

Weekly LWC Update 10-7-16

Interested reader: each week, I gather general information for Legislative Water Commission members to help keep them apprised about water issues in Minnesota. It contains a roundup of easily attainable MN water news, as well as articles from beyond MN that may inform member thinking. It also includes summaries of meetings I have attended and reports I have read, as well as info about upcoming events. During the Legislative Session, it also includes updates on water-related legislation. Any errors or omissions are inadvertent.

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NOTE: I've moved into Room 69 of the Legislative Citizens Commission on MN Resources suite (Rm 65).

MN NEWS

WATER ACTIONS

- Business Wire: [The Toro Company Recognized with 2016 EPA WaterSense® Excellence Award](#); the first major irrigation manufacturer recognized for second consecutive year
- Grand Forks Herald: [Area students paddle Red River for watershed education and flood research](#)
- International Falls Journal: [New approach to water management takes next step](#); BWSR: [Innovative approach to water management takes next step - Seven new planning areas announced as part of One Watershed, One Plan](#); they are:
 - **Cannon River watershed**, which includes parts of Dakota, Goodhue, Le Sueur, Rice, Steele, and Waseca counties.
 - **Cedar River watershed**, which includes parts of Dodge, Freeborn, Mower, and Steele counties.
 - **Lake of the Woods watershed**, which includes parts of Lake of the Woods and Roseau counties.
 - **Leech Lake River watershed**, which includes parts of Beltrami, Cass, and Hubbard counties.
 - **Missouri River Basin watershed**, which includes parts of Jackson, Lincoln, Murray, Nobles, and Pipestone counties and all of Rock County.
 - **Pomme de Terre River watershed**, which includes parts of Big Stone, Douglas, Grant, Otter Tail, Stevens, and Swift counties.
 - **Thief River watershed**, which includes parts of Beltrami, Marshall, Pennington, and Roseau counties.
- Minnehaha Creek Watershed District: [You Can Build a Garden](#), an ode to raingardens on YouTube
- AgriNews: [Climate change issues front, center](#)
- U of MN: [Minnesota Water Resources Conference set for October 18-19](#)
- DNR: [2 youths honored by DNR for their conservation efforts](#)
- Hutchinson Leader: [Open house at 5 p.m. today will offer steps you can take to ensure your drinking water is safe](#)

WATER SUPPLY

- AgWeek: [Minnesota town notified of rural water price increase](#)
- Duluth News Tribune: [Duluth steps up diligence against lead in drinking water](#)
- Eden Prairie News: [What is Eden Prairie doing to reduce chromium-6 in drinking water?](#)
- Sustainable Water: [Does Your Rate Setting Account for Wonky Weather?](#)
- American Water Works Association – MN Section: MN-AWWA celebrates 100 years of service; the [MN-AWWA-100](#) video gives a brief history of water in MN; at their 100th annual convention this past month, AWWA elected these two familiar faces to their Board, Pete Moulton from St Peter and David Brown from Met Council:



SURFACE WATER/STORMWATER

- U of MN: [How much does that fertilizer REALLY cost?](#); download a copy of the full article *The social costs of nitrogen* published in Science Advances [here](#)
- Strib: [Danger Downstream – Minnesota’s Threatened Rivers](#)
- Pioneer Press: [Minnesota DNR denies permit for Red River diversion project](#); Strib: [Minnesota agency denies permit for Red River diversion plan](#); Capitol Report: [DNR denies Red River diversion permit](#); MPR: [Minnesota rejects Fargo-Moorhead flood project plan](#); DNR: [DNR denies permit for Fargo-Moorhead flood diversion project](#)
- MPR: [Army Corps presses Red River flood project despite permit denial](#); Bismarck Tribune: [Army Corps plans to move forward with flood diversion plan](#); Gov Dayton: [Statement from Governor Dayton on Fargo-Moorhead Flood Diversion Permit Application](#)
- MinnPost: [Are Minnesota’s lakes half empty with aquatic invasive species, or half full?](#)
- Walker Pilot Independent: [Temporary closure at Knutson Dam Recreation Area](#) to reduce the spread of starry stonewort; [Brainerd Dispatch: New upper Mississippi River restoration project to benefit aquatic life](#)
- St Cloud Times: [War on aquatic invasive consumes St. Cloud conference](#)
- Mankato Free Press: [Governor makes water quality an election issue](#)
- BWSR: [Bringing clarity back to Detroit Lake](#)
- Bemidji Pioneer: [Zebra mussels found in two lakes](#); DNR: [Boat lifts focus of 2 new zebra mussel reports](#)
- DNR: [Starry stonewort confirmed in West Lake Sylvia](#)

