Weekly LWC Update 1-13-17

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 monitored 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. Provide corrections or additions to me at barb.huberty@lcc.leg.mn.

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LEGISLATURE

COMMITTEES

WATER BILLS

The gold shaded cells show the bills introduced this week that are companions to bills introduced last week. Beginning with the 6^{th} row after the header are bills introduced during the week ending 1/13/17. Click on the File # hyperlinks for more details.

House	Committee	Senate	Committee	Description
File	Assignment	File	Assignment	
<u>198</u>	Legacy	<u>18</u>	ENRP&LF	\$5M CWF to Met Council for grants/loans for local inflow/infiltration
				reduction programs in metro area
<u>178</u>	ENRPF	<u>25</u>	ENRP&LF	\$X GF to DNR for grant to Kohlman Lake Assoc for aquatic vegetation
				removal
<u>47</u>	ENRPF	<u>48</u>	Cap Invest	\$6M bond proceeds to DNR for Dakota Co to improve hydro facility at
				Byllesby Dam on Cannon River
<u>48</u>	Job Growth	<u>47</u>	Cap Invest	\$726K bond proceeds to PFA for Dennison to improve sewage lift station
				and pond
<u>49</u>	Job Growth	<u>46</u>	Cap Invest	\$300K bond proceeds to DEED for New Trier to replace water
				infrastructure and add stormwater pond
<u>110</u>	ENRPF	<u>30</u>	Cap Invest	\$10M bond proceeds to Met Council for inflow/infiltration reduction
				programs in metro area

<u>169</u>	ENRPF	<u>34</u>	Cap Invest	\$3.3M to DNR for City of Champlin to make Mill Pond improvements
None	None	<u>45</u>	Taxes	tax provisions modifications (see line 47.26 where riparian protection aid is added and line 99.8 allows taxes to be used for water quality improvement projects in Blue Earth and Nicollet Counties)
<u>151</u>	Legacy	None	None	\$350K from CWF to Admin for grant to Lake Superior Center Authority for new river systems exhibit (dba the Great Lakes Aquarium)
<u>158</u>	Job Growth	None	None	\$1.2M from general fund to PFA for grant to Duluth N Shore Sanitary District to retire debt to bring rates into alignment with other facilities
<u>167</u>	ENRPF	None	None	Repeal MN Stat 103F.48, eliminating riparian buffer requirement
None	None	<u>SF111</u>	Ag & Rural Dev	Ag and Revenue Departments to study the impact of taxing ag lands based on production value (including identifying types of ag properties not directly used in ag production and approaches for valuing them)
<u>190</u>	Ag Policy	None	None	\$1.683M general fund to MPCA (plus amounts to be determined to MDH, DNR, & MDA, plus \$1.212M to MPCA in tails for 2020-2021) for actions to protect the Upper Mississippi River Watershed as a drinking water source for Minneapolis, St Paul and St Cloud
203	ENRPF	None	None	modifies drainage system repair procedures by allowing updated land values based on the county assessor's most recent estimated market value
220	Job Growth	None	None	\$2M bond proceeds to PFA for grant to Koochiching Co for part of the Voyageur's National Park clean water project
<u>221</u>	ENRPF	None	None	\$4.8M bond proceeds to DNR for grant to Lanesboro to repair/renovate the Stone Mill Dam

So far, 27 of the 366 introduced bills are water-related (7%).

LCCMR

The Legislative Citizen's Commission on Minnesota Resources has posted their <u>Biennial Report to the Legislature</u> for the period 1/15/15 to 1/15/17. The <u>2018 Request for Proposal</u> is now available for those wishing to apply for funding from MN's Environment and Natural Resources Trust Fund for projects beginning July 1, 2018; proposals are due 5/15/17.

