

































# 2014 SHERBURNE SWCD HIGHLIGHTS

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#### **Education and Outreach**

Education Events Attended: 7Education Events Hosted: 9

#### **Forestry**

- Trees Sold: 16,252

- Gravel Bed Trees Planted: 150- City Tree Surveys Completed: 1

- Forest Stewardship Plans: 4

- Acres of Invasive Species Removed: 18



Lakeshore Restorations: 6Total Linear Feet: 1,711Total Square Feet: 15,150

#### **Water Quality**

- Sites Monitored for Bacteria: 4

- Miles of River Cleanup: 6

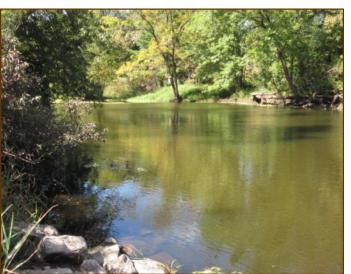
#### **Wetland Conservation Act (WCA)**

- Wetland Delineations: 28









# SWCD Supervisors & Staff

#### **Locally Elected SWCD Supervisors**



Douglas Hipsag Secretary District I



Shane Berg Treasurer District II



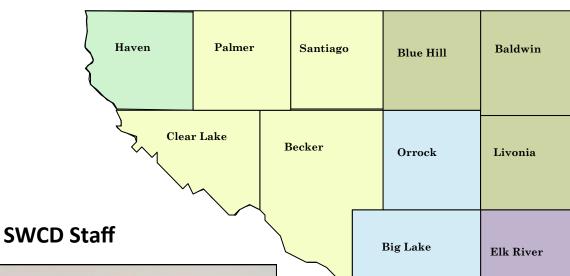
Larry Goenner
Reporter
District III



Jason Selvog
Chair
District IV



Roger Nelson Vice Chair District V





Bill Bronder, District Technician
Gina Hugo, Resource Conservationist
Francine Larson, District Manager
Frances Gerde, District Aide
Tiffany Determan, Water Resource Specialist
Andie Bumgarner, Administrative/Marketing Assistant

# 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
Pasture Management/Seeding Plans



### **Forestry**

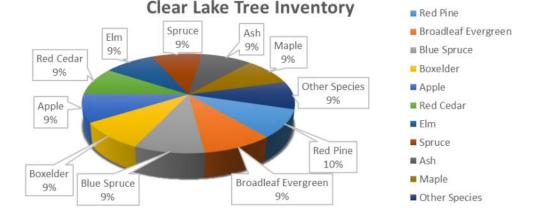
#### **Clear Lake Community Tree Inventory**

A group of nine dedicated volunteers worked to conduct a complete tree inventory for the City of Clear Lake during the summer of 2014. Volunteers received 4 hours of training and were then equipped with tools and maps. Data was collected on every maintained, public and private tree within the city limits, including species, trunk diameter and crown diameter. All told, 1,893 trees were identified and measured. Public trees were also assessed for condition to provide information that will help the city plan future management. The inventory results will help guide future planting as the city strives to increase diversity. Presently, nearly half of the trees within the city are made up of only three tree genera: maple, ash and spruce.





Freshly planted Dutch Elm disease tolerant American Elm in Elk River's Trott Brook Park



#### **Community Tree Planting**

In September, SWCD staff worked alongside volunteers and public works/parks staff of Elk River, Big Lake, Becker and Zimmerman to plant gravel bed conditioned trees in public spaces. 65 trees were planted between the four cities.

6 Volunteers 24 Hours

#### **Tree Health Consultations**

150 onsite consultations were conducted to assist landowners with management of tree diseases in urban landscapes and throughout wooded rural residential property. Oak Wilt and Bur Oak Blight were the most common diagnosis, followed closely by needle cast diseases of spruce and pine.



