Wicklunds Named Dakota County’s Outstanding Conservationists

The Dakota County SWCD recently recognized Jerry and Audrey Wicklund as their 2012 Outstanding Conservationists for their dedication to conservation on the land and in their community. When the Wicklunds bought their land in 1945, they knew they didn’t want to run a typical farm with conventional agricultural practices. Instead, they converted much of the land to switchgrass and established natural areas through the Conservation Reserve Program and other programs. Over the years, they have restored 60 acres of native prairie grasses, planted 700 trees for windbreaks and habitat, built hundreds of wood duck and blue bird houses, and installed and maintained buffer strips along Chub Creek near Northfield.

But they don’t stop at their property boundaries. The Wicklunds are also involved with teaching youth by hosting and participating in education events like building and installing wood duck and blue bird houses, and opening their land to youth and women hunting. Jerry is also an active member in the Southern Dakota County Sportsmen Club.

The Wicklunds provide a real “hands-on” approach to conservation work. By managing natural plant communities that attract wildlife and continuously looking for ways to improve habitat and water quality, they provide great examples of environmental stewardship in their community.

Each year the SWCD honors a landowner, business, or organization for their contributions to conserve or restore natural resources in Dakota County. This year, the Wicklunds rose to the top. The SWCD commends the Wicklunds and looks forward to continuing their work together. Jerry and Audrey will be recognized at the Minnesota Association of Soil and Water Conservation District’s Annual Convention in December.

Did you know? Over 200 residential raingardens, native gardens and stabilized shoreline projects have been installed through the SWCD Blue Thumb Program since 2008.
The SWCD recently received a $31,000 grant from the Department of Natural Resources (DNR) Conservation Partners Legacy Grant Program. Each year, the DNR awards small grants from the Clean Water Land and Legacy Amendment for habitat restoration on public land or easements.

When conditions are right this fall or next spring, the 193-acre restored prairie on the southern portion of the Dakota County Fairgrounds property will be burned to remove cottonwood saplings and other invading trees and plants. The burn will allow the native species to rebound next spring – unencumbered by the shade from trees. The large cottonwoods “feeding” the prairie a blanket of seeds each year will also be removed as part of this project to greatly reduce the invasion of trees into the prairie.

Controlled burns are a common way to manage restored prairies, mimicking natural fires that regularly swept through these areas in pre-settlement times.
Significant Damage from June Floods

As the crops are harvested throughout Dakota County this fall, we are only beginning to discover the entirety of the damage done by June’s large-scale storm event. In some southern areas of the county over 9-inches of rain fell in less than 24-hours. Considerable damage was done to public infrastructure like roads and bridges. The Federal Emergency Management Agency works with local officials to repair a majority of these sites. But a lot of damage was also done to agricultural fields throughout the Vermillion and Cannon River watersheds. At least 80 landowners have already contacted the SWCD requesting assistance with damaged areas. Some of these cases are not eligible for help. Thus far, however, about 60 agricultural landowners are likely to get assistance to repair fields and install new practices like grassed waterways and sediment control basins.

In general, SWCD staff discovered that existing conservation practices (like waterways) that were professionally designed and installed performed well and withstood the raging waters. In other cases, where no waterway existed or was under-designed gullies washed out fields and carried sediment and nutrients into streams.

In August the State of Minnesota approved nearly $168 million in statewide flood relief funding, and a portion of that funding was dedicated to install and repair agricultural soil and water conservation practices within Dakota County. Existing conservation practices that were damaged during the storm are eligible for up to 100% cost-share. New conservation practices that prevent or mitigate future flood damage are eligible for up to 90% cost-share. All cost shared projects require a contract and an operation and maintenance plan for the effective life of the practice – typically 10 to 15 years. Interested landowners can call the SWCD office at 651-480-7777 for more information.

The photos above depict typical large-scale gullies in fields that did not have conservation practices installed.