MN NEWS

WATER ACTIONS

- KXRA Voice of Alexandria: <u>Governor Mark Dayton and Lt. Governor Tina Smith To Hold Town</u> Hall Water Summit at University of Minnesota, Morris
- South Washington County Bulletin: Greater Minnesota cities want water funding
- MPCA: Financial assistance for nonpoint source water pollution projects: Clean Water Partnership and Section 319 Programs
- Bluff Country Newspaper Group: Free 'Science Sundays' coming to Lanesboro
- Staples World: Twin Eagle Dairy Earns Water Certification
- DNR: <u>Conservation Partners Legacy Grant Program</u> Round 2 of the Metro grant cycle is open until 4:00 pm on 1/27/17
- US Water Alliance: <u>US Water Alliance and Water Environment & Reuse Foundation Launch</u>
 <u>National Blue Ribbon Commission for Onsite Non-potable Water</u>; 3 Minnesotans serve on this
 commission: Anita Anderson MDH, Brian Davis Met Council, and Jon Eaton City of Eagan

- DNR: DNR seeks comments on Duluth area lake and stream management plans
- Met Council: Council launches revamped water quality data website
- Hometown Focus: Governor Dayton, Lt. Governor Smith propose tax cuts for over 450,000
 Minnesotans; including \$10M to provide payments for buffer strips

WATER BUSINESSES

Strib: Ecolab buys Abednego, a water recycling expert

SURFACE WATER/STORMWATER

- Strib: Minnesota Republicans target water quality law for repeal; Daily Progress: Minnesota Republicans target water quality law for repeal; Post-Bulletin: Republicans target water quality law for repeal
- MN Sea Grant: Six Projects, \$1.5 Million ... What You Should Know
- American City and County: <u>2016 Crown Communities: Stormwater St Cloud</u>; to address stormwater runoff problems in an area developed before stormwater requirements, St Cloud:
 - o installed 4 sump catch basins in places in constrained spaces,
 - o purchased a street sweeper and developed a GIS-based street sweeping program,
 - o converted impervious surfaces within city right-of-ways to pervious green space to promote infiltration,
 - o converted a river-adjacent gravel parking lot to a paved lot with a rain garden and an underwater infiltration system
 - o partnered with the Benton Co. SWCD to build an underground regional treatment system for a 45 acre industrial and residential drainage area

\$1.3M in grants from MPCA and BWSR were used to support these projects.

- Fillmore County Journal: Newly protected shoreline on the Root River
- Nasa Earth Observatory: <u>Colored Dissolved Organic Matter in Lakes</u>; learning more about CDOM will help them better understand water treatment problems
- West Central Tribune: <u>Renville County wants state funding before taking on buffer law</u> <u>enforcement</u>; Red River Farm Network: <u>Buffer Law Remains Key Constituent Issue</u>
- Stillwater Gazette: 2017 brings more than \$2 million in Clean Water Funds to Washington County
- Hastings Star Gazette: New rules set for Mississippi corridor land use, development
- Water Online: <u>Utilities And The Fight Against Road Salt</u>
- Maple Grove Patch: Excessive Salt Use is Hurting MN Lakes, State Officials Warn
- MPR: <u>Drug traces found in state waters may be enough to harm fish, agency finds</u>; MPCA: <u>New study adds to concerns about chemicals found in Minnesota's rivers</u>; read MPCA's 23 page study: <u>Pharmaceuticals and Chemicals of Concern in Rivers</u>: <u>Occurrence and Biological Effects</u>; water from 50 river sites across MN analyzed from 2014-2016) contained:
 - o iopamidol, an X-ray contrast agent (at 78% of sites)
 - sertraline, amitriptyline, and fluoxetine, all antidepressants (at 48%, 44%, and 10% of the sites, respectively)
 - sulfamethoxazole and erythromycin, both antibiotics (at 24% and 14% of the sites, respectively)
 - o metformin, a medicine for type II diabetes (at 18% of sites)
 - o triamterene, a diuretic (at 16% of sites)
 - o carbamazepine, an anticonvulsive medicine (at 14% of sites)

 also widespread: DEET, the plastic component bisphenol A, the corrosion inhibitor benzotriazole its breakdown products

Impact effect studies found that 5 of the 10 water samples exhibited low estrogenic activity and fish gene expression data from exposed fathead minnows indicate that contaminants may have impacts on genes associated with reproduction, development, growth, and tumor formation.

