BWSR Snapshots

March 2013

Northeast Minnesota flood recovery: Helping one family at a time

By Jen Maleitzke, Communications Director

After bailing out water from his basement and watching a waterfall form in his backyard, Jamie Juenemann thought he'd seen the worst of the 2012 June storms in northeast Minnesota. That was until he and his family attempted to drive into Two Harbors, only to find out that half-way down their one mile driveway, their bridge over the Little Stewart River was in disrepair and virtually impassable.

"There was water about four feet below the bridge's beams and we lost about three feet of rock and gravel under the bridge," Juenemann said. "It took two days to realize the full extent of the damage and we quickly knew it was not safe to drive over the bridge."

Since the bridge provides the sole access the home, the Juenemann family had to hike or bike a half mile each way to get home after the flood.

More than three feet of rock and gravel washed away during flood.

Juenemann learned that the cost estimates to replace the bridge was well beyond their budget. The family dealt with the possibility of not being able to send their eldest daughter, a senior in high school, to college.

"The situation put a tremendous amount of stress on us," Juenemann said. "It took a while for the funding to fall into place."

With a project cost of nearly $120,000, the Juenemanns secured a loan from the U.S. Small Business Administration (SBA), but still needed additional financial support. They reached out to the Lake County Soil and Water Conservation District (SWCD).

"Everyone we worked with at the Lake County SWCD was great," Juenemann said. "They were really reassuring and provided the support and resources we needed to get the project going and completed before winter."

The Juenemanns saved on project costs by working on the bridge themselves.

Starting the project the first week of November, it took two full months until completion. The new bridge was designed and constructed to accommodate stream hydrology and natural channel design, including bankfull benches.

"We finished the project on December 31 and celebrated with a champagne toast," Juenemann said. "Jennifer [Thiemann, Lake SWCD District Manager] and the Lake SWCD Board made everything so much easier and we are grateful for the support."

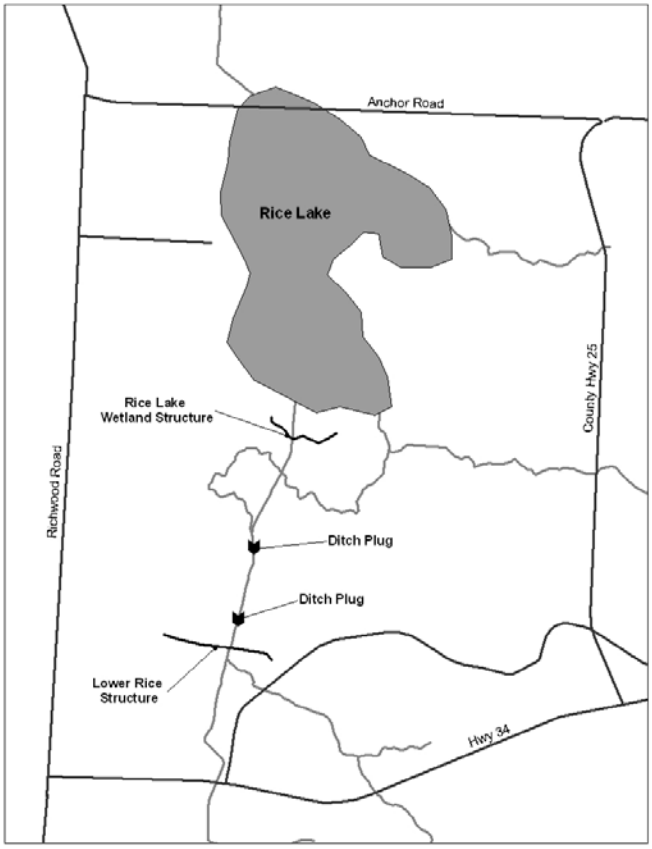
In addition to destroying the bridge, the storms created changes in the stream channel, ruining a highly-prized steelhead habitat. The Lake SWCD will conduct a stream channel restoration project over the new two years to rebuild the habitat. Vegetation around the bridge will be restored during the 2013 growing season, and come fall, Juenemann's daughter will be off to college.

Rice Lake nutrient reduction and habitat improvement

By Chad Severts, Board Conservationist

The Pelican River Watershed District (PRWD) initiated the *Nutrient Reductions to Detroit Lake Project* in 2003. From its monitoring program, the District identified the upstream ditched Rice Lake wetland as the highest source of phosphorous entering Detroit Lake. The water quality flowing out of the wetland was worse than untreated urban stormwater runoff. The physical and chemical mechanisms which cause the release of nutrients from drained wetlands are complex and had

been studied for more than 10 years in the Rice Lake Area.