The photo to the left shows a waterway that functioned well under high flows. This waterway prevented soil erosion and filtered flood waters before they reached the river.
**New technology will reduce phosphorus load in Apple Valley’s Long Lake**

A pound of phosphorus can stimulate 500 pounds of algae in local lakes—one reason the City of Apple Valley has been working to reduce phosphorus in runoff to Long and Farquar Lakes. In October, the City installed a promising new technology that uses iron filings to capture phosphorus in stormwater runoff. This iron-enhanced sand filter is designed to prevent 33 pounds per year of phosphorus from reaching Long Lake. It is the first time this practice for phosphorus removal has been used in the Vermillion River Watershed.

The Minnesota Pollution Control Agency classified Long and Farquar Lakes as impaired in 2002. The two lakes did not meet the state water quality standard for phosphorus. To meet the standard—and prevent the weeds, algae growth, and cloudy water that excess nutrients create—Apple Valley must reduce phosphorus draining to Long Lake by an estimated 385 pounds per year.

In 2011, the City approached the Vermillion River Watershed Joint Powers Organization (VRWJPO) about cost sharing a project to reduce phosphorus from an area draining to Long Lake. Working with the VRWJPO on how to achieve the most phosphorus removal for the least cost, Apple Valley selected the iron-enhanced sand filter. The VRWJPO, Dakota Soil and Water Conservation District (SWCD), and the City all contributed time and financial resources toward installing the project.

The iron-enhanced sand filter technology, developed by the University of Minnesota’s Saint Anthony Falls Laboratory (SAFL), uses iron to reduce phosphorus. (Visit [http://stormwater.safl.umn.edu/sites/stormwater.safl.umn.edu/files/092612erickson.pdf](http://stormwater.safl.umn.edu/sites/stormwater.safl.umn.edu/files/092612erickson.pdf) to see how the

See Reducing phosphorus load on next page.

**Girl Scouts’ celebration improves water quality**

On October 13, Girl Scouts celebrated 100 years of “inspiring generations of girls who change the world” with activities to improve water quality. Approximately 1,400 Girl Scouts, their families, and alumni in the River Valleys region worked on phosphorus-reduction activities in Apple Valley, Farmington, Lakeville, and Rosemount.

See Girl Scouts on next page.
Girl Scouts’ celebration improves water quality continued from page 1

Girl Scouts raked, swept, bagged, and removed leaves from public spaces near lakes impaired for nutrients, including Alimagnet Lake in Apple Valley and East Lake in Lakeville. They filled 3,100 compost bags. Lawn and leaf waste was transported to a compost facility, instead of making its way into water resources and feeding algae.

Rainstorms and snowmelt wash leaves and dirt into stormwater systems and into lakes, rivers and streams. As the material decays, phosphorus enters waterways, causing excessive growth of aquatic plants, such as algae. Girl Scouts also labeled 240 storm drains with messages reminding people not to dump pollutants because storm drains lead directly to local lakes and rivers. Door hangers distributed to 1,600 households informed families about water quality problems caused by too much phosphorus.

A host of businesses and organizations sponsored the Centennial Day of Service, including the Vermillion River Watershed Joint Powers Organization (VRWJPO). The VRWJPO provided a small grant to Girl Scouts River Valley’s to assist with the cost of roll-off dumpsters for the bags of collected leaves and debris.

The VRWJPO might be able to help your community or organization with cost-share funding for a water-quality or habitat clean-up or improvement project. For guidelines, visit www.vermillionriverwatershed.org and search “Capital Improvement” or e-mail water@co.dakota.mn.us.

Just for the record...

The Vermillion River is known as a trophy trout stream, but the only record-breaking fish ever caught in the river (according to the Minnesota Department of Natural Resources) was a black crappie. In 1940, a five-pound, 21-inch black crappie was caught in the Vermillion River, the biggest one on state record. To see a list of the fish species that live in the Vermillion River and its tributaries, visit www.vermillionriverwatershed.org and search “fish species.” Photo: Auburn University.

Reducing the phosphorus load in Apple Valley’s Long Lake continued from page 1

“Minnesota Filter” works). Iron rusts when it is exposed to air. This rusty iron can chemically bind with phosphorus and prevent it from reaching the water. The key to the technology is to allow the iron to be exposed to air between storms.