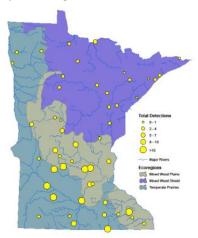


Figure 3. Number of chemicals detected at each sampling location

WATER SUPPLY

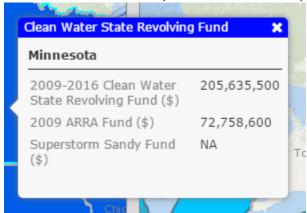
- WCCO: Blaine Issues Boil Order As Water Service Returns and Blaine Awaiting Water Test Results; Fox 9: Schools closed, boil requirement in place after Blaine water outage; Strib: Blaine water is back, but problem forces Monday school closings; MPR: Water service returns to Blaine; schools closed and residents told to boil water; homes and businesses in Blaine (population 64,000) lost service for more than 2 hours on Sunday; the water towers were empty, causing a drop in water pressure; a software issue is thought to be the cause of the problem; neighboring suburbs are supplying water to refill Blaine's water towers, but residents are asked to boil water for 24 hours as a precaution; 6 schools were closed on Monday; MPR: Blaine's water deemed safe again, boil order lifted; Pioneer Press: Blaine lifts boil advisory after lab finds no water contamination; WCCO: City Officials Still Investigating Blaine Water Outage
- Inforum: Minnesota water tower freezes, disrupts services for small town
- Strib: Osseo water tower primed for position on national historic register
- MDH:MDH crafted an Interconnection Policy to help water suppliers work together on water sharing; the new policy discerns between requirements and recommendations for water sharing agreements; see the scope of decision making needed when suppliers prepare for contingencies: MDH Community Public Water System Interconnection Plan
- Burnsville Patch: Burnsville's Water Meter Project: What Residents Should Know

 EPA: <u>Rebuilding the Nation's Aging Infrastructure</u>; federal funding allotted to MN for the state drinking water revolving loan fund shown below; ARRA = the American Recovery and Reinvestment Act of 2009 (aka "the Stimulus Act")



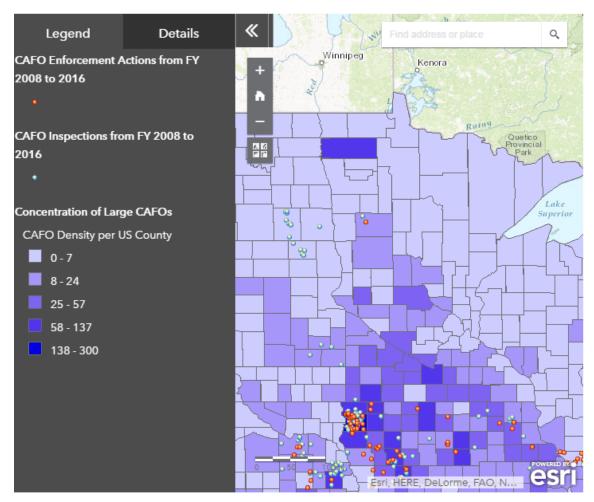
WASTEWATER

• EPA: Rebuilding the Nation's Aging Infrastructure; federal funding allotted to MN for the clean water revolving loan fund for wastewater shown below; ARRA = the American Recovery and Reinvestment Act of 2009 (aka "the Stimulus Act")



AG & WATER

- West Central Tribune: Breaking ground for cover crops in west central Minnesota
- MDA: <u>MDA requests research proposals on the effectiveness of conservation practices</u>, related to nutrient source reduction, off-movement, and treatment in MN
- Politico: <u>Farm Bureau Votes to Defend Conservation</u>, <u>Nutrition</u>; a provision opposing conservation compliance as an eligibility requirement for the federal crop insurance program was deleted
- USDA: <u>USDA Announces \$252 Million Available for Regional Conservation Partnership Program</u>
- Post Bulletin: Hog farm proposal draws a crowd in St. Charles
- Inforum: Farm bill tour to be in Moorhead Jan. 24
- Circle of Blue: EPA Turns Away from CAFO Water Pollution; EPA: <u>National Enforcement Initiative</u>: <u>Preventing Animal Waste from Contaminating Surface and Ground Water</u>; in FY2016, EPA conducted only 119 inspections of Confined Animal Feeding Operations (CAFOs) and 17 enforcement actions; MN has the 2nd highest # of CAFOs permitted in the U.S.; the figure shows sites receiving EPA enforcement action