#### **FORESTRY**

#### Second Gravel Bed Installed

In April 2014 District Staff received assistance from County Public Works staff to install a gravel tree bed nursery on the grounds of the Becker Maintenance Facility. This new bed is used to condition trees specifically for County projects. Cretex, Inc. in Elk River donated the concrete blocks that define the edges of the bed. County Public Works donated the equipment operator time for constructing the bed, inserting the trees, and lifting the trees. In addition, Public Works donated the gravel substrate for the bed. The gravel tree bed nursery was used to condition bare root trees from spring until fall when they were planted in Islandview Park. The purpose of this hold time is not to grow the trees; but rather to enhance their root systems. Gravel beds are not complex and have been used in the nursery trade for decades. It is simply contained hydrated gravel in which bare root trees are temporarily held. 75 trees were conditioned and included silver maple, American elm (DED tolerant), hackberry and oak.







Enhanced root system of tree after 12 weeks of conditioning in the gravel bed

#### The benefits of gravel bed held trees:

#### **Cost Savings**

Up to 50-75% less expensive than potted or balled and burlap (B&B) trees

#### **Increased Survival**

Fibrous root system increases trees ability to absorb water and nutrients

#### **Planting Times**

Allows for fall planting, greatly reducing watering needs compared to spring planting

#### **Visible Root Structure**

Able to prune defective roots before tree is planted

#### **Ease of Planting**

Bare root trees weigh significantly less than potted or B & B stock



#### **Citizen Pruner Program**

The cities of Becker, Big Lake, Elk River, and Princeton have partnered with the Sherburne Soil & Water Conservation District and the U of M Tree Care Advocate Program on a pilot program that aids in increasing effective tree care by working together and engaging citizens in community forestry. Citizen Pruners were trained last spring in tree identification, biology, and pruning techniques. This fall, an advanced course was offered and well attended, extending the skills and ability of this steadfast volunteer force. SWCD staff partnered with each city to host "Pruning Events", where volunteers came and worked in teams to prune city-owned trees of high priority.

Volunteers 21 Hours 94.5

# WATER QUALITY

#### **Briggs Lake Chain Partnership**

A Clean Water Fund grant totaling \$86,250 in 2014 allowed for the development and implementation of a mini-grant program aimed directly at the County's most proactive lake association; the Briggs Lake Chain Association (BLCA). The program is being used to strategically place stormwater reduction best management practices in key neighborhoods which have been identified as contributing to degraded water quality through Total Maximum Daily Loads (TMDL), aerial lakeshore analysis and site-reviews conducted by the BLCA. The BLCA selected three neighborhoods to focus work in 2014, one of the multi-land owner projects is targeted for installation in spring 2015. Stormwater projects to be implemented include an array of urban pollution reduction practices including: rain gardens, swales, French drains, gutters, infiltration trenches, berms, and/or other innovative practices.



#### **Aquatic Invasive Species Prevention Plan**

In 2014 the MN Legislature recognized that success in Aquatic Invasive Species (AIS) efforts would require the combination of local, state, and federal agencies. As such, on May 20<sup>th</sup>, 2014 the MN Legislature leveraged local energy by creating the AIS prevention fund. This fund distributes 10 million annually at the county level. The proceeds must be used to prevent the introduction or limit the spread of AIS at all access sites within the county.

The amount of funding each county receives is based on a formula using the number of public accesses in each county and the number of boat trailer parking spaces at those public accesses. Sherburne County is slated to receive \$72,960 annually. The funding amount is based on a count of 16 trailer launches and 142 trailer parking spaces at those launches. Late in 2014 the county, by resolution, delegated

Sherburne SWCD responsible for developing and implementing the prevention plan; plan development was initiated early in 2015 with the use of a task force. The AIS Prevention and Management Plan is scheduled for completion early this summer.



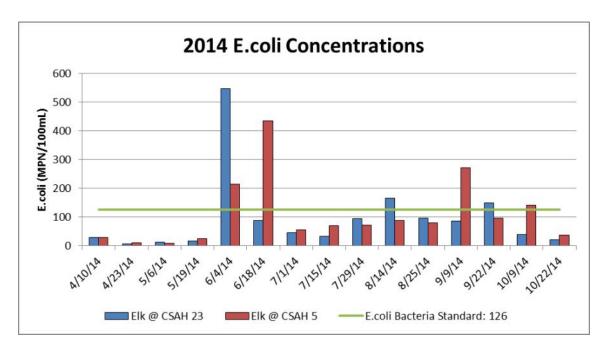


Rush Lake (DOW 71014700), Sherburne County Eurasian watermilfoil Survey 5-30-2014



