Weekly LWC Update 6-9-17

ERRORS? OMISSIONS? If found, please notify ***barb.huberty@lcc.leg.mn***.

Interested reader: each week, I gather general information for Legislative Water Commission members to help keep them apprised about water issues in Minnesota. This update 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 information about upcoming events. During the Legislative Session, updates on water-related legislation and committee activities are added. Any errors or omissions are inadvertent.

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Subscribe to the weekly update & follow LWC meetings at: www.lcc.leg.mn/lwc/

MN NEWS

WATER ACTIONS

- Duluth News Tribune: Duluth EPA lab turns 50: Low profile, high outcome science mostly behind the scenes
- Sun Current: Sustainability: Eden Prairie showcases environmental efforts with tour
- Pioneer Press: 3M will spend $1 million settlement with Met Council on water cleanup

SURFACE WATER/STORMWATER

- MCEA: MCEA files appeal to protect downstream water users in response to DNR's April order deleting over 640 miles of waterways from MN's public water inventory
- Pioneer Press: 3M will spend $1 million settlement with Met Council on water cleanup
- Albert Lea Tribune: South-central Minnesota lakes hurt by poor water quality; Strib: South-central Minnesota lakes hurt by poor water quality
- MPCA: In Miller Creek, trout suffer from urban pollution woes
- Albert Lea Tribune: Watershed takes steps to issue bond
- MPCA: MPCA, local partners finishing first statewide check-up of lakes and streams; monitoring will begin this summer in the last six watersheds: the Lower Rainy River, Rapid, and Rainy Lake watersheds (northern MN); the Blue Earth, Cottonwood, and Redwood River watersheds (southern MN); also on deck is monitoring of the St. Croix River and monitoring to track progress from the first 10- year period in the North Fork Crow, Pomme de Terre, and Snake River watersheds; Hometown Source: MPCA, local partners finishing first statewide check-up of lakes, streams; Aitkin Age: The trickle-down effect: testing water quality in Aitkin County; Brainerd Dispatch: MPCA nearly finished with water quality assessment
- Austin Daily Herald: County to discuss costs, possible help for Ikes E. coli testing
- MPCA: From least polluted to a growing concern, Lake Superior-North watershed faces potential land use threats; MPR: North Shore watershed clean for now, but facing risks; Duluth News Tribune: Minnesota's far north lakes, streams in good shape, but threats remain
- ABC5: Carver County Putting Rainwater to Good Use
- St Croix 360: Study: Plastic pollution prevalent in St. Croix and Namekagon Rivers

- MPR: DNR: Minnesota's largest invasive carp captured near Redwood Falls; Strib: Minnesota's largest invasive carp caught in Redwood Falls
- KTIC Radio: President puts spotlight on infrastructure vital to grain exports; locks and dams on inland waterways, like the Mississippi River could benefit

WATER SUPPLY

- Hibbing Daily Tribune: State Park Investigating Contaminated Water
- WCCO: Cottage Grove Water Ban Could Last Longer Than Expected; KSTP: Cottage Grove Dealing With Water Woes; Pioneer Press: Water-drinking public worried — or not — about 3M pollution in Washington County
- MPR: New lead-testing mandate lies ahead for schools
- Pioneer Press: Former ammunition plant site in Arden Hills will stand empty a year longer

WASTEWATER

- DL Online: $20 million in DL projects funded by state bonding bill: Water treatment plant, Heartland Trail among those on the list

WATER BUSINESSES

- Water World: Test and Treat Campaign Provides Solution to Lead in Drinking Water an Minnesota Schools; Great Water Tech, a St. Paul, MN water tech company, has launched an initiative to help schools address lead contamination in drinking water
- Power: U.S. Water Celebrates 20 Years!; this St Michael company is a subsidiary of Allete