In MN, the federal feedlot program is delegated to the MPCA, which then delegates authority to local units of government to complete most registration or permitting activities, including inspections and enforcement. MN progress can be seen in the 2013-2014 County Feedlot Program Report; in 2014, there were:

- 18,526 feedlots registered
- 156 construction and 65 interim permits issued
- 2,975 inspections performed
- 46 education and assistance workshops attended by 1,221 producers
- 214 environmental improvement practices implemented (e.g., buffers, manure storage, relocation, etc.)
- 99 enforcement actions, including 68 warning letters, 24 violation notices, and 5 court cases

EXTRACTIVE INDUSTRIES

- MPR: PolyMet clears major hurdle with federal land exchange and Forest Service OKs land swap for proposed PolyMet mine; Pioneer Press: Forest Service OKs land swap for proposed PolyMet mine
- Mesabi Daily News: <u>Lawsuit Targets Polymet Project-Environmental Groups File Intent to Sue</u> <u>Federal Agencies Over Land Exchange</u>; <u>Pioneer Press: 2 environmental groups plan lawsuit to</u>

- stop PolyMet mine; MPR: Environmental groups plan to sue feds over PolyMet mine's impacts on wolves, lynx
- Twin Metals MN: <u>Twin Metals Minnesota Statement on Federal Government Action to Withdraw Federal Lands In NE Minnesota from Future Mining Development</u>
- Duluth News Tribune: <u>Kennecott asks to expand copper search</u>
- Brainerd Dispatch: <u>Tribal members learn more about another pipeline project -- this one in northern Minnesota</u>
- MPCA: Quarterly PolyMet permitting update
- DNR: <u>Vermillion Gold, Inc. Exploration Plan Submitted and Amended</u>; a map of boring locations is included; DNR posts all pending and approved exploration plan here: <u>State Nonferrous</u> <u>Metallic Mineral Leasing Exploration Plans and Exploratory Boring Regulations</u>

OPINIONS

- St Cloud Times: Boundary Waters demand protection, now and in future
- MinnPost: Minnesota health and medical experts cite greatest concerns and hopes for 2017

BEYOND MINNESOTA

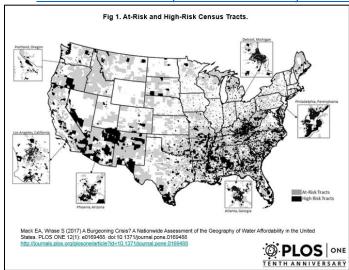
REGIONAL

- Strib: Legislator wants to lift Wisconsin mining moratorium
- The Washington Post: <u>Snyder OKs faster lead notification requirements after Flint</u>; customer notifications when lead reaches action levels must now be issued in 3 business days instead of 30 days
- The Journal Times: Fight over Waukesha water plan not over; WPR: Waukesha Water Diversion Project Faces Fresh Round Of Scrutiny
- Wisconsin Public Radio: Study Shows Possible Way To Head Off Algal Blooms
- Triple Pundit: How California Plans To Make Water Conservation a 'Way of Life'; as explained in
 the Making Water Conservation a California Way of Life report, CA will be shifting from
 mandates to conservation standards applied based on local population, temperature, system
 leaks, and types of commercial and industrial use; in summary, the new plan will address:
 - Eliminating water waste: wasteful practices like hosing off sidewalks and driveways, washing cars with hoses lacking a shut-off nozzle, and watering lawns in a way that causes run-off will be permanently prohibited and water system leaks will be minimized
 - Strengthening local drought resilience: stronger standards for local water shortage contingency plans will be developed and water suppliers must plan for droughts lasting at least 5 years, plus more frequent and severe periods of drought
 - Improving agricultural water efficiency and drought planning: existing requirements
 for agricultural water management plans will be updated so irrigation districts are able
 to quantify their customers' water use and plan for water supply shortages (under
 current law, agricultural water districts serving 25,000 acres or more are required to file
 water management plans, but the executive order requires irrigation districts serving
 10,000 acres or more to also file plans)
- Albuquerque Journal: <u>Subsurface irrigation at the root of grass testing</u>; some western food
 production systems have used buried drip irrigation for decades, but NM research is assessing
 how to transfer this technology to lawns
- Gainesville Times: Jan. 24 deadline set for Georgia, Florida to settle water wars dispute
- Strib: Sinkhole dangers lurk when underground infrastructure fails