Map of project area

The District is jointly working on this project with the Natural Resource Conservation Service (NRCS). The NRCS Small Watershed Assistance Group conducted an in-depth assessment study on the Rice Lake Wetland. From that study, it was determined that restoring the wetland was the most technically feasibly option to improve the water quality of Detroit Lake. Restoring the wetland will increase its size from 434 acres to the pre-ditched size of 896 acres. This project will reduce the total phosphorous (TP) loading to downstream recreational water bodies including Detroit, Sallie and Melissa Lakes by 1,200-1600 kg/yr.

This project is an excellent example of a local watershed district utilizing all the partners and programs needed for a successful project, including:

- The NRCS technical and engineering assistance provided is valued at more than $500,000.
- The BWSR Clean Water Funds grant of $250,000 is assisting with additional engineering costs and the purchase of flowage easements.
- The Lessard-Sams Outdoor Heritage Council (LSOHC) contributed $125,000 to assist with project implementation.
- The NRCS Wetland Reserve Program has utilized $345,000 of funding to help purchase flowage easements.
- The MPCA Clean Water Partnership loan program was also used by the PRWD to obtain flowage easements on property that was not eligible for the Wetland Reserve Program.

At this time, the total project costs have been $2,776,000. NRCS has committed to paying the project construction costs which are estimated to be an additional $1.2 to $2.0 million. The project components include:

- Raise Anchor Road and installation of new culverts,
- Installation of a structure at the outlet of Rice Lake Wetland,
- Installation of 2 ditch plugs between the Rice Lake Wetland Structure and Lower Rice Lake Structure,
- Installation of a structure on Pelican River, north of Sucker Creek (Lower Rice Structure), and
- Replacement of historic outlet's culvert.

The project is expected to be constructed in the upcoming construction season. By reducing the major pollution from the Rice Lake wetland by 50 percent, the PRWD hopes to stabilize or possibly improve the long term water quality trend of Detroit Lake.

From novice to professional: Conservation Corps apprenticeship leads to career position

By Jen Maleitzke, Communications Director

The summer of 2011 was one that Neva Widner will never forget.

As a conservation apprentice at the Carlton County Soil and Water Conservation District (SWCD), Widner performed water quality monitoring and surveyed wetlands, streams and runoff on farms. One of her biggest challenges occurred when a torrential rainstorm in the Nemadji Watershed required immediate response.

Widner takes water quality samples during her summer apprenticeship at Carlton SWCD.

"The rain event really tested my monitoring skills," Widner said. "Within a matter of hours, 5.5 inches of rain fell, and rivers were the highest recorded in the 37 years of historical flow records. I could truly take inventory of my knowledge and skills."

Her apprentice experience at Carlton SWCD directly led to her to a full-time job as a Water Resources Technician in 2012.

As the most experienced conservation leaders are nearing retirement age and walking out the door with the knowledge and experience they've built over decades, university graduates are subsequently walking in the door, knowledgeable in theory, research methods and emerging technologies, but lacking practical on-the-job skills important for success. The Minnesota Conservation Apprentice Academy allows youth and mentors to work side by side to build a solid foundation for the future management of the state's natural resources.

Applications for 2013 Conservation Apprentice Academy are being accepted now through March 29. Apprentices will be placed with SWCDs to conduct water quality monitoring, install conservation practices, conduct site inspections, recruit landowners for conservation projects, assist landowners and SWCD staff with management plans, and much more.

Applicants must be ages 18-25 and be available to work full-time from May 20 – August 23. Statewide positions are available. Detailed program information can be found at the **Conservation Corps website.**

Reflecting on her apprenticeship, Widner said, "The Apprenticeship Academy provided me the opportunity to develop a set of professional skills and network to become competitive in my pursuit of acquiring a conservation position. I view the Apprenticeship Academy as a vital component to the long-term effectiveness of Minnesota SWCD functionality, by providing the apprentice the means to transition from the classroom to the field, and the SWCD the additional affordable staff support."

The Board of Water and Soil Resources manages the Minnesota Conservation Apprentice Academy project with funds appropriated through the Minnesota Environment and Natural Resources Trust Fund. The Conservation Corps serves as the employer and uses these funds to match apprentices with mentor SWCDs, provide a monthly apprentice stipend, check in with mentors and apprentices throughout the summer, and track long-term results.