In this project, iron filings were mixed with sand. An iron filing and sand mixture fills two constructed depressions in Long Lake Park. The water from an adjacent stormwater pond rises during a storm. When the pond rises, water enters the basins, where it filters through the sand/iron mixture before discharging to the lake. An estimated 95 percent of the area’s water would drain through the iron-enhanced sand filter each year.

This effort will help restore water quality in Long and Farquar Lakes. Read about two other projects Apple Valley has implemented to reduce phosphorus loads in Long and Farquar Lakes at www.vermillionriverwatershed.org and search “Falcon Ridge” and “Long Lake drawdown.”
Meet Watershed Planning Commissioner Ron Mullenbach

Ron accepted this responsibility because of the tie between land development and water quality. Ron saw, first-hand, the water quality benefits achieved when his father took land adjacent to a creek out of agricultural production and planted hundreds of trees along the banks.

As a land manager for the residential development firm D.R. Horton, Inc., in Lakeville, Ron’s work includes acquiring land, obtaining government approvals, and planning development. He appreciates the relationship between land use and water quality because his work involves ensuring that development plans take place in compliance with government requirements. As a former Lakeville city planner and current development manager, Ron has seen both sides of regulation. “I believe in fair and equitable standards across all property types and locations,” he says.

The WPC meets monthly to recommend actions to the Board and guide implementation of the watershed plan. Follow the WPC meeting agendas and minutes at www.vermillionriverwatershed.org. Click “Do Business” and then click “Planning Commission.”

MPCA proposes more watershed lakes and streams for 2012 impaired waters list

The Minnesota Pollution Control Agency (MPCA) proposes to add several Vermillion River stream reaches and East Lake in Lakeville to the U.S. Environmental Protection Agency (EPA) list of impaired waters in 2012. If EPA agrees with the proposal, these reaches and East Lake will become part of the Watershed Restoration and Protection Plan (WRAPP) study that the VRWJPO began this year.

Impaired waters do not meet at least one of the state’s water quality standards. (To read about impaired waters in the Vermillion River Watershed, visit www.vermillionriverwatershed.org and search “impaired waters.”) Most of the new river and stream impairments are for “aquatic life,” which means the water quality isn’t healthy for fish and macroinvertebrates. East Lake would be listed as impaired for “aquatic recreation” because excess nutrients (such as phosphorus) cause algae growth and make the water poor for swimming, boating, and recreation.

The City of Lakeville has requested that East Lake not be listed as impaired. Lakeville completed an assessment of East Lake in 2010. The City determined that this wetland has high value for vegetative diversity and wildlife habitat, but has lesser value for water-quality protection, flood management, or recreation.

Help restore habitat at Pine Bend Bluffs

Friends of the Mississippi River and Great River Greening will host a habitat restoration event at Pine Bend Bluffs Natural Area, near the Mississippi River in Rosemount, on Saturday, November 3, 9 a.m. - Noon. Volunteers will remove buckthorn from the unique habitat. Contact Katie Clower, FMR, at 651-222-2193 x 23 or pre-register at www.fmr.org/participate/events.

Sign up for watershed on-line newsletter

Sign up to receive the Vermillion River Watershed on-line newsletter: go to www.vermillionriverwatershed.org. Click on “Contact Us–Give Feedback” at the bottom of the page. Enter your name, email, and your mailing address. Click “Submit.” Or, call 952-891-7000.

When the next issue of the newsletter is posted on the website, we will email you the link to the latest issue instead of mailing you a printed copy.
Invasive species push out native plants and aquatic life

Recently, a North Dakota man was stopped in Two Harbors when two Minnesota Department of Natural Resources (DNR) conservation officers noticed a shopping cart covered in wet zebra mussels in the back of his truck. The man noticed the cart between two dumpsters when he went on a Lake Superior cruise and picked it up before heading home. He thought it would look cool in his business in Wahpeton. He didn’t know that it is illegal to transport zebra mussels, an invasive species spreading to many of Minnesota’s inland lakes – and taking over those lakes’ ecosystems.