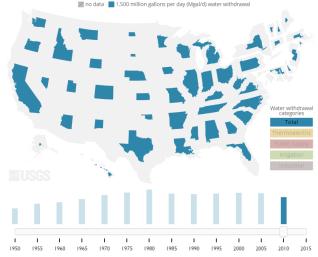
NATIONAL

- EPA: EPA Launches New Program With \$1 Billion in Loans Available for Water Infrastructure Projects
- Congress: Water Infrastructure Improvements for the Nation Act signed by Obama
- MIT News: Startup offers "online booking" for industrial water
- Strib: US agrees to pay billions to Marines affected by toxic water
- Bloomberg BNA: Hill Republicans Aim to Curtail Water Rule Despite Litigation
- USA Today: Groups unite to create roadmap for replacing lead pipes that poison water
- Circle of Blue: 2017 Preview: Window of Opportunity for U.S. Department of Agriculture
- Federal Register: Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 4) for
 Public Water Systems and Announcement of Public Meeting; on 1/17/17. EPA's new Safe

 Drinking Water Act rule is going into effect requiring public water systems to collect occurrence
 data for 30 contaminants that may be present in drinking water but are not yet subject to
 drinking water standards
- Office of Information and Regulatory Affairs: <u>National Primary Drinking Water Regulations for Lead and Copper: Regulatory Revisions</u>; EPA plans to have a draft rule by 6/17 and a final rule by 12/18
- Homeland Security News Wire: <u>Dust Bowl would devastate today's crops</u>; despite technological
 and agricultural advances, today's agricultural system is just as sensitive to drought and heat as
 it was in the 1930s
- EPA: National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System
 General Permit Remand Rule; The EPA revised the regulations governing regulated small
 municipal separate storm sewer system (MS4) permits to respond to a remand from the US
 Court of Appeals for the 9th Circuit in Environmental Defense Center, et al. v. EPA, 344 F.3d 832
 (9th Cir. 2003)
- Science Daily: <u>Affordable water in the US: A burgeoning crisis; PLOS: A Burgeoning Crisis? A Nationwide Assessment of the Geography of Water Affordability in the United States; Circle of Blue: Price of Water 2016: Up 5 Percent in 30 Major U.S. Cities; 48 Percent Increase Since 2010</u>



USGS: How much water do we use?



MEETINGS

MISSISSIPPI RIVER CITIES & TOWNS INITIATIVE

St Paul Mayor Chris Coleman, as co-chair of the MRCTI, will be in Washington DC for their 5th annual MRCTI Capitol Meeting from Feb 28th through March 2nd to meet with the Army Corps of Engineers, the National Realtors' Association, the US Dept of Transportation, USDA-NRCS, FEMA, White House staff, and Congressional representatives to discuss investment for water infrastructure within the corridor. One strategy being discussed is repatriating funds held by US businesses overseas.

At their Sept 2016 meeting in Natchez, MS, the MRCTI Mayors <u>announced</u> their new alliance with Walmart to incentivize sustainable agriculture by urging food suppliers in all 10 Mississippi River states to set aside acreage for the implementation of nutrient reduction practices and for cities to use their procurement authorities to purchase food from farms using nutrient reduction practices. They also shared their Disaster Preparedness Request with FEMA and announced a River Economy Partnership with U.S. Dept. of Transportation.

WATER/WAYS

The Smithsonian Water/Ways event opened this past weekend in Lanesboro, a small (population 754) and vibrant arts community. Over 50 people braved near zero temps to launch the event with a water blessing at the dam before taking in the exhibits and auxiliary activities at the Bethlehem Lutheran Church, the Lanesboro Art Center, and the Commonweal Theater. During the "Ripples of Reflection" event people's remembrances of water were shared by local actors with a backdrop of historical photos. Water emerged as both the antagonist and the protagonist in stories told about land lost to bank erosion, water obtained from springs for people and livestock, flour and lumber mills powered by water, "do or die" swim lessons in the Root River, excursions to hook elusive fish, the dangers of paddling on the river, and catastrophic snowstorms, rainstorms, floods. Having fishable, swimmable, and drinkable water was definitely on the minds of these SE MN residents. See media coverage in the Fillmore County Journal: Traveling Smithsonian Exhibition Water/Ways exhibit in Lanesboro.