WASTEWATER

- Strib: [Sewer backup closes Walker Art Center until Saturday](#); Pioneer Press: [Main-line sewer backup closes Walker Art Center through Friday](#)

AG & WATER

- BWSR: [Faribault County: home to the nation’s largest bioreactor](#)
- Civileats.com: [Cheers to This: Beer That’s Good for the Climate...](#)and water; Patagonia Provisions and Hopworks Urban Brewery in Portland are delivering this beer, which is made with Roseau-

grown Kernza™ (a.k.a. intermediate wheat grass) developed by the U's Forever Green program;
The Washington Post: [Perennial wheat is an ecologist's dream. Soon it may be what's for dinner.](#)

- BWSR: [Minnesota's Wetland Bank for Agriculture gets \\$1 million boost](#)
- AgriNews: [Cover crops for cattle add value](#)
- MDA: [RFA to offer zero-interest loans for farmers in flood disaster counties](#)

EXTRACTIVE INDUSTRIES

- alphanews: [Northern MN Oil Pipeline May Face Further Delays](#)

OPINIONS

- Mankato Free Press: [Our View: Water quality: Profitable farming can co-exist with clean water](#)

BEYOND MINNESOTA

REGIONAL

- Circle of Blue: [Mississippi's Claim That Tennessee Is Stealing Groundwater Is A Supreme Court First](#) (recommended reading)
- LA Times: [Weaker water conservation numbers prompt fears that California is going back to its old bad habits](#)
- New York Times: [Timber Company Tells California Town, Go Find Your Own Water](#)
- Reuters: [Water meeting safety standards after Florida sinkhole leak: Mosaic](#)
- The Guardian: [Looming megadroughts in western US would make current drought look minor](#)
- Strib: [Milwaukee to give water filters to low-income families](#)
- The Des Moines Register: [Nitrates in the water may be more harmful than we thought](#)

NATIONAL

- Federal Register: [Treatment of Indian Tribes in a Similar Manner as States for Purposes of Section 303\(d\) of the Clean Water Act](#)
- USGS: [Cyanobacterial harmful algal blooms and U.S. Geological Survey science capabilities](#); this brief report gives an overview of Cyanobacteria Harmful Algal Bloom issues throughout the US and USGS diverse studies, technologies and partners
- Federal Register: [Request for Public Comments To Be Sent to EPA on Peer Review Materials To Inform the Safe Drinking Water Act Decision Making on Perchlorate](#)
- Circle of Blue: [EPA Announces National Wastewater Nutrient Pollution Census](#); EPA: [National Study on Nutrient Control and Water Treatment Technologies](#)
- Strib: [Half a million households in U.S. lack proper plumbing](#)

GLOBAL

- Reuters: [Sewer warmth to heat Paris swimming pool](#)

MEETINGS

LSOHC – EASEMENT WORKING GROUP

The Lessard-Sams Outdoor Heritage Council has formed a working group to learn more about conservation easements. At their first meeting this week, representatives of several organizations (i.e., the MN Department of Natural Resources, the U.S. Fish and Wildlife Service, The Nature Conservancy, Dakota County, the Minnesota Land Trust, The Conservation Fund, and the MN Board of Water and Soil Resources) gave an overview of their easement programs and how they are managed. The discussion

then migrated into what requirements should be included in conservation easements obtained with Outdoor Heritage Funds, particularly as they related to the easement acquisition and review process and expectations related to habitat gains in those easements.

