Neer Park

The City of New London has practiced improved land stewardship in the past by implementing shoreland restorations at two of its parks on the Mill Pond. In 2009, the City continued its efforts with a major shoreland restoration at Neer Park.

The shoreline at Neer Park was experiencing intense undercutting and slumping, and the existing turf grass could not provide soil stabilization or protection from wave action. Erosion issues were severe enough that the park was selected to be a part of a research project on the limits of bio-engineering by Mary Blickenderfer, a shoreland specialist with the University of Minnesota Extension.

Bio-engineering uses native plants and other alternatives to rock armament to solve erosion issues; however, there are situations where the natural system has been altered to the extent in which bio-engineering is not capable of stabilizing the shoreline. Ms. Blickenderfer’s research is designed to determine the point at which bio-engineering is no longer a viable solution and rock rip-rap is the only option for stabilization.

The design of the restoration project at Neer Park was a collaboration with Ms. Blickenderfer, the Watershed District, Minnesota Department of Natural Resources, the City of New London, and a contracted engineering company. More than 685 linear feet of shoreline were stabilized using a combination of Envirolok, Filtrexx Soxx, and coco logs, and 13,000 square feet of upland area were restored with more than 1800 plants in combination with native seeding. Rock rip-rap was used on a small section of the shoreline where it was determined that bio-engineering methods would not be sufficient. The project was implemented in August with the help of community volunteers, District staff and New London city employees.

A Clean Water Partnership grant from the Minnesota Pollution Control Agency (MPCA) funded 75% of the project with the remaining 25% being funded by the City of New London and the Little Crow Ski Team.

319 Stormwater Improvement Grant

The MFCRWD signed a federal 319 grant in November 2008 to improve stormwater management in ecologically sensitive watersheds, with a focus on New London and Spicer. The project focuses on stormwater monitoring, education with regards to stormwater improvement, and the implementation of Best Management Practices (BMPs) to address immediate stormwater issues.

Extensive stormwater runoff monitoring was conducted in both cities beginning with spring snowmelt and continuing with precipitation events throughout the summer and fall. Stormwater samples were collected from three stormwater inlets to Green Lake in Spicer and three inlets to the Mill Pond/Middle Fork Crow River in New London. Samples were analyzed for suspended sediment and phosphorus. This monitoring will help direct future stormwater mitigation projects in New London and Spicer. Stormwater quality monitoring will continue throughout 2010.
Volunteers were a critical force for the monitoring efforts throughout the watershed again in 2009. Our volunteers collected water samples and secchi disk readings on Calhoun, Elkhorn, George, Green, Long, Monongalia, and Nest Lakes from April through October. Water samples and transparency tube readings were also collected on seven stream sites. The results of the volunteers’ efforts at our area lakes are shown in the chart below. Precipitation data was also recorded by volunteers at various locations around the watershed.

The results of the volunteers’ efforts at our area lakes are shown in the chart below. Precipitation data was also recorded by volunteers at various locations around the watershed.

Funding for the volunteer monitoring program was provided through two grants from the MPCA: a Citizen Monitoring grant and a Clean Water Partnership grant.

Through analysis of the water quality data collected by our volunteers, we are able to develop a better understanding of the water quality throughout the watershed as well as evaluate trends over time. In addition, the information will help us to more accurately plan future water quality improvement projects.

The MFCRWD would like to thank the 2009 volunteers: Allan Gilbertson, LuAnn Giedlen, Bill Gossman, Bob Hodapp, Ron Johnson, Ann and Bill Latham, Dean Lovold, Harlan and Sherrie Meints, Jill Nelson, Ruth Schaefer, Dave Schmidt, Mel Wensman, and Graden West.

Rules & Permits

The MFCRWD Board of Managers adopted its Administrative Rules in December 2008. These Rules cover the three areas of concern that were identified by the Watershed District and its stakeholders in the design process: Stormwater, Erosion Control, and Drainage.

A Stormwater permit is required for (a) any land disturbing activity one acre or greater; (b) any new or expanded drain tile system with a diameter greater than 12 inches that drain agricultural land; or (c) any new or expanded drain tile system with a diameter greater than 6 inches that drains shoreland. Please contact our office with questions or before beginning any project that may require a Watershed District permit. The complete Administrative Rules, permit application, appendices, and guidance documents are available at our office and on our website at www.mfcrow.org.