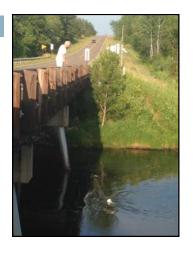
#### **Elk River Bacteria Total Maximum Daily Load-Update**

After completion of the Elk River Bacteria Total Maximum Daily Loads (TMDL) in 2012 the SWCD continued monitoring bacteria at two locations along the Elk River to oversee long term trends and response to bacteria reduction practices recommended in the TMDL. Practices that were recommended included large animal pasture and manure management (in riparian areas) and septic system upgrades. To this point bacteria continues to exceed levels that are safe for aquatic recreation, particularly during dry weather. For more information on the Pasture and Manure Management Program initiated as a result of this work refer to page 18.



#### **Rum River Watershed**

The District has continued assisting with the development of the Rum River Watershed Restoration and Protection Strategy (WRAPS). The Rum River Watershed covers a strip of land on the eastern side of the county. During 2014 water quality and flow was monitored by Isanti County staff at several locations on the Rum River itself, tributary streams that flow into the Rum, and several lakes throughout the watershed. The monitoring data is being used to build a watershed wide model which will ultimately identify areas that are critical for restoring clean water. In addition to monitoring, a sub-committee began developing a plan for reaching out to watershed peoples. The first step of the plan development was a survey to gauge how people perceive and use the lakes and streams in the watershed.



The Rum River WRAPS project began in 2013 and will be completed in 2016. The end product of the process are completed Total Maximum Daily Loads (TMDLs) for waterbodies not meeting state water quality standards and a complimentary report prescribing future management approaches. Locals can then use the information to obtain funding to implement projects to protect and improve water quality.

# MAJOR WATERSHED RESTORATION & PROTECTION

#### **WRAPS**

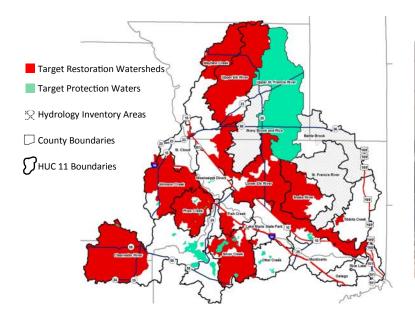
Coordinated efforts to protect and restore water quality in the Mississippi River (St. Cloud) Watershed concluded in 2014.

In 2010, Sherburne SWCD began leading the WRAPS (Watershed Restoration and Protection Strategy) process, a seven-county effort to protect and improve the nearly three-quarters of a million acre Mississippi River (St. Cloud) Watershed. The key products of the WRAPS process, which were completed in 2014, include Total Maximum Daily Loads (TMDLs) for 12 lakes and 3 streams and a "road map" or implementation plan that documents how to protect good water quality where it exists and restore it in places where it is poor.

The reports are available on the Minnesota Pollution Control Agency Website at: <a href="http://www.pca.state.mn.us/hqzqdd6">http://www.pca.state.mn.us/hqzqdd6</a>

Several of the watershed partners plan to continue working together in some capacity. At the end of 2014 the group began efforts to identify grant opportunities with the watersheds agricultural community in an effort locally referred to as "COCO" (COuncil of agriCultural Opportunities).







Final Watershed Community Event

The WRAPS process assisted with identifying subwatersheds that are of higher priority, based on a number of criteria, to target conservation and protection efforts which will result in more efficient use of limited resources. In 2014 the SWCD adopted the use of the priority watersheds as top priority for water quality improvement efforts.



















### **2014 CONSERVATION COOPERATOR**

#### **Briggs Lake Chain Association**

The Briggs Lake Chain Association has been recognized as the most proactive and hardworking lake association in the county! Some of the most notable accomplishments of this group include: managing their own grant program leading to the installation of over 40 shoreline buffers, coordinating and hosting an annual shoreline and stormwater educational workshop for lake residents, and conducting an aerial lakeshore analysis overflight which identified specific locations to improve water quality. The Briggs Lake Chain Association recently began a journey to establish a Lake Improvement District to address water quality, water level, and aquatic invasive species. The efforts of the members of the Briggs Lake Chain Association and the Healthy Lakes Committee should set an example for all lake associations.