CLIMATE ADAPTATION

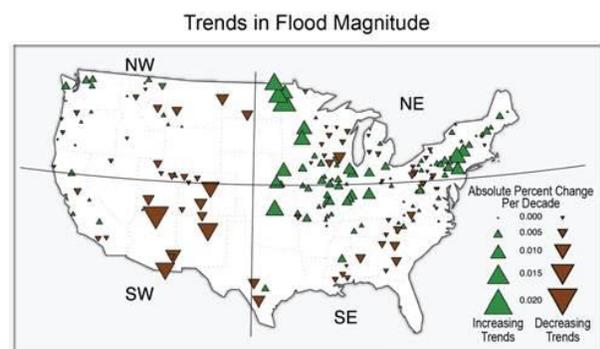
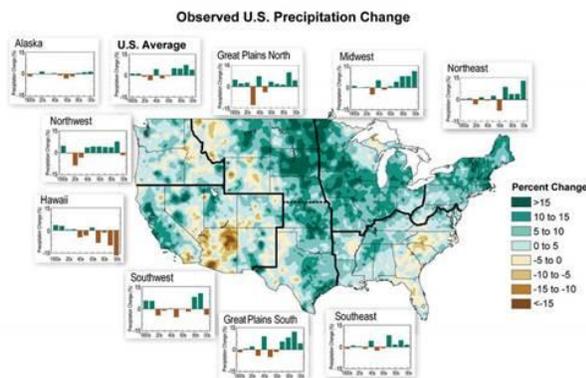
Dr Mark Seeley, U of MN’s Extension Climatologist and MN History Center’s Weather Historian, hosted a workshop this week to explain how MN’s climate is changing and identify resources that can be used to transform awareness to action. From drought to flooding, nearly every Minnesotan has experienced climate variabilities. But not everyone knows that MN’s central location in the North American continent makes it susceptible to receive air masses from any trajectory; plus, its variable soils, vegetation, and topography help make MN’s climate one of the most variable on earth. Climate variability is a combination of natural variability, changes in land use, and increases in the emission of greenhouse gases.

MN is experiencing changes in climate normals, with more severe weather days and unusual weather events. For example, the March 2009 Red River flood saw higher crests and a longer duration of high water, necessitating 66 days of evacuation. There were 48 tornadoes across the state on 6/17/10. In 2012 (the year of the largest national drought since 1936), the Cannon and St Louis rivers experienced record floods; 55 MN counties received federal drought designation at the same time 11 MN counties declared flood emergencies. On 3/31/14, Lac Qui Parle County had tornado and blizzard warnings at the same time. There have been 7 “mega-rain” events (>6” over 1,000 sq miles, with >8” in the core area) in the MN’s 1st 104 years of record and 7 mega-rains since 2002. Here are some 2015 records:

- a complete drought reversal happened in one month: May (with rain on 23 of 31 days)
- it was 84 degrees in Luverne on April 1st – the warmest April 1st in MN history
- the agricultural growing season was the best in over 50 years
- it was 97 degrees in Sabin on October 11th – the warmest October 11th in MN history (and the same temperature that day as Phoenix, AZ)
- December was the warmest December in MN history (80% of its precipitation events were rain, so less water storage in snow)

2016 may be another record setting year – with 72% of days already being warmer than normal.

On average, winter temperatures are now 4 degrees warmer and other seasons have experienced 1 to 2 degree increases, primarily as a result of warmer average daily minimum temperatures. The state’s plant hardiness zones are changing and NW MN now has between 9 to 17 more growing days. The largest change in precipitation is occurring in April and models predict that MN will get wetter in the growing regions of the state.



