Nelson

District I - Douglas Hipsag, Treasurer






District II - David Berg, Reporter

District III - Larry Goenner, Chair

District IV - Jason Selvog, Vice Chair

District V - Roger Nelson, Secretary

Locally Elected SWCD Supervisors

-  District I
-  District II
-  District III
-  District IV
-  District V

Sherburne SWCD Staff



Back:
Tiffany Determan, Water Resource Specialist,
Frances Gerde, District Aide and Francine Larson, Manager

Front:
Bill Bronder, Resource Conservationist and
Gina Hugo, Resource Conservationist

NRCS Staff

Left:

Miranda Wagner,
Soil Conservation
Technician

Right:

Mary Monte,
District Conservationist



Helping People Help the Land

2012 Highlights/Statistics

Accomplishments at a Glance

● County Forestry

- Trees Sold: 22,000
- Trees Planted 22,500
- Urban Forestry Committee
- Over 90 tree site visits

● Wetland Conservation Act (WCA)

- Over 50 site visits

● Stormwater

- 2 bio-retention basins
- 2 raingardens
- Total square feet: ~4,978

● Shoreline Restoration

- 2 lakeshore restorations
- 2 stream bank restorations
- Total linear feet: 775
- Total square feet: ~11,770



Sherburne County Veterans Memorial

In 2012, Sherburne County Veteran's Services broke ground on a long awaited memorial on the grounds of the Sherburne History Center. It was the desire of the planning committee to have the memorial set in attractive vegetation that would blend with the native prairie landscape that already blanketed the campus of the History Center. For the "turf", blue grama was chosen for its inherent low profile, soft green blades and outstanding drought tolerance. Incidentally the site was not to have irrigation, making traditional turf absolutely infeasible. A border of 60 prairie rose bushes were planted to define the space and set it apart. The memorial is also bordered on the north and east by a driveway and parking lot, a natural screen was needed to buffer memorial visitors from the comings and goings of the Center. For this purpose, a non native tree was chosen for its unparalleled suitability to urban settings, hardiness, and beautiful summer blossoms; it was the Japanese Tree Lilac. Fifteen of these were planted between the memorial and the asphalt.

This project was a pure pleasure to work on. The SWCD staff worked alongside County Public Works staff, Veteran's Service staff, History Center staff, County Grounds Maintenance and Sherburne County Sentence to Serve. As the vegetation takes hold, the SWCD will continue to coordinate maintenance with these departments to ensure a successful establishment.



Other Sherburne SWCD Activities

U of M Plant Materials Site

The Plant Materials site is located in Becker and has a wide range of different tree, shrub, and herbaceous species planted for demonstration. Sherburne County is in the Anoka Sand Plain, which as its name states has very sandy soils. The Plant Materials site is meant to demonstrate how well different plant species grow in the poor soils. The Sherburne SWCD provides maintenance when needed at the site such as planting grass in between rows, weeding, pruning and evaluating plant health. During the summer contributing agencies get together for an annual weeding of the entire grounds.



Miscellaneous SWCD Activities

- Nitrate Testing Clinic
- Soil Quality Testing
- TMDL implementation
- Biomass at Bridgeview

2012 Conservation Cooperator

The Sherburne SWCD has selected the City of St. Cloud - Public Services as our Conservation Cooperator for 2012. In 2011, the City of St. Cloud, partnering with the Sherburne District, took a proactive approach to complete a stormwater retrofit assessment in Southeast St. Cloud. The assessment identified the best locations to retrofit Best Management Practices to ultimately reduce nutrients entering the Mississippi River. As a result, the city designed, installed and will maintain 20 rain gardens in an established residential neighborhood. Because of their effective outreach efforts, the City has plans to continue the program by installing up to 15 additional rain gardens in 2013.



Noah Czech, Stormwater Compliance Specialist



City of St. Cloud rain garden one year after planting

Programs

County Forestry

- Responded to over 90 tree health inspection site visits
- Organized Urban Forestry Committee to address growing concern for Emerald Ash Borer (EAB)
- Developed forest management plans for landowners
- Biomass at Bridgeview Park
- Tree Planting with Boy Scouts
 - 500 trees were planted in Big lake



Native Buffer-Prairie Enhancement

- 31.5 acres of land was converted into prairie
- 87.5 acres of existing prairie was managed with a prescribed burn and/or enhanced with a seeding of local ecotype forbs (flowers)



Native grasses and wildflowers after the benefits of a prescribed burn.



Programs

Major Watershed Project

Coordinated efforts to protect and restore water quality in the Mississippi River (St. Cloud) Watershed continued to make headway in 2012.