LITTLE ROCK CREEK AREA

DNR has been working with a Project Advisory Team (PAT) on the <u>Little Rock Creek Sustainable</u> Groundwater Use Planning Project. At their November meeting, PAT members discussed and provided

input on the draft list of broad, possible DNR actions to be considered in the LRCA Sustainable Groundwater Use Plan. (The draft list generally replicates the types of actions DNR incorporated in their Groundwater Management Area Plans for the N&E Metro, Bonanza Valley, and Straight River areas.) No decisions were made regarding the input provided. Gerry Maciej, Benton SWCD Administrator, discussed the importance of improving soil health (for each 1% of organic matter added to sandy soil, water holding capacity increases by 0.4 in/ft) and conducting irrigation uniformity tests. He also demonstrated their new web-based decision support tool for irrigation scheduling (an LCCMR funded project). The tool was tested by 8 local irrigators on about 1,500 acres last season and they have provided feedback for tool improvements. Broader training on how to use the tool will be held during their February Irrigation Seminar.

At their December meeting, DNR staff explained the permitting process used in areas having high groundwater use and with surface water features that are sensitive to withdrawals. It DNR's goal to manage the state's water resources in a manner that balances water use, protects ecosystems and water quality, and provides for sustainable future use. When DNR receives a permit application, they evaluate drawdown estimates and stream impacts and, in areas with many wells, develop models to use in assessing cumulative effects and impacts relative to a threshold of concern. If the threshold is not reached, then a permit is issued. If there is insufficient data, then a permit is either not issued or issued conditionally. If the threshold is exceeded, then DNR needs to set a protected flow elevation for the affected water body and reassess appropriation amounts. DNR has completed a groundwater model for the LRCA and found that appropriations are depleting Little Rock Creek's streamflow, so they will be working with water users to determine how to reduce these cumulative impacts to the Creek. DNR doesn't anticipate an modifications to existing permits before 2019.

DNR's complete January 2017 update has been posted here. Discussions about potential DNR actions in the Little Rock Creek Area will continue at their next meeting (1/25/17 from 1 to 4 pm at the Lions Building in Rice). DNR anticipates completing the draft LRCA plan by February 2017, facilitating a comment period, making revisions, and submitting a final plan to the DNR Commissioner in April.

REPORTS

STATE OF MN WATER

- DNR: Stream Flow Report discontinued until spring
- National Drought Mitigation Center: 1/10/17 Drought Monitor

WATER CONSERVATION VS EXPANSION

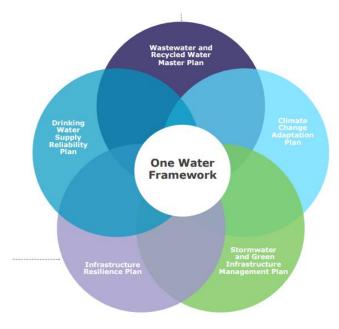
EPA has published Best Practices to Consider When Evaluating Water Conservation and Efficiency as an Alternative for Water Supply Expansion, a 63 page document intended to "help water utilities and federal and state governments carry out assessments of the potential for future water conservation and efficiency savings to avoid or minimize the need for new water supply development." It can also help a utility assess how it is "managing its water resources from a technical, financial, and managerial perspective."

ONE WATER

The Water Research Foundation (WRF) has published their <u>Blueprint for One Water</u>. WRF defines One Water as "an integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs." The Blueprint is intended to be "a practical guide for agencies seeking to manage water resources holistically and sustainably." The one water framework is illustrated in the first graphic, below, and the key elements of a One Water Approach are listed in the second graphic. WRF will host a free webcast "<u>One Water</u>

<u>Implementation: A Path to Reliability and Resiliency for Water Utilities</u>" on 1/30/17 from 2:30 pm-4 pm

ET (1:30 pm CT).





Modified from Mukheibir and Howe 2015

SWCD CAPACITY

There has been a lot of discussion about the capacity limitations of Soil and Water Conservation Districts. Each year BWSR prepares a Combined Balance Sheet to assess the financial status of each SWCD; here's the 2015 Combined Balance Sheets for SWCDs (Publication 16-1374).