# PROJECTS ON THE GROUND

#### St. Cloud - Raingardens





In 2010 a subwatershed assessment (SWA) was completed in the south east neighborhood in the City of St. Cloud to target areas in need of water quality projects. As a result of the subwatershed assessment, 20 raingardens were installed in 2011 to collect excess street runoff before entering the Mississippi River. The project was so successful, the City of St. Cloud and the SWCD sought more funding to complete a second phase of the raingarden project. With plenty of attention drawn from the first project there were over 45 residents interested in the second phase of the raingarden project. After several informational meetings and site assessments, 13 properties were selected to receive raingardens in 2014. The raingardens will reduce total suspended solids by 900 lbs/year, total stormwater runoff by 75 acre-feet/year and total phosphorus by 8 lbs/year.

Zimmerman - Shoreline Restoration			
Project Details	Project Funding	Project Partners	
Date Installed: July, 2014	2014 State Cost Share: \$500.00	Sherburne SWCD	
Area: 1,176 ft <sup>2</sup>	Landowner: \$433.07	Landowner	
Number of Shrubs: 39	Total Project Cost: \$933.07		
Number of Plant Plugs: 100			







#### **Clear Lake - Shoreline Restoration Project Details Project Funding Project Partners** Date Installed: July,2014 2013 State Cost Share: \$500.00 Sherburne SWCD BLCA DNR: \$2,500.00 Area: 1,400 ft<sup>2</sup> Landowner Number of Plant Plugs: 480 BLCA Mini Grant: \$500.00 Briggs Lake Chain Assoc. Buffer Width: 15-30 ft Community Partners Grant: \$4,000.00 Linear Feet: 74ft Landowner: \$2,740.00 Phosphorus Reduction: .0515 lbs/yr Total Project Cost: \$10,240.00





Elk River - Raingarden			
Project Details	Project Funding	Project Partners	
Date Installed: August, 2014	2013 State Cost Share: \$500.00	Sherburne SWCD	
Area: 260 ft <sup>2</sup>	Landowner: \$1,285.37	Landowner	
Number of Plant Plugs: 132			
Drainage Area: 13,000 ft <sup>2</sup>			



# PROJECTS ON THE GROUND

Big Lake – Shoreline Restoration			
Project Details	Project Funding	Project Partners	
Date Installed: August, 2014	2014 State Cost Share: \$1,000.00	Sherburne SWCD	
Area: 3,180ft <sup>2</sup>	Landowner: \$757.95	Landowner	
Number of Plants: 314	Total Project Cost: \$1,757.95		
Length Protected: 75 In ft			





Lake Orono - Shoreline Restoration			
Project Details	Project Funding	Project Partners	
Date Installed: August, 2014	2014 State Cost Share: \$1,000.00	Sherburne SWCD	
Area: 400 ft <sup>2</sup>	Landowner: \$1,037.97	Landowner	
Number of Shrubs: 39	Total Project Cost: \$2,037.97		
Number of Plant Plugs: 102			

Before

After



#### **Monitoring**

**Stream Monitoring Sites** 

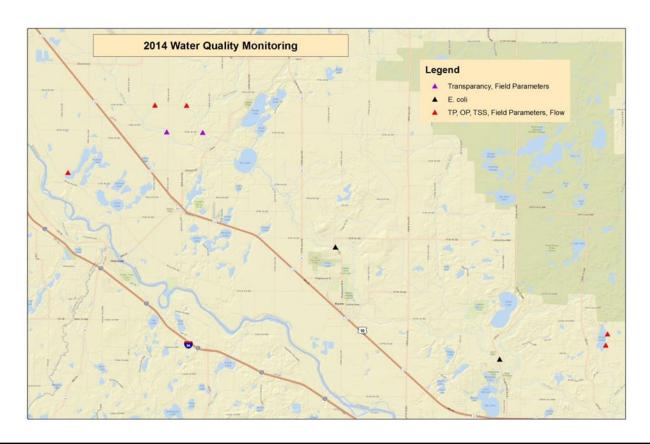
Flow Measurement: 2

Bacteria: 2 Phosphorus: 5





In 2014 the SWCD started building the network of stream monitoring sites to better understand the current conditions. Two sites along the Elk River have been monitored regularly for E.coli and a third for flow measurements. Seven additional sites were added and were sampled depending on the need for data, most sites were sampled for phosphorus and flow was measured. Samples that tested high for phosphorus were found at two ditched inlets to Birch Lake.