Water Health Assessments

The MPCA completed a Watershed Assessment Report and Lakes Assessment Report to assist planners with identification of waters meeting standards set by the State in which to focus the use of time and funds for cleanup and protection in the final Watershed Restoration and Protection Plan (June 2014). For more information please visit the MPCA Watershed Website at: <http://www.pca.state.mn.us/hqzqdd6>

Civic Engagement

The Civic Engagement planning committee established a Watershed Community Leaders team composed of representative from local social clubs, groups and businesses. Members of the team serve the watershed community by expanding their current knowledge base, passing the knowledge on to other citizens within their community and by providing feedback (based on community values, ideas, concerns and priorities) to technical experts on implementation aspects of the project. During the first official gathering, held in January 2013, the team toured the St. Cloud Drinking Water Treatment Plant.

I LIVE. I WORK. I PLAY. I AM THE MISSISSIPPI RIVER (ST. CLOUD) WATERSHED

Website: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/watersheds/mississippi-river-st.-cloud.html>



Other Sherburne SWCD Activities



Great Sunflower Project

New to the SWCD in 2012, The Great Sunflower Project is the largest citizen science project focused on pollinator conservation. Allows researchers to better understand our native bee populations. Free sunflower seeds were given away at the annual Tree Sale to interested participants. Over 80 seed packets were distributed.

Invasive Species Removal

Two County parks have been getting much need TLC this passed year. **Bridgeview** is no stranger to our SWCD staff. For the passed several years there has been a battle with buckthorn that quickly enveloped the entire understory of the once pristine oak forest along the Mississippi. This year, critical period cutting was done during both the winter and summer months. A prescribed burn is planned for the spring of 2013. Buckthorn takes several years to eradicate. Each year more native plants are being spotted in the understory.



Jack-in-the-Pulpit, Bridgeview



Brush cutting buckthorn, Bridgeview



The **Oak Savanna** park in Becker is not as infested as Bridgeview, and we want to keep it that way. Last fall SWCD staff spent several days cutting buckthorn and treating the cut stumps with a concentrated glyphosate herbicide. The park may have low numbers of buckthorn, but it only takes a few seasons for it to take hold and spread. Early efforts will prevent an infestation similar to Bridgeview.



Other Sherburne SWCD Activities

5th Annual Elk River Cleanup

The cleanup event is growing bigger every year! This year over 35 volunteers, SWCD, and NRCS staff got together in early October to spend a few hours cleaning up trash along Big and Mitchell Lakes, the Elk River and some of its tributaries. Together the cleanup crews collected over 800 lbs of trash!



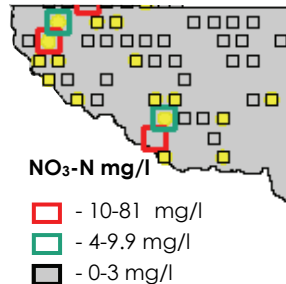
Elk River in Big Lake



Big and Mitchell Lakes Crew

Central Sands Well Network

The Minnesota Department of Agriculture started the Private Well Network Study in 2010 to gather data on the current levels of nitrate in ground water. Their long term goal is to observe how the nitrate levels are trending. The SWCD met with 15 landowners (locations highlighted in yellow) that signed up to be apart of this study. A GPS location was taken of their well and information regarding its construction was gathered.



Conservation Corps Apprentice

For the second year in a row our office was lucky enough to get a conservation corps intern for the summer months. The Minnesota Conservation Corps started the Apprenticeship program in 2011 to allow young adults to gain experience in SWCD offices. Funding comes from the Clean Water Land and Legacy Amendment. The intern assisted the SWCD staff with prairie plantings, water quality monitoring, tree health inspections, BMP installation, and invasive species removal.