Wetland Conservation Act enforcement summary

By Dennis Rodacker, Metro Senior Wetland Specialist

The Wetland Conservation Act (WCA) enforcement provision is a challenging, yet important tool necessary to maintain Minnesota's No Net-Loss policy, and to protect wetland functions and values. While these challenges are many, the most difficult are land-use regulation vs. property rights, and the complexities of effective communication.

In a routine WCA enforcement case after a violation becomes noticed, the DNR, the WCA enforcement authority, issues a Cease and Desist Order (CDO). This legal document instructs the landowner to stop working on their project and contact their Local Government Unit (LGU), or Soil and Water Conservation District (SWCD). These people then meet with the landowner and figure out a way to get the project into compliance with the WCA. This can be carried out by restoring the wetland, replacing the lost functions and values, or after the fact permitting. After the project comes into compliance, the SWCD issues a Satisfactory Completion form to the landowner and copies the DNR who then closes the case.

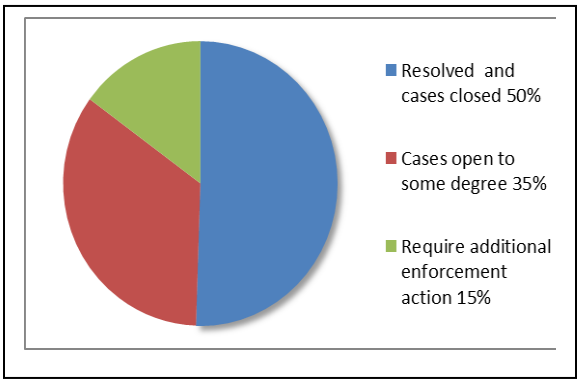
A recent example is a landowner who wanted to put up a new building on their property, but there was a low wet depression in the preferred location. In the process of what the landowner considered improving their property, a large extent of wetland was filled. A DNR Conservation Officer was notified and visited the site.

The officer discovered the project violated the WCA and issued a CDO to the landowner. Subsequently, the LGU and SWCD visited the landowner to figure out a way to do the project while still conforming to the WCA. The solution in this case was to locate the building to a secondary location on the property and remove the fill from the wetland. After this was done, a Satisfactory Completion form was given to the landowner and copied to the DNR who officially closed the case file.

Effective communication is vital to the WCA enforcement process and breakdowns can happen for a number of reasons, which leads to cases staying open far too long. It was because of these breakdowns in communications that there were nearly 300 open WCA violation cases statewide as of late 2012. To remedy this situation in the fall of 2012, BWSR and DNR coordinated a communication project between the DNR, LGUs, and SWCDs to define the status of every open WCA violation case within the state. The goal was to determine what cases were open, and what cases had been resolved so they could be officially closed. It also provided a reminder to LGUs and SWCDs to check in on cases that have stagnated.

With the DNR's assistance, BWSR provided each LGU and SWCD a list of open cases in their respective regions that were issued CDOs but not officially closed. Initial conversations with LGUs and SWCDs resulted in 50 percent of the cases being resolved, just not officially closed. The remaining 50 percent were open to some degree, with 15 percent of those requiring additional enforcement actions to bring resolution, while the remaining 35 percent are working towards resolution in the near future.

As new violations occur, it is imperative that to maintain communication to help partners and landowners through these processes.



BWSR staff, board members participate in Environmental Congress

By Jen Maleitzke, Communications Director

BWSR board members Brian Napstad, Jack Ditmore, Paul Langseth, Keith Mykleseth, Steve Sunderland, agency leadership, and staff John Jaschke and Travis Germundson were among the 350 people who participated in the Environmental Congress on March 15.

Deb Swackhammer and BWSR board member Rebecca Flood talk at the Environmental Congress.

Hosted by the Minnesota Environmental Quality Board, a 14-member committee of citizens and state commissioners, the event focused on Minnesota's Environment and Energy Report Card, a document outlining water, land, air, energy and climate issues. Citizens were invited to participate in choosing the issues within these categories that they found most pressing. Featured speakers included Gov. Mark Dayton, Will Steger and Sen. Amy Klobuchar.

BWSR board members provided some insight about their overall impressions from the event:

- Board members Langseth and Mykleseth agree groundwater is going to be a big issue in the coming years, including the need for data and understanding the relationship between surface and groundwater interactions.

- Board member Ditmore believes it is important for BWSR is the importance of factoring climate change into agency decisions.

- Board member Sunderland sees the need for increased publicity about the state's achievements and programs that are available to the general citizenry.

All of the board members agreed the event was a well-organized meeting with a wide range of groups represented.

Topics from the congress will be compiled into a report to help the Environmental Quality Board and Gov. Mark Dayton set environmental goals for the state.