In 2008, Gov Pawlenty established workgroups to begin addressing climate mitigation (lowering greenhouse gas emissions) and climate adaptation (changing what we do in response to warmer, wetter conditions; reducing vulnerability to impacts). Partners include the U of MN, local government units, private sector businesses, agency staff and others. The goals of the Minnesota Climate Change Adaptation Working Group can be found [here](#). State agencies have produced the following reports:

- Interagency Climate Adaptation Team: [Adapting to Climate Change in Minnesota - 2013 Report of the Interagency Climate Adaptation Team](#)
- MDH: [Minnesota Climate Change Vulnerability Assessment 2014](#)
- EQB: [Minnesota and Climate Change: Our Tomorrow Starts Today](#) (2014) and [Climate Solutions and Economic Opportunities](#) (2016)

With respect to water and climate adaptation, Minneapolis is a leader: [Preparing for Climate Change; stormwater adaptation study](#) (with the Minnehaha Creek Watershed District); and [flood mitigation program](#). Good federal resources about water and climate adaptation include:

- EPA: [Flood Resilience: A Basic Guide for Water and Wastewater Utilities](#)
- [US Climate Resilience Toolkit](#); a sample of their brief, water-related case studies:
 - [The Fond du Lac Band of Lake Superior Chippewa Combine Mitigation with Capacity Building](#)
 - [Threats to Fredericktown's drinking water](#)
 - [Small Water Utility Builds Flood Resilience](#)
 - [Climate Preparedness Workshops Provide a Head Start Toward Resilience](#)

