

Stories from Master Water Stewards
Carol Kuechler and Kristina Geiger

Each month, the Freshwater Society will profile the work of our Master Water Stewards. Stewards are working in neighborhoods throughout the Minnehaha Creek Watershed District, helping neighbors to reduce urban runoff, protecting our lakes and rivers.

Master Water Stewards Carol Kuechler and Kristina Geiger installed several stormwater management projects in an ambitious capstone project. Every steward is required to do a capstone project as part of their certification process. Each project is comprised of an installed stormwater management project, and an education and outreach campaign.

Carol decided to redesign her whole backyard to decrease the amount of stormwater that runs off her property and down the alley behind her home.



Master Stewards help install native plants into Carol's two raingardens.

She tore out her backyard, regraded it, redirected downspouts and installed a catch basin, put in permeable pavers for the entire driveway, as well as installed permeable pavers for a patio, and two raingardens. Both of these raingardens were finished on October 19, interrupted briefly by several bouts of rain, hail and brilliant moments of sunshine. Two other stewards came to help install the native plants into the raingardens. The gardens have underground piping installed for the overflow and a large number of native plants.

For Carol and Kristina's outreach project, their goal was to address runoff to the alley behind Carol's home and have 50% (8-9 people) of identified homeowners participate in reducing that runoff.

Carol first participated in National Night Out to talk with her neighbors about the Master Water Steward program and the importance of how what we do on the land affects the health of our water, as well as talk about her backyard project. Carol and



Neighbors attending Carol and Kristina's managing water runoff outreach event.

Kristina created educational materials for Carol's neighbors and sent out a survey before their outreach event. This helped them to get a better idea of what neighbors are doing to manage the water running off their homes and learn what they want more information about.

Carol and Kristina went door knocking the week of October 28 to let homeowners in the area know about their outreach event the following week and to talk to them about managing water runoff. Carol and Kristina reached 39 homes door knocking and handed out flyers with details of their neighborhood event. This outreach event was an open house at Carol's home on November 3. She gave a tour of her stormwater management projects and offered neighbors gutter and downspout materials so they could redirect their downspouts. Carol and Kristina gave out many educational materials at this event and offered to consult with neighbors about possible projects on their property. Twenty-five neighbors attended the event, with two people expressing interest in installing their own project in the spring.

To learn more about the Master Water Stewards program, contact [Peggy Knapp](#) at the Freshwater Society.

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Lake Superior Ice
By Jonathan Mortenson

JANUARY 2014

Weather Facts and Photo from *MN Weatherguide Environment Calendar*
Monthly Normals: Temp. Max: 23.7 F Min: 7.5 F Precip: .9 in. rain / 12.1 in. snow



UPCOMING EVENTS

January 30
Moos Series Lecture, U of MN, St. Paul Campus

February 6
Road Salt Symposium, U of MN Landscape Arboretum, Chaska

May 1-2
State of Water Conference, Brainerd

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Curiosity Leads to Knowledge



Steve Woods

Pat Sweeney leads our effort to pull together everything and everyone involved in staging our Moos Family Speaker Series on Water Resources. When he told me (during my first week here) that he was about to ink the deal to get Robert Jackson of Stanford and Duke Universities for the January 30 lecture on hydraulic fracturing, I saw an opportunity to help my new co-worker.

"But, Pat", I said, "there isn't any fracking in Minnesota."

His pained expression told me he knew that. He patiently explained how our members had been asking for somebody knowledgeable and unbiased to come and shed some light on the issue. That sort of inquisitiveness has been a hallmark since the earliest days of the Freshwater Society. I know this because I recently have had the distinct pleasure of digging around the attic of this place and listening to the founders tell me stories of how we came to be.

Our members are curious about why frac-sand mining is coming to the "coastline" Minnesota and Wisconsin share. Having this background will help us all reflect on the nation's remarkable turnaround in our energy situation that was scarcely imagined, even five years ago. Fracking is occurring in North Dakota, Montana, Texas, Oklahoma, Ohio, Pennsylvania, Arkansas, West Virginia, New York and the movies... Once again highlighting that some of our most intractable problems – be they oil/gas extraction for our homes, hard rock mining for our phones, or agricultural policy for our food – occur in a national context.

As Freshwater maintains our groundwater efforts of the last year, we are ramping up our preparations for the agricultural discussions to come.

Regards,

STEVE WOODS

Steve Woods, Executive Director

The Freshwater Society is a non-profit organization dedicated to educating and inspiring people to value, conserve and protect water resources.

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Visit the Freshwater Society web site at www.freshwater.org.

January 30th Moos Speaker Series

Fracking: What We Know and Don't Know About Its Impacts on Water

A Freshwater lecture series on water and the environment is beginning its fifth year. Don't miss the next lecture.



Dr. Robert Jackson

On Jan. 30, Robert Jackson, an environmental scientist from Stanford and Duke universities, will speak on *Fracking: What we know and don't know about its impacts on water*.

The lecture, co-sponsored by the University of Minnesota's College of Biological Sciences, will be presented at 7 p.m. in the theater of the **Student Center** on the University's St. Paul campus. **Register** to attend. If you can't make it to the lecture in person, watch it live on **streaming video**.

Jackson and a team of Duke scientists have done extensive research on hydraulic fracturing to determine if chemicals pumped into the ground to force oil and gas to the surface are seeping into drinking water wells. So far, their research has not found evidence of that kind of contamination. It has, however, found methane gas in those drinking water wells.