UPCOMING EVENTS

• Jan 7-Feb 19: **Smithsonian Water/Ways and We Are Water MN Exhibits** in the Events Hall of the Commonweal Theater in Lanesboro, with companion exhibits "Currents of Change" in the

Lanesboro Arts Gallery, "Water Brings People Together Over Time" at the Lanesboro Museum, and "Water in Ritual: Baptismal Gown Display" at the Bethlehem Lutheran Church; this group is also hosting many other activities, from stage performances to dinners to lectures; read all the details here (they span several web pages)

- Jan 13: **Minnesota Wetlands Conference**; 7:30-4:30; Double Tree by Hilton Minneapolis North; \$150 members/\$180 non-members; more info here
- Jan 17: **Gov Dayton to sign CREP agreement** at 3:00 pm in the Capitol Rotunda; reception to follow in L'Etoile Du Nord Vault (Capitol Lower Level)
- Jan 17-19: 34th Annual Red River Basin Land & Water International Summit Conference "Passport to Progress: Thinking Beyond Our Boundaries"; \$225, Ramada Plaza Hotel in Fargo; more info here
- Jan 23-24: MN Water Well Association's 95th Annual Trade Show and Convention; Minneapolis Marriott NW; more info to come here
- Jan 27: Governor's Town Hall Water Summit, U of MN Morris, 9:45 am to 4 pm; registration opens 1/6; more info here; register here
- Jan 28: **Habitattitude Fish and Aquatic Plant Surrender**; 10:00 am to 6:00 pm; Redemption Lutheran Church Gymnasium; 927 East Old Shakopee Road, Bloomington
- Jan 30: Water Resources Foundation's **One Water Implementation: A Path to Reliability and Resiliency for Water Utilities** webcast; free; 1:30-3 pm CT; register here
- Jan 31-Feb 2: MN Erosion Control and Stormwater Management Annual Conference and Trade Show; 1 Day fee-\$170 member/\$200 Nonmember or 2 Day fee-\$330 member/\$390 nonmember; Verizon Wireless Center in Mankato; schedule here; register here
- Feb 2: 16th Annual Road Salt Symposium; 8 am 3 pm; \$135 (includes continental breakfast and buffet lunch); Mounds View Community Center (5394 Edgewood Drive); agenda here; register by 1/26 here
- Feb 3: Minnesota Environmental Congress (includes a water track); free; 8 am to 6 pm; U of MN Continuing Education and Conference Center (1890 Buford Avenue, St. Paul); more info and registration info here
- Feb 7: Nutrient Management Conference, St. Cloud; details to be announced
- Feb 9: Water Technology Export Roundtable: Opportunities in Water Reuse; 9:30AM 1PM;
 \$30 includes lunch; @ Dow Water & Process Solutions, 7600 Metro Boulevard, Edina; register here
- Feb 13: Rinke Noonan Annual Drainage and Wetland Conference; River's Edge Conference Center in St Cloud, details to come
- Feb 16: U of MN Extension's Nitrogen: Minnesota's Grand Challenge and Compelling Opportunity; \$20, 9:00 – 3:30; Verizon Wireless Center (1 Civic Center Plaza, Mankato); information and registration here
- Mar 7-9: 33rd Annual MN Rural Water Association Water & Wastewater Technical Conference; River's Edge Convention Center in St Cloud; \$280 early registration/\$305 on-site registration; agenda and registration here
- Mar 22-23: 19th Joint Annual Conference of the Red River Watershed Management Board and Red River Basin Flood Damage Reduction Work Group; Courtyard by Marriott in Moorhead; details to come
- Mar 27: Agricultural Drainage Workshop; Best Western Willmar; detains to come
- Mar 29-31: Design-Build for Water/Wastewater Conference; Minneapolis Convention Center;
 registration costs vary; agenda and registration info here

- Apr 18: MN Water Technology Export Roundtable: The Water Energy Nexus, 10:00 a.m. to 1:00 p.m. @ Aeration Industries (4100 Peavey Road, Chaska) \$30 (includes lunch)
- May 9: Minnesota Day at the **National Climate Adaptation Forum**; registration can be found here
- Aug 7-9: WaterWorks! Drinking Water Institute for Educators; Lakeville; details here