AG & WATER

- MDA: MDA seeks public input on draft Nitrogen Fertilizer Rule; see the press release for dates and times of 5 listening sessions in Marshall, Chatfield, Farmington, St Cloud, and Wadena between 6/22 and 7/11
- Strib: Pentair, Urban Organics open aquaponics farm in old Schmidt Brewery
- AMC: Estimated Riparian Aid to Counties
- Marshall Independent: Lincoln County to enforce buffer zone law
- La Crosse Tribune: Minnesota Buffer Law may change start date for few
- MPCA: Stearns County dairy farmers add water quality to chores

EXTRACTIVE INDUSTRIES

- Rochester Post Bulletin: Minnesota to open 22 meetings on disputed Enbridge pipeline; Mesabi Daily News: Enbridge Line 3 Public Meetings Open Near Bagley; MPR: Enbridge pipeline backers, foes speak out as Minnesota mulls permit
- Duluth News Tribune: Justice Department wants Twin Metals' lawsuit dropped; Pioneer Press: Feds seek to dismiss Twin Metals lawsuit over mineral rights near Boundary Waters; Hibbing Daily Tribune: Justice Dept. Moves to Dismiss Twin Metals Lawsuit
- St Croix 360: Oil & Water: Minnesota pipeline proposal could increase oil flows through St. Croix River watershed

OPINIONS

- Hutchinson Leader: Editorial: Taking action to improve water quality
- South Washington County Bulletin: Viewpoint: Cottage Grove water is safe to drink

BEYOND MINNESOTA

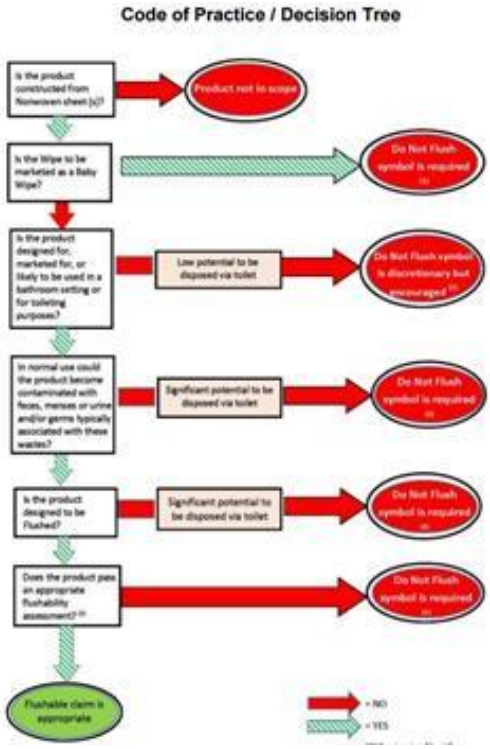
REGIONAL

- New York Times: Where Nestlé Guzzles Water, Michigan Neighbors Take Exception; another case of extensive groundwater removal vs surface water impacts; the article references the Michigan Dept of Environmental Quality's Water Withdrawal Assessment Tool
- GoSkagit: Concerns remain about method behind water rule; Skagit County has a controversial, 16-year old instream flow rule that limits water use throughout the county when flows in the Skagit River are below a certain level; remember, senior water rights further complicate these issues in the west; here's the rule: Chapter 173-503 WAC Instream Resources Protection Program – Lower and Upper Sakgit Water Resources Inventory Area (WRIA 3 and 4)
- The Desert Sun: California bill requiring well-drilling information sparks debate: 'Who could be against transparency?'
- Government Technology: New York's Online Water Portfolio Shares Drinking Water Data by ZIP Code; New York Public Interest Research Group: What's in my water? [try it out: type in zip code 10029 to see what's in East Harlem's water]
- Denver Post: Toxic firefighting chemicals can't be removed from water using standard filters, Mines research shows
- Circle of Blue: California Hones Drinking Water Affordability Plan; CA considering 4 options to design 1st statewide affordability program in the US
- AgWeb: Maker of Frosted Flakes Helping Farmers Improve Soil Health