A Drainage permit is required for: (a) any new or expanded open private ditch; (b) any new or expanded drain tile system with a diameter greater than 12 inches that drain agricultural land; or (c) any new or expanded drain tile system with a diameter greater than 6 inches that drains shoreland. Please contact our office with questions or before beginning any project that may require a Watershed District permit. The complete Administrative Rules, permit application, appendices, and guidance documents are available at our office and on our website at www.mfcrow.org.

Trophic Status Index (TSI) What does it mean?

Mesotrophic: Water moderately clear; increasing probability of no oxygen in the lowest levels during summer.

Eutrophic: Decreased transparency, lack of oxygen in the lower levels during the summer, weed problems evident, warm-water fisheries only.

Hypereutrophic: Dominance of blue-green algae, algal scums probable, extensive weed problems. Heavy algal blooms possible throughout the summer.
**Best Management Practices**

Best management practices (BMPs) are land use changes or activities that improve water quality by reducing runoff and pollution. The MFCRWD helps fund BMPs with cost share funding and State Revolving Fund (SRF) low interest loans. These projects are often initiated by a landowner inquiry to the MFCRWD office or any of our Soil and Water Conservation District, Natural Resources Conservation Service, or County partners.

Cost share funds may be approved for 50-75% of eligible project costs. These funds are grants and cannot be used for septic system upgrades. The District implemented 13 different BMPs in 2009 including a cattle exclusion, shoreland restorations, rain barrels and rain-gardens.

The District also has SRF loans that can be used for the homeowner’s contribution for eligible BMPs or septic systems upgrades. The loans are disbursed with a 3.5% interest rate and are placed as a special assessment on the landowner’s property taxes; loans are repaid when property taxes are paid, over a 7-10 year period. SRF loans were used to help seven homeowners with their contributions to their BMP projects and one septic system upgrade this year.

**Other MFCRWD outreach**

The Watershed District had many opportunities to contribute to and support our local communities and water resources in 2009. Contributions were made to the Earth Day celebration at Prairie Woods Environmental Learning Center, the Westby internship for a senior from the New London Spicer high school, the Green Lake Property Owners Association to conduct a survey on Eurasian watermilfoil, and to the Diamond Lake Wastewater Committee to explore a community-based resolution for sewage treatment. The Watershed District is also supporting the Diamond Lake Area Recreation Association in their pursuit of a new carp barrier.

**Aquatic Invasive Species**

Throughout 2009, invasive species received more attention and concern than they had for many years. From the discovery of zebra mussels in lakes near Alexandria to the threat of Asian carp in the Great Lakes, Minnesotans could not help but hear about these threats to our aquatic ecosystems. Two aquatic invasive plants have been identified in lakes in the Middle Fork Crow River Watershed District: curly-leaf pondweed and Eurasian watermilfoil.

Curly-leaf pondweed has been identified in Calhoun, Diamond, and Nest Lakes. Eurasian watermilfoil has been found in Green Lake. Both plants can outcompete native vegetation for space and food resources and may disrupt the native ecosystems.

Boaters and lake users can help prevent the spread of these nonnative invasive plants to other water bodies by thoroughly checking their boats, trailers, and other equipment for vegetation, removing it, and disposing of it properly.

Zebra mussels have been the target of awareness, education, and prevention in recent months. They were first found in the Duluth-Superior harbor in 1989 and have since spread to 37 water bodies in Minnesota. The mussels attach to boats, nets, docks, lifts, and swimming rafts and can be moved on any of these objects. They also attach to aquatic plants and microscopic larvae may be carried in water moved from an infested lake or river. Zebra mussels can attach to native mussels, killing them, and their filter feeding can greatly disrupt the food chain.

The District will be working with state and local governments and citizens to ensure that everything possible is done to prevent the arrival of zebra mussels, in addition to efforts to control the growth of curly leaf pondweed and Eurasian watermilfoil to the extent possible.