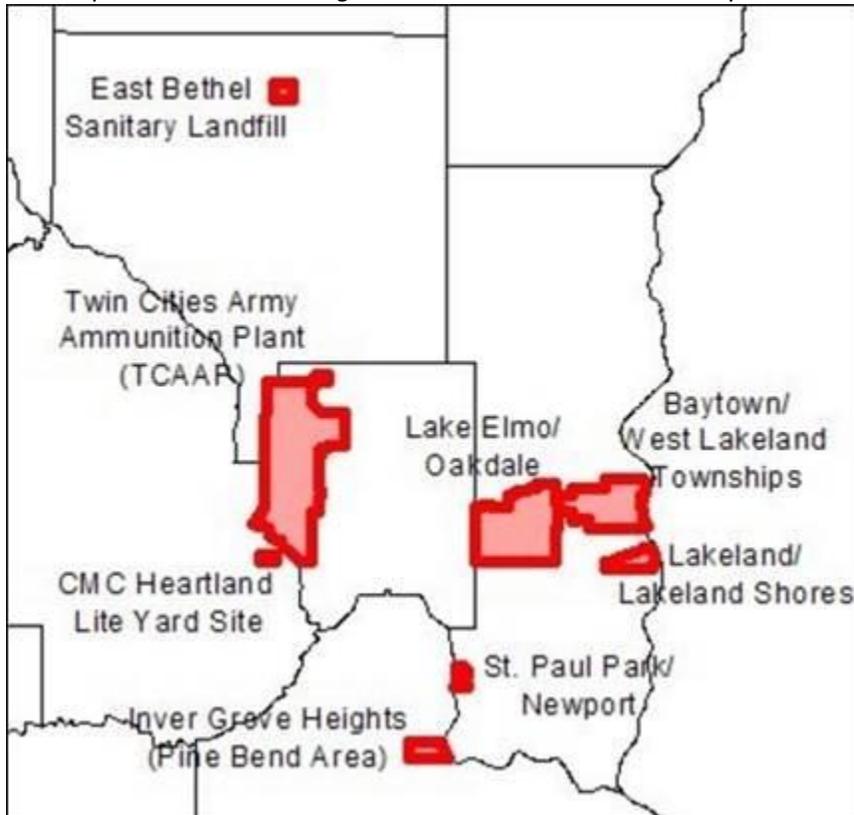


PERFLUORO COMPOUNDS

In the aftermath of EPA’s May announcement that they released health advisory values for perfluorooctanoic acid (PFOA) and perfluoro-octane sulfonate (PFOS), MDH communicated the change to private well owners in PFC affected areas. In late September, MDH, MPCA, and Washington County staff held 2 open houses to offer in-person guidance to private well users in affected areas. Whole-house granular activated carbon (GAC) filters are offered to residents with PFOA or PFOS concentrations already known to exceeding the new standards and additional sampling is underway to assess whether more homes need treatment. This is the third time the advisory values have been lowered since MN began addressing this issue. All municipal suppliers in the drinking water advisory areas already meet the new standard. 3M pays for the GAC systems, replacement filters, water monitoring, and program administration costs. Overall, concentrations of PFOA and PFOS are stable or declining in groundwater because mitigation at the disposal sites that were the primary sources has already been completed. An

interesting side note: Washington County requires private well owners to disclose whether their well is within a “Special Well and Boring Construction Area” at the time of a property sale.

MDH: special well and boring construction areas in the metropolitan area



MNTAP

The U of MN’s Technical Assistance Program (MnTAP) employs student interns to work with companies and organizations to identify ways to conserve water and energy. This past year, they had 22 entities apply for interns and 196 students apply for internships, but only 14 projects were funded, impacting 20 companies. This past year’s program included water use evaluations at Xcel Energy Blackdog and Riverside plants, St. Peter’s wastewater treatment plant, Cemstone, Lorentz Meats, Nordic Ware and others. In addition to overall cost savings with payback times as short as a year, implementation of MnTAP suggestions could result in the annual conservation of 65MG of water using a variety of practices, including: isolating unused systems, repairing leaky valves, adding meters, improving adherence to existing protocols, insuring correct treatment targets, reducing summer to winter water use ratios (e.g., by using smart irrigation controllers), increasing reuse opportunities, reducing flow rates, and using automated shut-off nozzles.

REPORTS

STATE OF MN WATER

- DNR: 10/2 [Stream Flow Report](#); flood flows are abating, high flows continue over most of the state
- National Drought Mitigation Center: 10/4 [Drought Monitor](#)

UPCOMING EVENTS

- Oct 14: **Mississippi River Forum Workshop**; 8:30 am to 12:30 pm; Science Museum of Minnesota; topics: Getting to Clean Water: How Do the Economics of Cropping Systems Measure Up? - Ecosystem Services: Putting People and Land into Water Management - Water: Right or Commodity; RSVP to: lark_weller@nps.gov
- Oct 18-19: **MN Water Resources Conference**; agenda [here](#); cost before 9/22 is \$245 2 days/\$170 1 day (\$265/\$190 after 9/22); registration link [here](#)
- Oct 24-26: **BWSR Training Academy**; Cragun's in Brainerd; agenda and registration details can be found [here](#)
- Nov 16-18: **MN Association of Floodplain Managers 2016 Annual Conference**; \$160; Kelly Inn, St Cloud; brochure [here](#); register [here](#)
- Nov 17: **MN's Water Reuse Stakeholder Meeting** (open to the public); 1:30 – 4:30; MPCA Board Room
- Nov 17: **Minnesota River Congress** meeting; Mankato; networking fair @ 4:30 & meeting @ 7:30; for more information contact Scott Sparlin @ sesparlin@gmail.com, 507-276-2280
- Dec 4-6: **MN Association of Soil and Water Conservation Districts Annual Meeting & Trade Show**; \$145 to \$220 (depending on days participating); Double Tree Hotel – Bloomington; details [here](#)
- Dec 5-6: **Association of MN Counties Annual Conference**; Hyatt Regency Minneapolis; \$375 before 11/4 & \$400 after; schedule [here](#); registration [here](#)
- Jan 23-24, 2017: **MN Water Well Association's 95th Annual Trade Show and Convention**; Minneapolis Marriott NW; more info to come [here](#)
- Feb 16: U of MN Extension's **Nitrogen: Minnesota's Grand Challenge and Compelling Opportunity**; Verizon Wireless Center (1 Civic Center Plaza, Mankato); details to come [here](#)
- May 9: Minnesota Day at the **National Climate Adaptation Forum**; registration can be found [here](#)