

Pioneer-Sarah Creek Watershed Management Commission

The 2007 Commission

- **Greenfield**
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- **Independence**
Carole Peter
Secretary
- **Loretto**
Brenda Daniels
- **Maple Plain**
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- **Medina**
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Vice Chair
- **Minnetrista**
Lisa Whalen,
Chair
- **Administrator**
Judie Anderson
- **Legal Advisor**
Joel Jamnik
- **Technical Advisor** James Kujawa

The Commission meets monthly at 4:00 p. m. on the third Thursday at Independence City Hall.

Pioneer-Sarah Creek Watershed Management Commission

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CWLA Grant Funds Available to Livestock and Horse Owners

The State of Minnesota, through the Board of Water and Soil Resources (BWSR), has granted \$410,000 to the Pioneer-Sarah Creek Watershed Management Commission to fund animal waste control work in the Lake Independence watershed. The Commission received the funds through the Clean Water Legacy Act (CWLA) approved by the State Legislature in 2006.

*The Commission has developed a docket of practices that are eligible for grant funding to livestock and horse owners in the Lake Independence watershed. These include construction of manure storage facilities, hauling services to dispose of manure, feedlot management, pasture management, buffer strips and cropland nutrient management. Rates for cost sharing are 75% funding from the grant money and 25% funding by the landowner. **Funds are available until June 2009.***

In 2007 applications for grant funds were received from four residents. One project includes livestock runoff control elements such as rain gutters, lot grading, diversions and turf reinforcement. Exclusion fencing and compost facilities are being designed for the other three sites.

This cost sharing program was developed as a result of the MN Pollution Control Agency's listing of Lake Independence as an impaired water for aquatic recreation. The Commission, together with Three Rivers Park District, the cities of Independence and Medina, the Lake Independence Citizens Association and other interested citizens and organizations, has studied and documented the lake's water quality. The study identified phosphorus as the primary source of the impairment and livestock waste, cropland, urban land, septic systems and geese waste from the 7,500 acre watershed that flows into Lake Independence as the main sources of the phosphorus.

What is the CWA?

The 1972 Clean Water Act (CWA) is the cornerstone of surface water quality protection in the U.S. It employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters.

Amended in 1977, the CWA gave the Environmental Protection Agency (EPA) authority to implement pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface waters. It made it unlawful for anyone to discharge any pollutant from a point source into navigable waters without a permit. It also recognized the need to address nonpoint source pollution.

In 2006 the Minnesota Legislature adopted the Clean Water Legacy Act (CWLA) to provide the authority, direction and funding needed to achieve and maintain water quality standards under section 303(d) of the federal Clean Water Act.



Practices eligible for funding:

- **Animal Waste Storage**
- **Manure Hauling**
- **Clean Water Diversions**
- **Roof Water Management**
- **Pasture Renovation**
- **Vegetative Buffer Strips**
- **Nutrient Management of Manure Application**
- **Exclusion Fencing**

Rain Gardens

Rain gardens help to improve local water quality by allowing rain and snowmelt to seep naturally into the ground. This helps recharge the groundwater supply, and reduces the amount of stormwater entering our storm sewer systems.

Rain gardens are designed with a depression at the center to collect rain and snow melt, and are usually placed at the end of downspouts or swales, or adjacent to hard surfaces such as driveways or roads. The gardens are planted with native vegetation (flowers, grasses, shrubs, and trees) that is tolerant of alternating wet and dry conditions.



McLaughlin rain garden.

16 Projects Were Reviewed by the Commission in 2007

2007-01 Lowell Schaper, Minnetrista. Addition to an existing home. No review was necessary.

2007-02 Boys & Girls Club, Minnetrista. Reconstruction of an existing barn. No review was necessary; however erosion and sediment control recommendations were provided.

2007-03 Maple Plain Water Treatment Plant, Maple Plain. Construction of a water treatment plant near the fire station/skate park on Highway 12.

2007-04 Michael Murphy Water Appropriation, Greenfield. Renewal of an existing permit for lawn irrigation water from Lake Schwappauff.

2007-05 Lake Rebecca Park Reserve, Paved Trail Extension, Greenfield. Installation of 4200 feet of new trail and restoration of 1600 feet of existing park trail.

2007-06 Catherine Sallas CUP, Independence. Construction of a home and barn including FEMA letter of map amendment and pasture/nutrient management.

2007-07 Heritage Woods of Greenfield. Development of nine lots on 60 acres of an 80-acre parcel located west of Pioneer Trail on the south line of Hanover.

2007-08 John Geis Parcel, Greenfield. Three-lot subdivision of a 24.7-acre parcel along the Crow River.