Programs

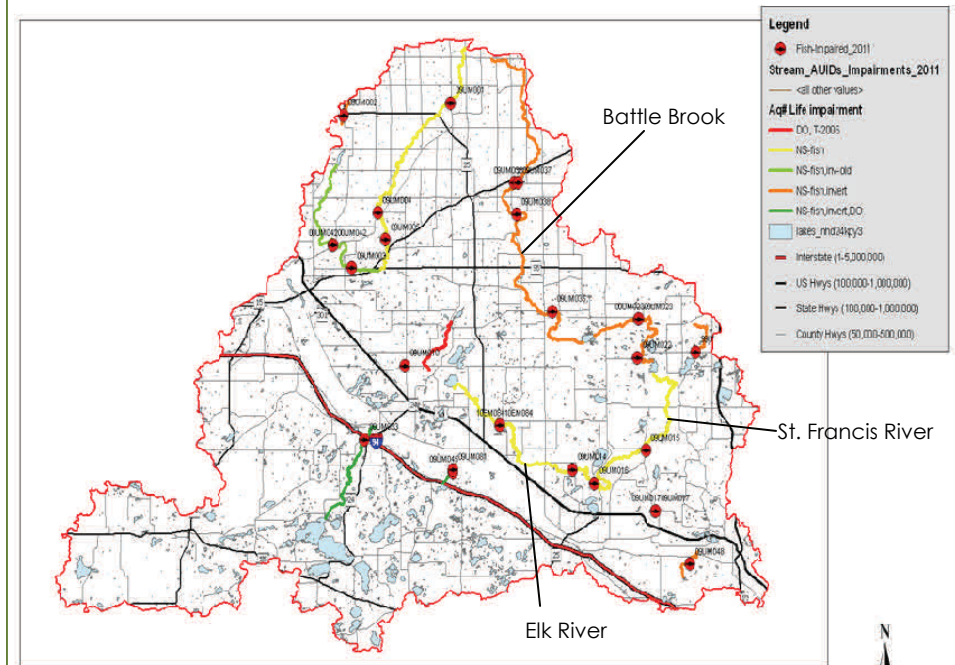
Major Watershed Project

Clean-up Plans

Completion of EPA required Total Maximum Daily Loads (TMDLs) for the following streams and lakes listed on the States Impaired Waters List prior to 2010:

- Low dissolved oxygen: Battle Brook (County ditch 18 to Little Elk Lake), Rice Creek (Rice Lake to Elk River), and Clearwater River (Clearwater Lake to Mississippi River).
- Excessive Nutrients: Julia, Briggs, Rush, Birch and Orono Lakes (Sherburne County); Donovan Lake (Benton County); Indian, Mink, Somers, Silver, Locke and Fish Lakes (Wright County).
- Impaired Biological Life: Stressors will be identified for portions of the Elk River, Mayhew Creek, the St. Francis River, Battle Brook, Clearwater River, Silver creek, and Unnamed Creek.

Biological Impairments in MSC Watershed (focusing on Sherburne County)



Programs

Education and Outreach

- Pollinator Week
- Environmental Education Days
- County Fair Booth
- Shoreline Buffer Maintenance Workshop - Briggs Lake Chain
- Conservation Tour of Practices



Clean Water Funding

Since the passage of the Clean Water, Land, Legacy Amendment in 2008, the SWCD has been the recipient of several Clean Water Funds administered by the Board of Soil and Water Resources (BWSR).

In 2010, we received \$81,600 for shoreline stabilization and storm water treatment projects. Also in 2010, we partnered with the Metro Conservation Districts and the City of St. Cloud on another Clean Water Fund grant that resulted in the installation of 20 rain gardens in the City of St. Cloud.

In 2011 the ERWA was awarded a CWF grant to address storm water runoff and surface water quality concerns within the watershed. In 2013, we again partnered with the Metro Conservation Districts on a Clean Water Fund grant that will be used to assess sub-watersheds for prioritizing types, costs, and locations of storm water treatment practices.



Projects

Elk River Stream Bank Stabilization

A property located on the Elk River had been experiencing serious stream bank erosion about one foot per year, due to high water levels in the recent years. The landowner expressed concern about property loss and water quality degradation. Most of the flat property is in the flood plain and located on a bend in the river which makes for a perfect site for erosion. A combination of rip rap and plants was installed to ensure the stream banks protection. Meadowsweet and red osier dogwood shrubs were planted into erosion control blankets with a native seed mix. The plants will prevent runoff from entering the stream unfiltered as well as hold the soil when water levels rise. The stream bank restoration project covered 2,430 square feet.



TP Reduction: 5.3 lbs/year

TSS Reduction: 4.9 tons/year



Before



During



During



After

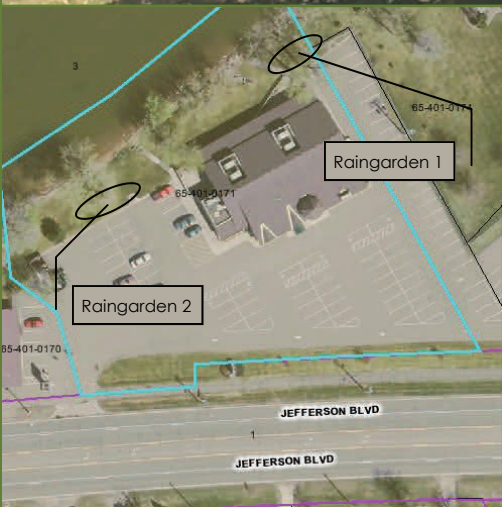
Projects

Big Lake Raingarden-Russell's on The Lake

Russell's on The Lake, as its name states is located on Big Lake. The parking lot is roughly 2 acres and drains directly into Big Lake with no treatment. The owner of Russell's felt the need to mitigate the stormwater runoff by installing two raingardens on both sides of the restaurant. The raingardens were installed in October with a total of 300 plant plugs. With a combined area of a little over 900 square feet, each raingarden will reduce the amount of total phosphorous by 40%.