**Clean Water Partnership Continuation Grant**

The Middle Fork Crow River Watershed District received good news in August on the proposal that was submitted to the Minnesota Pollution Control Agency for the Clean Water Partnership Continuation Grant. Our project proposal was one of five projects approved for award around the state. This continuation grant will allow us to aggressively pursue the implementation of best management practices (BMPs) throughout the watershed, continue to expand our educational efforts in area schools, and implement a progressive stormwater treatment system while addressing flooding in Belgrade, among other exciting opportunities. The grant portion of the project is $350,000, and $150,000 in loans will be available to provide additional incentives for property owners to implement BMPs and upgrade individual septic systems. This grant commences in early 2010.

A project initiated by the Spicer Design Team in 2008 was completed this past summer. More than 400 linear feet of shoreline along Green Lake were planted with native grasses and wildflowers. The site, at downtown Spicer’s City Park, was experiencing some erosion and slumping from wave action and stormwater runoff. The deep roots of the native plants will work to stabilize the bank and infiltrate stormwater runoff, therefore improving water quality while the plants will provide habitat for various wildlife.

There is a number of different types of BMPs available to landowners, including wetland restorations, buffer strips, sediment blocks, manure management, animal exclusions, CRP, raingardens, and shoreland restorations. If a project meets funding criteria, a contract is drawn up and approved by the District Managers prior to project implementation.
In 2006, Diamond Lake was added to the Minnesota Pollution Control Agency’s (MPCA) im-
amount of nutrients in the lake can cause nuisance algae blooms along with other problems
which detract from the lake’s designated use of recreation. In 2008, the Middle Fork Crow River
out a Total Maximum Daily Load (TMDL) study, the goal of which is to identify the sources of
the excess nutrients. As the lack of stream flow was a major impediment to our TMDL sampling efforts in 2008, we
were out often as the five streams that flow into Diamond Lake began flowing in March. With
stream sites that dried up in June and didn’t begin flowing again until late autumn rains satu-
rated soils again, it proved to be a wise decision to get out first thing in the spring. Chemistry
samples and physical data were also collected on Diamond Lake and Schultz, Wheeler, and
Hubbard lakes that comprise the chain of lakes that
drain into Diamond Lake. A total of 35 samples were
collected at inlet sites, 8 samples on Diamond Lake,
and 6 samples on each of the three chain of lakes in
2009, District staff will work with the contracted engi-
neering company on lake and watershed modeling, implementation plan development, and finalizing the
TMDL report with state and federal officials.

We are on the web
www.mfcrow.org

Coming up in 2010
Beginning with snowmelt this spring, we will
continue monitoring stormwater runoff, and we will
implement a Stormwater Education program for the 319 grant. Our youth educa-
tion program will continue in the classrooms of our three school districts. We will scram-
ble to get all three of our new grants off on the right foot; this will include the writing and
execution of work plans, the beginning of
studies and the implementation of projects. One example of a project in the works is a stormwa-
ter project that will improve water quality in the headwaters of the watershed, while reducing the frequency and severity of flooding in the City of Belgrade. The District will continue ex-
tensively monitoring the watershed, working with volunteers, establish a newsletter, and working with citizen groups on AIS issues.

Watershed Board Changes
We have experienced many changes in the 4 ½ years since becoming a Watershed District: our comprehensive watershed management plan has been completed, we have adopted Ad-
inistrative Rules, and we have expanded our staff from just one to three people. In 2009, we
experienced more change with the resignation of Bob Zenern from the Board of Managers. Bob
served on the Board of Managers since the District was established, and helped us accomplish
many goals of the District. Bob will be greatly missed by the Board and the Staff!

The Stearns County commissioners appointed Bruce Wing to succeed Bob on the Board of Managers. Bruce is a
retired school counselor with the BBE School District and lives south of Bel-
grade. The Staff and the other Manag-
ers welcome Bruce to the Board, and look forward to working with him for years to come!

Diamond Lake TMDL
In 2006, Diamond Lake was added to the Minnesota Pollution Control Agency’s (MPCA) im-
paired waters list for excess nutrients, specifically total phosphorus. This means that the amount of nutrients in the lake can cause nuisance algae blooms along with other problems which detract from the lake’s designated use of recreation. In 2008, the Middle Fork Crow River Watershed District entered into a contract with the MPCA and retained a consulting firm to carry out a Total Maximum Daily Load (TMDL) study, the goal of which is to identify the sources of the excess nutrients.

As the lack of stream flow was a major impediment to our TMDL sampling efforts in 2008, we
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