2007-09 Pat Anderson Subdivision, Independence. Two-lot subdivision of a 10.4-acre parcel along the east side of Haughey Lake.

2007-10 Little Long Lake Boat Launch, Minnetrista. Installation of a small diversion in the parking area of the boat launch to redirect water into an existing rain garden/settling pond area.

2007-011 Seeland Property, Greenfield. Wetland delineation review of a 112-acre parcel located in the south east corner of Highway 55 and CR 92.

2007-12 Aldon Addition, Ridgway Athletics, Maple Plain. Construction of a tennis facility on an existing 1.9-acre lot located on Budd Street adjacent to Highway 12.

2007-13 Bolander & Sons/Bentz Farm, Independence. Deposition of excess soil material from the Highway 12 project on property located in the northeast quadrant of the intersection of CR 6 and Copeland Road.

2007-14 Park Estates, Greenfield. Subdivision into 20-single family residential lots of four agricultural parcels (approximately 107 acres) located at the southeast intersection of CR 92 and W. Lake Sarah Drive.

2007-15 Pillar Homes, Pinney Residence, Minnetrista. Grading for a new home, barn and lawn, disturbing 3.2 acres of a nine-acre residential lot in the Alexander Farms subdivision.

2007-16 Shores of Whaletail Lake Dock Variance, Minnetrista. Request for variance for dock length. The Commission has no jurisdiction.

Camp Ihduhapi Shoreline Restored

Hennepin County Department of Environmental Services staff has been working with Camp Ihduhapi to remediate the severe erosion occurring on their shoreline on Lake Independence. With funding through a Hennepin County Natural Resource Incentives for Critical Habitat Program (NRICH) grant, the partners built a rip-rap berm about ten feet out from the existing shore and extended the rock approximately one foot above the normal water level of the lake. The area behind the rock was filled and sloped back into the existing hill at a 1.5:1 slope. Work took place during the winter of 2006-2007 after the lake ice reached a depth to support the weight of heavy construction equipment (above, right). Planting was done to stabilize the fill placed behind the rock. In 2008 permanent vegetation restoration will be completed after the rock and soil placement has settled (below, left).



Shriners to Install Best Management Practices

Betsy Gilkerson-Wieland, Hennepin County Extension Educator, and Pioneer-Sarah Creek Commission staff have been working with the Shriners Horsemen to construct a manure stacking slab, clean water diversion and settling pond on their property on County Road 92 in Independence. Pasture and manure management will also be components of their project. County Natural Resources Incentives for Critical Habitat (NRICH) and State cost-share funding will cover 75% of the project costs with the other 25% coming from the Shriners. Engineering assistance funding has also been provided by the Association of Metropolitan Districts.

Lake Independence Final TMDL Report Approved by EPA

The Lake Independence TMDL for Excess Nutrients was approved by the Environmental Protection Agency (EPA) on February 23, 2007. As a prelude to the total maximum load (TMDL) Work Plan, a diagnostic feasibility study was completed in 2004 to identify a list of potential management actions to improve the water quality. Through cooperative efforts between the Pioneer-Sarah Creek Watershed Management Commission, Three Rivers Park District, local municipalities, and the Minnesota Pollution Control Agency this diagnostic feasibility evolved into the Lake Independence Phosphorus TMDL.

Lake Independence, an 851-acre lake, is used extensively for boating, fishing, swimming and aesthetic viewing by local residents as well as the entire Twin Cities regional area. The south shoreline of the lake is within Baker Park Reserve and contains two public swimming beaches, a campground, an ADA accessible fishing pier, numerous picnic areas and a boat launch.

The lake receives runoff from a 7,631-acre predominantly agricultural watershed that contains portions of three municipalities, Medina, Independence and Loretto and is undergoing rapid urbanization. The majority of new residential lots are large, allowing homeowners to maintain small hobby farms. The lake watershed contains approximately 298 animal units, mainly horses.

Over the past 15 years, the water quality of the lake has declined and algal blooms now occur throughout much of the summer season, negatively impacting recreational use. Data from 1990 to 2003 show that the lake total phosphorus concentration averages 47-ug/L, exceeding the 40-ug/L water quality standard for Class 2 recreational waters. Monitoring data generated from three stream inflow sites over a three year period showed that the watershed contributes 1,475-pounds of phosphorus and 7,301 pounds of nitrogen annually to Lake Independence.

Analysis of the specific sources within each sub-watershed showed that the majority of inflowing nutrients are derived from feedlots and agricultural cropland, followed by urban developments, rural developments, the Loretto Wastewater Treatment Plant discharge, shoreline erosion, geese, failing septic systems, a golf course, and parkland. Direct precipitation and internal recycling processes add an additional 906 pounds of phosphorus annually to the lake.