Invasive species are not native and adversely affect the places they invade, spreading economic, environmental, and ecological degradation. Once the invasive species (plants, animals or insects; in water or on land) are established, it can be very difficult to get rid them.

DNR launched an information and enforcement effort to prevent their spread in Minnesota. So far, zebra mussels have been found in Dakota County in Lake Rebecca and the Mississippi River, but not in the Vermilion River.

Asian carp are spreading northward and threatening to move into the Great Lakes and Upper Mississippi, Minnesota, and St. Croix Rivers. The Hastings Falls provides a natural 90-foot barrier giving the Vermilion River some protection from natural migration. Learn more about the national battle against Asian carp at [www.epa.gov/gltnpo/invasive/asiancarp/](http://www.epa.gov/gltnpo/invasive/asiancarp/).

The recent discovery of emerald ash borers in trees just north of Dakota County raises concern about this invasive insect moving toward the watershed. Efforts to stop this tree-killing invasive include prohibiting firewood from being removed from affected areas. For more information about preventing the spread of emerald ash borer, visit [www.emeraldashborer.info/minnesotainfo.cfm](http://www.emeraldashborer.info/minnesotainfo.cfm).

Invasive plants move easily among water bodies and across native landscapes in the watershed. Curly leaf pondweed, for example, starts to grow while the ice is still on lakes, giving it a head start on native species. It grows into a thick mat, outcompeting other plants, then dies back in early summer. Nutrients released by curly leaf pondweed can cause severe algae blooms, giving lakes a pea soup appearance. The weeds tangle up swimmers and boat propellers, making recreation difficult.

The Vermillion Stewards have worked hard to eradicate invasive plant species in the watershed, volunteering to remove buckthorn, garlic mustard, and wild parsnip from natural areas. Watch next spring for opportunities to join the Vermillion Stewards in restoring natural landscapes by removing invasive plants and establishing native species.

Since their colonization of the Great Lakes, zebra mussels have covered the undersides of docks, boats, and anchors; spread across the bottoms of streams, rivers and lakes; blocked pipelines; clogged water intakes of municipal water supplies; and taken space and food from native species. Photo: USGS.
On a mostly sunny day in June over 160 people snaked their cars down through the CF Industries facility to the banks of the Mississippi River at the upper end of Spring Lake. There, they boarded the Anson Northrup paddleboat and spent the next three hours learning about issues affecting Spring Lake and lower Pool 2 of the Mississippi River, just upstream from Hastings. The floating workshop was co-sponsored by the Mississippi Makeover Project (coordinated by the SWCD) and the Metro WaterShed Partners.

Participants included Representative Denny McNamara, Senator Katie Sieben, many local officials, agency staff, and representatives from the offices of Senator Klobuchar, Congressman Kline, and Congresswoman McCollum. In all, over 60 distinct organizations were represented! While there was plenty of time for networking and enjoying the scenery, workshop sessions featured information about the threat of Asian carp throughout the River system, and the need for large scale restoration projects like island building and water level drawdowns in Pool 2. Habitat restoration in Pools 2 and 3 and the Lower Vermillion River is the focus of the MPCA-funded Mississippi Makeover Project. Since 2007, the project has engaged citizens, set restoration targets, and prioritized restoration projects. Building islands in lower Pool 2 is the top priority of the project’s Citizen Advisory Group. Now, the Army Corps of Engineers is starting to look at that potential as well. The paddleboat tour helped describe the need and build support for this and other projects by getting people on this important stretch of the Mississippi River. For more information on the project visit: www.dakotaswcd.org/wshd_misssmak.html.