#### **EDUCATION AND OUTREACH**

#### Why is Rural Runoff a Problem and What can we do About it?

Rural stormwater runoff is a concern for Sherburne County, it has the potential to impact the health of the County's many lakes, streams, and wetlands. In the mix are rural residential properties, farmland, shorelands, wetlands, roads, and ditches.

On October 23<sup>rd</sup>, 2014 the SWCD, with guidance from the County Water Planning Committee and assistance from Sherburne County Zoning and the University of MN Extension Service; hosted a second workshop (the first was in 2013) for local community leaders and staff. 2014's workshop covered the following topics: What is rural runoff?, why is it a concern?, what's being done about it?, and what resources are available to reduce its impact? 30 participants attended the hands on workshop, which included a light dinner, presentations, and small group discussions. Information gathered during the small group discussions is being used to develop an outreach plan which

focuses on stormwater runoff and illicit discharge. Moreover, the information is being used to plan a workshop for fall 2015.



Workshop participants listened to presentations by Extension, the SWCD, and County Zoning.



#### **Cub Scout Tree Planting**

Scouts and their family members gathered to plant trees in two Elk River Parks on the first Saturday in May. Nearly 40 people, children, and adults worked together to dig holes, tamp soil, and deliver water to freshly set seedlings.

#### **Briggs Lake Chain**

The SWCD has a long-standing partnership with the Briggs Lake Chain Association which has included participating in a workshop each spring to educate the interested residents about different types of restoration projects, plants, strategies, and grants to help protect the lakes and area wildlife.



#### **EDUCATION AND OUTREACH**

#### **Sherburne County Fair**

The Sherburne SWCD makes an effort to attend community events like the Sherburne County Fair, to provide conservation information. Displays and educational material



showcase the resources available to the public. The SWCD staff is also on hand to answer any questions. In 2014 the SWCD teamed up the Farm Friends Barn committee to create a life on the farm display showcasing how food goes from the farm to the store. Children were invited to collect eggs from the chicken coop, milk a cow, and dig up potatoes.







#### **Environmental Education Days**

The Sherburne National Wildlife Refuge hosted the annual environmental education days on September 16-17th. The Sherburne SWCD presented information at the groundwater and watershed models for a part of the event.

#### **Watershed Cleanup**

There were 9 volunteers and 4 SWCD staff that braved the cold to lend a hand in the annual Elk River Watershed Clean up. The group met at Lakeside Park in Big lake to enjoy coffee and light snacks before heading out to 3 different cleanup areas along the Elk River and its tributaries. After only two hours the crew collected over 500 lbs. of trash! Some unusual items were car tires, a microwave, and a very heavy car hood.

9 Volunteers 18 Hours 550 lbs. of trash collected



#### VARIOUS SWCD ACTIVITIES

#### 2014 Tree Sale

In 2014 over 16,000 trees were sold during the SWCD's annual tree sale. The tree sale is an important annual program that runs between January 1 and mid April. The sale originated in order to provide landowners with an affordable and convenient way to purchase trees and shrubs for conservation practices, such as windbreaks, shelterbelts, living snowfences, scenic buffers, wildlife habitat, and more.





#### **Conservation Corps Intern**

For the 4<sup>th</sup> summer in a row the SWCD has been fortunate enough to receive a conservation corps apprentice to assist with various SWCD field work. This summer our apprentice was Steven Pignato. Steven is currently a student at St. Johns University studying Environmental Science and German. He assisted with shoreline restorations, raingarden installations, maintenance of new projects, and completed status reviews of existing projects. He also assisted with the Clear Lake Community Tree Inventory, regular irrigation checks, and other monitoring activities. His assistance was extremely valuable during the busy field season! The SWCD plans to apply for a Conservation Corps apprentice for the summer of 2015.