Raingarden 1



Raingarden 2

USDA-Natural Resources Conservation Service (NRCS) Programs

Environmental Quality Incentive Program (EQIP) is a voluntary program that provides financial and technical assistance to agricultural producer to implement conservation on private land. EQIP assists producers with improving the natural resources of soil, water, plant, animal, and air.

2012 EQIP Funding Highlights in Sherburne County

- \$66,692.00 EQIP contracts funded in 2012
- 7,680 feet of Irrigation Low Pressure Conversion along with approximately 540 acres of Irrigation Water Management that will be completed each year for 3 years
- Abandoned Well Sealing
- 35 acres of Field Borders seeded to native grasses/forbs
- No-till Planting of soybean & corn on 262 acres for 3 years
- Seasonal High Tunnel



Irrigation Low Pressure Conversion 2012



Corn planted into No-Till soybeans 2012



Seasonal High Tunnel constructed in 2010 and 2011. 2178 sq ft each

USDA-Natural Resources Conservation Service (NRCS) Programs

Conservation Stewardship Program (CSP) is available to agricultural and forestry producers to address resource concerns on their land along with improving or maintaining existing conservation systems.

Highlights of 2010 - 2012 CSP Contracts Funded in Sherburne County

- Five forestland contract enrolled on 197 acres for a total contract obligation of \$4,934.00
- Five cropland contracts enrolled on 3043 acres for a total contract obligation of \$130,419.00

The conservation provisions in the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill) will provide conservation opportunities for farmers and ranchers for years to come. The new provisions build on the conservation gains made by farmers and ranchers through the 1985, 1996 and 2002 Farm Bills. They simplify existing programs and create new programs to address high priority environmental goals.

Conservation programs under the 2008 Farm Bill are:

- Agricultural Management Assistance Program (AMA)
- Chesapeake Bay Watershed Initiative (CBWI)
- Cooperative Conservation Partnership Initiative (CCPI)
- Conservation of Private Grazing Land Program
- Conservation Reserve Program (Farm Service Agency)
- Conservation Stewardship Program (CSP)
- Environmental Quality Incentives Program (EQIP)
- Agricultural Water Enhancement Program (AWEP)
- Conservation Innovation Grants (CIG)
- Farm and Ranch Lands Protection Program (FRPP)
- Grassland Reserve Program (GRP)
- Healthy Forest Reserve Program (HFRP)
- Small Watershed Rehabilitation Program
- Wetlands Reserve Program (WRP)
- Wildlife Habitat Incentive Program (WHIP)