A stakeholders committee appointed by the Pioneer-Sarah Creek established a water quality goal of 36 ug/L for the mean growing season total phosphorus concentration for Lake Independence. Achieving this goal requires a phosphorus loading reduction of 1,081 lbs/year, or 45 percent of the current load. The stakeholder committee determined that specific phosphorus loading reductions must come from the sources identified above. The committee also recommended that the phosphorus load reductions from each municipality be reduced proportionately to their existing export to Lake Independence. Therefore, the City of Independence will be required to achieve a larger reduction of phosphorus loading from manure than Medina, because more livestock units are present in Independence. The communities agreed to jointly work to reduce the internal loading of phosphorus by 209 lbs/year.



Lueck Site

Commissioners Tour Watershed

The Pioneer-Sarah Creek Commissioners toured the watershed prior to their June 21, 2007 regular meeting. Sites they visited/viewed included the Crees, Witthuhn, McLaughlin and Lueck rain gardens; the streambank restoration at Camp Ihduhapi; the Shriners Horse Farm, the Lake Sarah outlet, the Holiday Station stormwater pond, and Meadows of Whisper Creek wetland restoration.

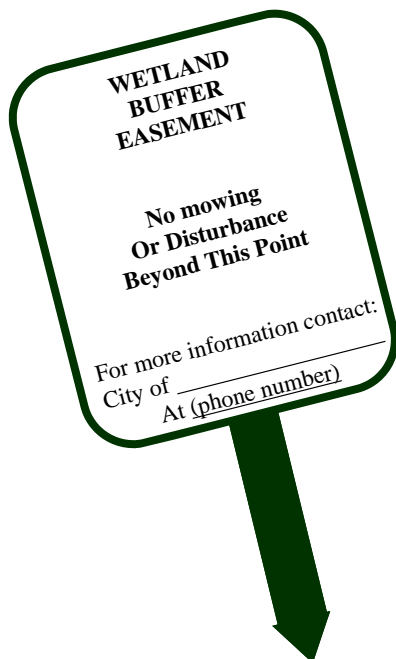
They also conducted a boat tour of Lake Independence prior to their July 19, 2007 regular meeting. Among the areas they viewed were the streambank restoration at Camp Ihduhapi and the proposed Bachtold restoration site.

MEP Grant Projects Completed

In 2005 the Pioneer-Sarah Creek Watershed Management Commission was awarded a MetroEnvironmental Partnership (MEP) Grant from Metropolitan Council to assist in funding and constructing shoreland protection around Lake Independence. Funding was used to reduce nutrient inputs to the lake by installing three rain gardens and one lakeshore stabilization project. Projects were funded on a 75% cost basis, with property owners providing a 25% in-kind or cash contribution. Construction of the projects was completed in 2006 and planting occurred in spring 2007.



Commissioners view the McLaughlin rain garden.



Wetland Buffer Easement Signs Approved

The Commission currently serves as the Local Government Unit (LGU) to administer the Wetland Conservation Act for the cities of Greenfield, Loretto and Maple Plain. Wetland Buffer Performance Standards adopted by the Commission in 2004 as part of its second generation Watershed Management Plan state: *An average buffer of 20 feet is required around wetlands, lakes and streams for all new development. The buffer shall be designed with the intent to treat runoff from a site and/or to provide habitat.*

At its July 19, 2007 meeting, the Pioneer-Sarah Creek Watershed Management Commission adopted an amendment to these standards that states that a *Commission-approved permanent wetland buffer monument shall be installed at each lot line where it crosses a wetland buffer and wherever else needed to indicate the contour of the buffer, with a maximum spacing of 200 feet of wetland edge.*

Buffer signs are posted around the edge of the buffer to warn of the protected area. This buffer zone protects the wetland from trespass, unapproved dumping and filling.

In order to maintain uniformity throughout the watershed, the Commission encourages the cities in the watershed that serve as their own LGUs to adopt these monument requirements as well.

Curly Leaf Pondweed Management Plan Proposed for Lake Sarah

The Lake Sarah Stakeholders Committee (LSSC) continues to meet to discuss the water quality of Lake Sarah. The committee was formed to evaluate and implement specific strategies to control exotic and invasive aquatic plant species and promote the growth of native species to promote and improve Lake Sarah's water quality.

Early on, the committee requested Three Rivers Park District's assistance in creating a TMDL for the lake. In turn, the Pioneer-Sarah Creek Watershed Management Commission has requested financial assistance from the Minnesota Pollution Control Agency to complete a TMDL analysis for Lake Sarah. Completion of a TMDL requires a full year of inflow stream monitoring and an additional six months to write the feasibility report and develop a work plan.