**Good Pasture Management** 

**Poor Pasture Management** 

#### **Pasture Management Program**

In 2014 the District received a Clean Water Fund grant totaling \$60,000. The funds are being utilized to implement a pasture and manure management program which provides technical and financial assistance to small farm owners; most closely focused on those within priority locations as identified in the Elk River Bacteria TMDL and WRAPS

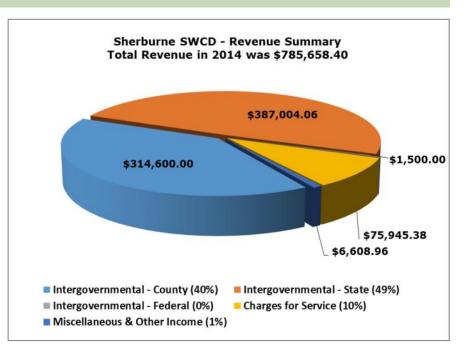


reports. In 2014, staff met with 4 landowners within the priority area and 3 outside those boundaries. The ultimate goal is to saturate the area with bacteria reduction best practices such as pasture renovation/management, riparian buffer strips, clean water diversions, vegetated buffer strips, and manure management; including composting structures.

#### 2014 FINANCIAL SUMMARY

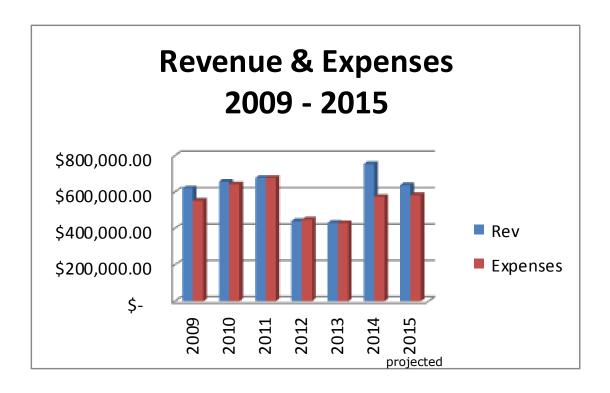
The Sherburne Soil & Water Conservation District finances its day-to-day operations through a variety of revenue sources.

These sources include County Allocation (40%), State Grants (49%), charges for Services (10%), and other Miscellaneous Income (1%). Although governed by an elected board of officials, Conservation Districts do not have levy authority and must secure funds from many sources to maintain programs and services.



Note: Intergovernmental - County includes State Pass-Through revenues.

Sherburne SWCD's expenditures include personnel & operating expenses, District, State and Federal program expenses, and other related expenses.



# USDA / NRCS PROGRAMS



The 2014 Farm Bill was enacted on February 7, 2014. NRCS offers voluntary Farm Bill conservation programs that benefit both agricultural producers and the environment.

Some programs will be available immediately, while others will require limited time to be set up within the agency. Details are on each program page and at your local USDA Service Center.

Current Farm Bill contracts remain in effect; new sign-up information will be announced here as it becomes available.



NRCS offers financial and technical assistance to help agricultural producers make and maintain conservation improvements on their land.

# Partnership

NRCS works with partners to leverage additional conservation assistance for agricultural producers and landowners in priority conservation areas.



NRCS offers easement programs to eligible landowners to conserve working agricultural lands, wetlands, grasslands and forestlands.