NATIONAL

- AgriNews: Interest in on-farm soil research grows
- USA Today: Report: Toxins from nonstick chemicals in drinking water of 15M nationwide
- Farm and Dairy: Top 7 technologies in precision ag
- University Business: Facility management: Managing campus water policies
- MPR: U.S. pays farmers billions to save the soil. But it's blowing away
- Water Deeply: Public Support for Water Investment Depends How You Ask the Question
    1. In the United States, 63 % of respondents aren't satisfied with their infrastructure; water & sewage systems are their top priorities
    2. Support for water infrastructure spending is strong and bipartisan
    3. When asked about infrastructure, people may not immediately think of waterworks
    4. Many people say they're willing to pay to fix infrastructure
    5. Messages should stress vulnerability and ties to economy

- NACWA: [NACWA, Other Associations Reach Agreement on Wipes Labeling]; voluntary [Code of Practice: Communicating Appropriate Disposal Pathways for Nonwoven Wipes to Protect Wastewater Systems, 2nd Edition]



- New York Times: [Trump Plans to Shift Infrastructure Funding to Cities, States and Business]; Bloomberg: [Trump to Outline Infrastructure Plan That Includes Rural Funding]
- Phys.org: [Stormwater retention ponds may not protect surface waters from road salt contamination]
- Water Online: [Non-Revenue Water Is A Money Pit. Here's Your Way Out]; the EPA estimates that average water loss in a water system is 16%, with 75% percent of that being recoverable; installing advanced metering infrastructure automatically detect leaks & inform utilities so they can curtail leaks
- Water Efficiency: [Strength and Security – Cybersecurity strategies for water utilities]
- Phys.org: [How one man's shoes help NASA communicate water clarity issues]; using his own approach to Secchi disk measurements, a retired MD senator uses white sneakers to annually measure water clarity in the Patuxent River; he can't see his shoes while chest-deep in the river as he could when a young man

Bernie Fowler walks into Maryland's Patuxent River every June to see how deep he can go and still see the tops of his shoes. As a young man he could see his feet on the river bottom as he stood chest-deep to net blue crabs. Now in his nineties, he ventures into the river to assess the water clarity. Fowler has been collecting this data point for the past 29 years and counting, calling it 'sneaker depth.' Credit: Jefferson Patterson Park and Museum

GLOBAL

- MPR: UN chief warns oceans are 'under threat as never before'
- CBC Canada: Edmonton brewery worker's idea cuts company's water use across country
- CBC Canada: Ontario confirms bottled water companies to pay more as of August 1; fee jumps from $3.71 to $503.71/million liters of groundwater pumped

MEETINGS

WASTEWATER REUSE

Met Council's master water supply management plan addresses future water needs in a growing metropolitan area. One way Met Council hopes to improve metro water sustainability is by pursuing wastewater reuse where economically feasible, a tactic that can also help alleviate conveyance system constraints. Reuse is a simple idea, but complex to implement – and protecting public health is an important factor. To make headway in this area, Met Council has established a reuse policy task force, which has begun meeting to develop policies about:

- whether to allocate the cost for reclaimed water using a full cost-of-service approach or as a partially subsidized program (because of regional benefits),
- whether reclaimed water should be sold wholesale to a community or via a retail sales approach to a user, or some combination of each; at this time, Met C doesn't have authority for retail sales, and
- how much risk to assume by providing a product

Task force members are learning through national examples about the drivers for wastewater reuse, different rate approaches, regulatory hurdles (MN lacks regulations for wastewater reuse and generally follows CA regs, adjusted on a case-by-case basis), and types of reuse (e.g., irrigation, industrial process & cooling water, augmentation of surface waters, or aquifer recharge).

One driver of wastewater reuse in MN may be the cost to meet new or lower effluent limits. Another driver may be inadequate water supplies, in either quantity or quality or both. As in the Mankato-Cal Pine example seen on last summer's LWC field tour, the sustainability objectives of businesses can also drive reuse. As Met Council continues evaluating reuse options, engineering and economic feasibility will be important considerations, particularly if less expensive water conservation methods are still available.