One of the primary concerns of the committee is curly leaf pondweed (CLP). Data collected in summer 2007 suggests that internal loading, almost all from CLP, produces 75-80% of the phosphorus released in the lake. CLP is an invasive, non-native aquatic plant that germinates as cold weather begins and grows through the winter. In early summer the mature plants collapse to the lake bottom where they decompose, releasing phosphorus that feeds lake-choking algae and adds organic material to the lake's bottom.

The LSSC has proposed the new, groundbreaking approach to manage CLP as well as Eurasian water milfoil (EWM) in Lake Sarah. While EWM does not contribute significantly to phosphorous loading, it can significantly impact the recreational use of the lake and displace native vegetation that is critical to the lake's ecosystem.

The plan calls for treating all infested areas of the lake (approximately 620 acres) with the herbicide Aquathol® K and spot treating EWM where the infested areas cause a public nuisance with the herbicide Navigate. These are the same chemicals homeowners are already using to control excessive plant growth along their shoreline. A whole-lake treatment of the infested areas of the lake is required for CLP.



Curly Leaf Pondweed

For EWM, an assessment of the problem areas will be mapped two weeks after ice-out and only those problem areas will be treated for EWM, with little or no damage to native species. This will be a long-term management plan, calling for up to five years or longer of lake-wide treatment. The plan must be conducted with the permission and oversight of the Minnesota DNR.

Provided that funding sources can be identified and secured and this project is approved by the lakeshore property owners, treatment will begin in early spring 2008. To date the LSSC has received over 100 permissions from lakeshore owners to proceed with the plan.

The LSSC is made up of citizens, representatives from the cities of Corcoran, Greenfield, Independence, Loretto, and Medina, Three Rivers Park District, and the Minnesota DNR. Current members include Dave Allen, John Barten, Robert Berens, Fred Bills, Harold Burrows, Dan Cady, Mario Crespo, Brenda Daniels, Jerry Horazuk, Marvin Johnson, Randy and Colleen Klaers, Jim Kujawa, Beth Kunkel, Mike Peterson, Tom Swanson, Bridget Vanyo, Sue Vergin, Sylvia Walsh, Jerry and Cheryl Wise, and Jodi Wunsch.

Contact Jerry Wise for more information about the management plan: jerrywise@frontiernet.net

Commission Approves 2008 Budget

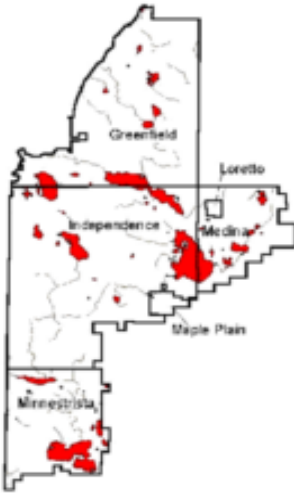
In 2007 the Commission approved a 2008 operating budget of \$361,380, with member assessments totaling \$70,000. Grant and cooperator revenue totals \$210,000. Each city's assessment is based on its share of market value within the watershed.

In 2008 the Commission will work with watershed landowners to complete the Lake Independence total maximum daily load (TMDL) implementation program. Money to partially fund this project was received from the State of Minnesota through the Board of Water and Soil Resources (BWSR) in the form of a Clean Water Legacy Act grant.

Work has begun on developing a work plan for the Lake Sarah TMDL. Costs of the activities associated with this TMDL continue in the 2008 budget. In addition, money is being set aside to fund future TMDLs and development of the Commission's third generation Watershed Management Plan.

A copy of the most recent audit report is available on the Commission's website: www.pioneersarahcreek.org.

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**For more information about the Pioneer-Sarah Creek
Watershed Management Commission visit the website:
www.pioneersarahcreek.org.**

Commission Service Contractors

- Hennepin County Department of Environmental Services — technical consultants
- Judie Anderson’s Secretarial Service, Inc. — administrative services
 - Campbell-Knutson — legal services
 - Johnson & Company, Ltd.—2006 audit
- Short Elliott Hendrickson (SEH) - wetland consultants
 - SRF Consulting Group — wetland consultants
 - URS Corporation — wetland consultants
 - Wenck Associates — wetland consultants

Official Newspapers — MNSun.com *and* pressnews.com

Official Depository — US Bank

Official Newspapers—MNSun.com and pressnews.com

Member City Websites

Greenfield:

www.greenfield.govoffice.com

Independence:

www.independence.govoffice.com

Loretto:

Has no website at this time

Maple Plain:

www.mapleplain.com

Medina:

www.ci.medina.mn.us

Minnetrista:

www.ci.minnetrista.mn.us