United States Department of Agriculture





Miranda Wagner Soil Conservation Technician



Mary Monte
District Conservationist

# USDA / NRCS 2014 HIGHLIGHTS



MASWCD Area IV 2014 tour at the Plant Material Learning Center, Becker, MN



Fall Wildlife Festival at the Sherburne Wildlife Refuge, Zimmerman, MN



Honey Bee Pollinator



Tree planting for a field wind break. Becker, MN



**Cover Crop Planting** 



**Native Grass Planting** 

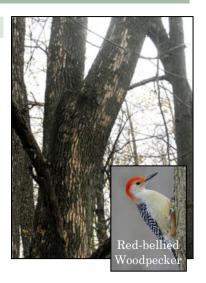




## SWCD 2015 PROJECTS

#### **Woodpecker Activity Survey**

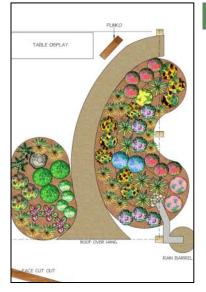
Researchers have found a strong correlation between heavy woodpecker activity in ash trees in late winter and presence of emerald ash borer (EAB) larvae. EAB is confirmed in the City of Shoreview, within 30 miles of Sherburne County Communities. Early detection is key to successful mitigation of the damaging effects of an infestation. To that end, the District is partnering with the MN Department of Agriculture, Plant Protection Division to conduct a volunteer survey that would look for signs of infestation – namely woodpecker activity in late March and early April of 2015. The District will be hosting a training session in February that is also open to city park staff. Priority areas for survey include all Elk River Parks as well as around compost sites in Zimmerman, Elk River, Big Lake, and Becker. It will be important to repeat survey work annually and possibly add survey sites as volunteer participation will support.





#### **Expanded**

Legislative-Citizen Commission on Minnesota Resources (LCCMR) Grant Application for Oak Savanna Restoration and Signage at Bridgeview Park. The District is partnering with the County Parks Department to develop a grant proposal that would secure funds to continue and expand restoration efforts at Bridgeview Park. The proposal deadline is May 11, 2015. Funds for project implementation would be available July 1, 2016; with a completion date of June 30 of the project completion year, which is project dependent and typically 3 years after year of implementation. Proposed project activities include: forest stand improvement, prescribed burning, innovative use of forest products and interpretive signs along path to highlight biological and historic significance of Bridgeview.



#### **Outreach and Education**

The SWCD is planning to expand its presence at the County Fair with a new design for a semi-permanent booth. The new design, shown left incorporates demonstration gardens and space for hands on activities. Information on SWCD programs will also be available. The demonstration gardens will be used to promote the use of native plants in a landscape setting.

The SWCD hopes to be more involved in educational opportunities in order to promote our programs and gain more of an interest among county residents. In 2015 the SWCD has already participated in the STEM (Science, Technology, Engineering and Mathematics) Summit at Princeton High School. The SWCD will also have a presence at the Big Lake Garden Education Expo and the Zimmerman Wildlife Festival.



#### The Local Aquatic Invasive Species Plan

The SWCD, via a resolution with Sherburne County, is working with a Local Task Force to develop an Aquatic Invasive Species (AIS) Prevention Plan specific to Sherburne County. Upon approval by the Sherburne County Board, the SWCD will work to actively implement the plan.

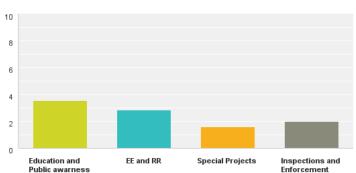
# Purpose of the Sherburne County AIS Prevention and Management Plan

- Prepare and adopt an AIS Prevention and Management Plan that justifies the use of Legislatively granted AIS prevention funds.
- 2. Guide efforts that prevent the spread of AIS into Sherburne's lakes and streams.
- Preserve economic and environmental viability of Sherburne's water bodies.

To this point, task force members have prioritized the importance of each major category as shown right in order of importance. Recommendations on funding dedicated to each category and specific tasks will be discussed during the second task force meeting. The goal is to have the plan completed and approved by County Commissioners and submitted to the DNR by June 2015.

# Q1 Rank the relative importance of each major category

Answered: 20 Skipped: 0







The Task force is composed of the Sherburne County Water Plan Committee and augmented by representatives from the following list of water related sectors: Law Enforcement, Lake Associations, a Bait Dealer/Sportshop, a marine shop, Sportsmen's Group, Local officials (city/SWCD/county/twp), a representative from the chamber of commerce, and a representative from the DNR.



#### **Improving Soil Health**

Utilizing both the Clean Water Fund grant and the Minnesota Department of Agriculture Sustainable Ag grant, the SWCD will continue working with local farmers on improving soil health through activities such as soil analysis, data collection from moisture probes and planting cover crop demonstration plots.

Soil health can be defined as maintaining and improving the soil's capacity to function. It is important to understand that it is the interaction of the physical, chemical, and biological properties of the soil that determines the soil's health. We can measure and farm in ways that improve the health of the soil. A healthy soil means increased production with fewer inputs and improved water quality.



### **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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