Watershed Planning Underway in North Cannon

Dakota County SWCD staff are helping the North Cannon River Watershed Management Organization (in southern Dakota County) update their 10-year watershed management plan. Over a series of four meetings, staff received input and feedback from an active Planning Advisory Committee comprised of watershed citizens and staff from agencies. This group identified issues facing the watershed and then developed goals and strategies to help address those issues. The watershed Board of Managers will soon review those goals and strategies, along with the entire draft plan, and will decide on an appropriate level of activity and funding that will carry the organization through the next ten years. Plan review and ultimate approval by the State and watershed communities is expected next year.
When you add it up, buffers just make sense. Buffer strips, or filter strips, are strips of land along a waterbody or watercourse that protect the water from pollutants that run off the land during storms or snowmelt. They are also known to create and improve wildlife habitat, and improve riparian shoreline or streambanks.

Last winter a landowner along the Vermillion River approached the SWCD about establishing a vegetated buffer between his crop field and the river itself. An approximately 50-foot wide wooded buffer already existed along most of the river, but the vegetation beneath the tree canopy was thin and the landowner wanted to make sure adequate vegetation existed to filter any potential pollutants running off his crop fields.

This summer, a 60-foot wide strip of the crop field was converted to native prairie grass. The grass buffer strip will filter an estimated 4 lbs. of phosphorus and 3.05 tons of sediment from the Vermillion River each year.

The SWCD worked with the landowner to secure funding from the U.S. Department of Agriculture’s Conservation Reserve Program (CRP) for the amount of cropland lost and the cost of buffer installation. The Vermillion River Watershed Joint Powers Organization contributed additional funding toward the project. Landowners who are interested in establishing their own buffers can contact the SWCD office at 651-480-7777.

An Excerpt from the New State of the River Report:

How is the Mississippi River? The State of the River Report — developed by the Friends of the Mississippi River and the National Park Service’s Mississippi National River and Recreation Area — assembles and analyzes a wealth of data, and describes 13 indicators that illustrate the condition of the river.

Visit www.stateoftheriver.com for the complete report, stewardship and policy guides, and dates of presentations.

So, how is the Mississippi River? It’s a river that has improved in both water quality and ecological health over time, but there are also some distressing trends and emerging concerns.

- Positive trends in our bald eagle, mussel, and fish populations are signs of a restored river that is once again home to healthy and abundant wildlife. As pollution has been cleaned up and habitat restored over the past 40 years, bald eagles, mussels, and fish populations have rebounded.
- Other indicators remain causes for concern. Excess sediment and phosphorus can compromise aquatic habitat and recreation in the Mississippi River, including downstream in Lake Pepin. Some portions of the river are impaired with excess bacteria, while site-specific fish consumption guidelines are in place throughout the river due to elevated levels of PFOS, mercury, and PCBs.
- Several indicators are cause for serious concern moving forward. River flows have multiplied to worrisome levels, destabilizing the watershed and flushing large amounts of pollution into the river. Nitrate concentrations are increasing at an alarming rate and Asian carp continue to move upstream. Emerging contaminants, like triclosan, PAH compounds, and others, present potential risks to the river that we do not yet fully understand.

Annual Pollution Reduction =
4 pounds phosphorus + 3 tons sediment
The City of Inver Grove Heights received the 2012 Community Conservationist Award from the Minnesota Pollution Control Agency and the Minnesota Association of Soil and Water Conservation Districts. This award honors an individual, business, municipality, or organization for their ongoing commitment to protect soil and water resources in a community environment.

“The City’s many accomplishments are outstanding examples of how we can work together to put effective conservation projects on the ground,” said Jim Davidson of the SWCD. Since 2008, the City has voluntarily included over 45 curb side raingardens, 2 native gardens and a 3,350 square foot bioinfiltration cell as part of its street reconstruction projects. Further, the City adopted one of the State’s most innovative zoning ordinances that requires all new development in the city’s Northwest Area to reduce runoff volume and mitigate impacts by following Better Site Design practices to reduce impervious cover, conserve natural areas, and create landscapes designed to treat stormwater runoff. When applied early in the project planning, Better Site Design techniques can sharply reduce stormwater runoff and pollutants generated at a development site, and also reduce the size and cost of the stormwater conveyance system needed for the site.

The City has many plans for future water quality projects and continues to be a strong conservation partner with the SWCD. Congratulations to the City of Inver Grove Heights on this well-deserved award!