A panel of three Minnesota experts will appear with Jackson and join him in answering audience questions. Those experts are: Alptekin Aksan, a University mechanical engineering professor who is part of a team researching ways to clean up fracking wastewater; Deborah Swackhamer, co-director of the University's Water Resources Center and a professor of environmental health sciences; and Ginny Yingling, the Minnesota Health Department's lead investigator on potential water quality issues associated with frac sand mining.

Learn more about the **lecture series** and view video of past speakers. Read a short **q-and-a interview** with Jackson. Read a Jan. 15 **Washington Post article** about some other fascinating research led by Jackson: a survey of natural gas leaks in Washington, D.C.'s, gas distribution network. Such methane leaks are a significant source of greenhouse gases.

Freshwater Comments on State Agricultural Efforts

In 2013, the Minnesota Department of Agriculture and the Minnesota Pollution Control Agency released major proposals for reducing water pollution from farm fertilizers.

The Ag Department proposed a **revision** of a 20-year-old nitrogen fertilizer management plan aimed at reducing nitrate contamination of drinking water pumped from private and public wells. The MPCA announced a phased **strategy** to reduce the nitrogen and phosphorus flowing to state lakes and rivers and, ultimately, to the Gulf of Mexico and Lake Winnipeg.

The Freshwater Society formally commented on both of the still-pending proposals. In both cases, the Freshwater comments praised the agencies for their efforts to reduce pollution. And in both cases the Freshwater comments also called on the agencies to strengthen their planned efforts.

Read the **Freshwater comments** on Ag Department's plan. Read the **Freshwater comments** on the MPCA nutrient-reduction strategy.

Items of Interest

Links to original reports on water availability, water pollution and water policy are archived on the **Reports and Research** page of the Freshwater web site.

There is some intriguing research there by agencies and organizations as diverse as the U.S. Geological Survey, the Intergovernmental Panel on Climate Change and the Pew Environment Group. You can look up a report that puts Minnesota water use into a national perspective, and you can read about Chesapeake Bay pollution caused by giant chicken farms.

Browse through the web page. You will find something that interests you.

13th Annual Road Salt Symposium

At this time of year (especially this year!) Minnesota roads turn a hue of white after numerous applications of road salt. It turns out that the chemicals that help provide safe roads in the winter are anything but safe for our lakes, rivers and drinking water. In the last few decades we have begun to see the harmful impacts caused by road salt as the chloride-impaired waters list continues to grow and groundwater data indicates harmful levels.



Join the Freshwater Society for the 13th Annual Road Salt Symposium. The conference features the latest research on the state of chloride in Minnesota's ground and surface waters, methods to decrease the use of road salt with alternatives and best management practices and innovative ideas about the future of winter maintenance in Minnesota.

It's up to everyone to make changes to protect our freshwater resources! **Learn** more or **register** for the February 6th Symposium at the **University of Minnesota's Landscape Arboretum**.

Freshwater Society Welcomes Two New Board Members

Paige Winebarger and Julie Blackburn, two experienced leaders with deep experience in water resources and strong commitment to conservation, are the newest members of the Freshwater Society Board of Directors.



Paige Winebarger

Paige retired in 2001 as senior vice president and general counsel for Marquette Bancshares, Inc. Before joining Marquette, she was deputy commissioner of banks for the state of Minnesota.

In her life as an environmentalist, Paige has served as a citizen member of the Minnesota Environmental Quality Board and a member of the Minnesota Pollution Control Agency board. She is a former chair of the board of the Minnesota chapter of the Nature Conservancy, and she is a member of the Guardianship Council, which steered the Freshwater Society through strategic planning in 2008. Read a short **q-and-a interview** with Paige, focusing on her interest in water.

Julie Blackburn has more than 15 years working in a leadership capacity in watershed protection and restoration and providing overall strategic management of natural resource programs. She is employed in the Minnesota office of RESPEC, a consulting and services firm focused on providing innovative solutions for natural resources, environmental planning and restoration and water quality.



Julie Blackburn

Julie previously was assistant director for policy and programs at the Minnesota Board of Water and Soil Resources. In that position, she worked with the Minnesota Legislature, local governments, and agencies on issues regarding wetlands, drainage, watershed management, implementation and restoration. She has been administrator for two watershed districts in Central Minnesota, and she formerly was a board member of the Rivers Council of Minnesota and Minnesota Waters.

An interview with Julie will appear in the February *Facets of Freshwater* newsletter.

SAVE THE DATE State of Water Conference May 1–2, 2014

Interested in Lake and River Conservation?

Join us at the State of Water Conference May 1-2 in Brainerd.

This two day event follows in the tradition of the Lakes and Rivers Conference previously organized by Minnesota Waters and features workshops and information sessions on everything from lake restoration to local ordinances.

Join us to learn more about protecting and improving the water you love and take part in a great opportunity to network with other citizens and water resource professionals. Details and registration will be available in February at www.freshwater.org.

Join the Society – Get the Weatherguide!

Become a new member of the Freshwater Society and you'll receive the new, 2014 *Minnesota Weatherguide Environment Calendar*. It's a win-win!

Help us protect freshwater resources and you'll enjoy a plethora of amazing regional photography, Nature Notes, weather history and meteorological information, gardening tips and much more. **Become a member!**