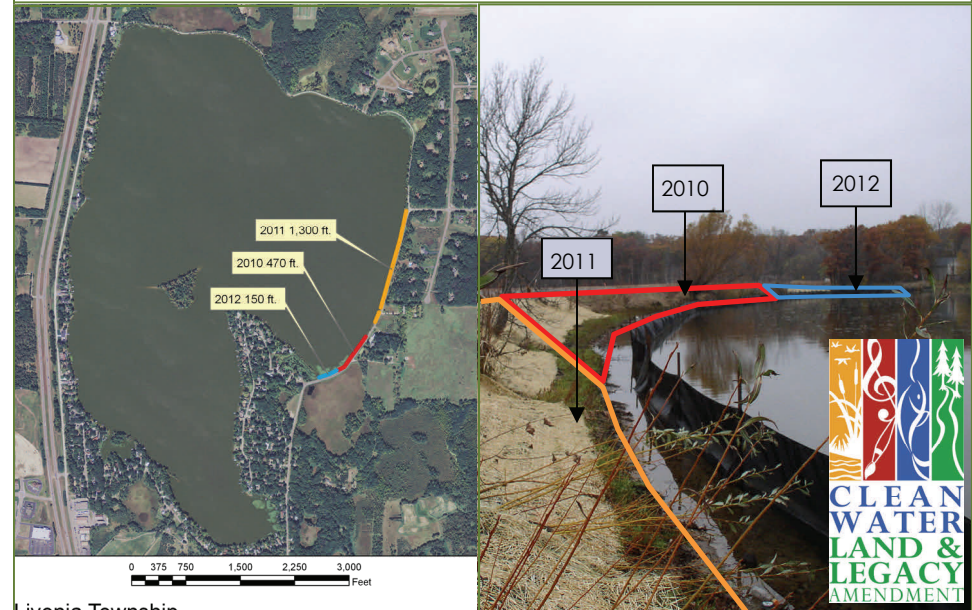
Projects

Lake Fremont Shoreline Stabilization

Wave action on Lake Fremont was eroding the lake shore and threatening to undermine 120th Street, a Livonia Township road. The SWCD has been working on controlling erosion issues on this stretch of the lake since 2009. In 2012 the last 150 linear feet was fitted with soil wraps and willow live stakes with assistance from Sherburne County Sentence-to-Serve (STS).

Sediment reduction: 11 tons/year

Phosphorous reduction: 9.4 lbs/year



Livonia Township
Lake Fremont, 120th St. Shoreline Protection
T34N R26W Sect. 10 NW1/4

Before



Backfilling soil wraps with sand

Projects

Young Park Bio-retention Basin

The newly designated park was donated to Baldwin Township and the SWCD was in charge of the raingarden design and installation. The design consists of native wildflowers and grasses that will send deep roots into the soil allowing for infiltration of runoff water coming from the parking lot before it can enter the nearby wetland.

During National Pollinator week several volunteers spent an afternoon assisting the SWCD with plant installation.

Before TP: 2.34 lbs/year
Before Runoff: 2.21 acre ft/year

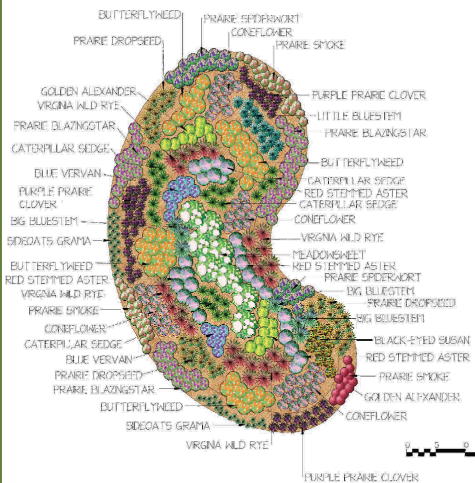
After TP: .94 lbs/year
After Runoff: .39 acre ft/year



Before construction

Volunteers planting

Basin Design



After



Projects

Little Elk Lake Bio-retention Basin

In 2008 the Baldwin Town Board was interested in repairing a boat access on the Little Elk Lake. Water from a large watershed was eroding the access and also carrying sediment from the surrounding neighborhood into the lake. Repairing the access would not completely address the sediment problem. After reviewing several options, the township and SWCD settled on a bio-retention basin.



A concrete curb directs runoff into a grassed basin where the sediment drops out and the water flows through a rock inlet into the retention basin. Except for extreme rainfall events, the water will infiltrate and the phosphorous will be taken up by the plants.

Before TSS: 960 lbs/year
Before TP: 3.2 lbs/year

After TSS: 57 lbs/year
After TP: .5 lbs/year



Before



Planting



After

Projects

Little Elk Lake Shoreline Restoration

A property located on Little Elk Lake had 150 linear feet of lakeshore with inadequate runoff treatment of a drainage area of .85 acres. Rip rap covers the length of shoreline but is in need of repair every few years because of heavy runoff eroding sediment under the rock.

Native plants were put in above the rip rap and live stakes were planted into the rock. A total area of 4,350 square feet was seeded and planted in October of 2012. This will result in a reduction of about 41% of total phosphorous and a reduction of 78% of total suspended solids.

Before TP: 2.37 lbs/year

After TP: 1.4 lbs/ year



Before



Planting Crew



After

Projects

Rum River Stream Bank Stabilization

A property along the Rum River had 300 linear feet of severely eroded bank. After the initial site visit with SWCD staff and based on other treated erosion sites along the river that we've been involved in, it was decided that a combination of stream barbs and cedar revetment would effectively control the bank undercutting while improving fish habitat.

Taking advantage of a mild winter and low river levels, construction began in December 2011. Three rock stream barbs were installed and the bank was flattened to a 2:1 side slope before being seeded. Unfortunately, two days after spreading topsoil, seeding, and staking the straw blanket, a 4" downpour caused extensive damage to the freshly seeded bank. Repairs were made, the area re-seeded, and erosion blanket re-installed.

Before soil loss: 131 tons/year

Before TP loss: 112 lbs/year

After soil loss: negligible

After TP loss: negligible



May 2011



December 2011

Before construction

Finished Stream Barbs



June 2012



July 2012

Seeding and blanket install

After construction