A panel of industry representatives interested in reuse will participate in the task force's July meeting

LCCMR

The Legislative Citizens' Commission on MN Resources held an all-day meeting this week. In addition to receiving some logistical updates and a debriefing on Session activities, members approved modified work plans and appropriations added by the Legislature. The 2017 LCCMR bill appropriated $3,175,000 for projects in the water resources category (4.94% of the total). Additionally, overviews of three water-related programs associated with LCCMR funding included: BWSR's Conservation Reserve Enhancement Program (CREP), the Public Facility Authority's grant and loan programs for water, wastewater, and stormwater infrastructure, and the U of MN's Aquatic and Invasive Species Research Center (MAISRC).

BWSR staff explained that about 598,000 acres of temporary conservation easements obtained through the Conservation Reserve Program will expire over the next 5 yrs. They expect an estimated 299,000 acres to be retained through renewals, based on recent averages. Even if the 60,000 acres CREP target is reached, the projected net loss of acres by 2019 will be about 239,000 acres. CREP will leverage $500M of federal funds, that can only be used for landowner payments, if MN makes a $150M match; at this point, MN has $116.29M committed toward its match. MN funds can be applied to technical assistance, practice design and engineering, and processing easements. CREP has a continuous application period, but sign-up began on 5/15. The state will process the applications received by the SWCDs in batches as state funds become available, with the first batching period beginning 6/30. Priority of award is based on an environmental

benefits score, but applications needed to implement the buffer law will get first dibs. CREP funds can also be used for wetland restoration and drinking water protection practices. The cost to restore CREP acres (from production acres) and establish permanent easements is $8,300/acre.

New language in the 2017 Session Law Ch 96-S.F.No. 550 directs the LCCMR to *"…consider recommending loans from the corpus of the trust fund to statutory and home rule charter cities and towns with a population less than 5,000 as provided in the Minnesota Constitution, article XI, section 14. The commission shall work with the Public Facilities Authority in developing its recommendations. The commission shall include in its recommendations an analysis of using trust fund allocations for grants to the same cities and towns, including any necessary statutory changes.*" Because the LCCMR has not been involved in PFA programs in the past, staff from MPCA and the PFA made presentations about the processes involved in awarding water infrastructure grants and loans. MPCA indicated that for towns <5,000, 65% have wastewater treatment pond systems and 35% have mechanical systems. PFA noted that the largest portion of the infrastructure investment need is to replace buried pipes. LCCMR members asked how PFA and MPCA felt LCCMR could be most helpful to small cities, outside of capital investments. Suggestions included more robust operator training, better asset management, and workforce development.

MAISRC staff gave updates on 4 research projects funded by the LCCMR: spiny waterflea vectors, monitoring of new zebra mussel infestations, assessing the impact of AIS on walleye populations, and responding to invasive *Phragmites*.

SRO FOR PFCs

The MN Dept of Health (MDH) hosted "standing room only" public meetings this week in Lake Elmo and Cottage Grove to help explain their recently released health-based values (HBVs) for two perfluorinated chemical (PFC) compounds: perfluorooctyl sulfonate (PFOS) and perfluorooctanoic acid (PFOA). An HBV is a concentration of a chemical that is likely to pose little or no risk to human health. It is a science-based value that relies solely on information about health effects; it does not account for cost impacts or engineering feasibility to provide treatment. The values are based on the transfer of accumulated PFOS and PFOA from mother to the fetus during pregnancy and to breastfeeding infants. They are conservative values that ensure protection of the most susceptible and highly exposed portions of the population. They take into account all water uses and mixtures of PFCs in drinking water, and consider that some PFC exposure happens via sources other than water. MDH's revised HBVs are levels that pose little or no risk to even highly exposed people, incorporate a margin of safety to account for uncertainties in the understanding of health risks, and will result in lower concentrations in people over time.

As the table below shows, MN developed its first HBV when EPA was still at the provisional health advisory stage. When EPA released their final health advisories last spring, MDH re-evaluated its HBVs, taking into account additional information on:

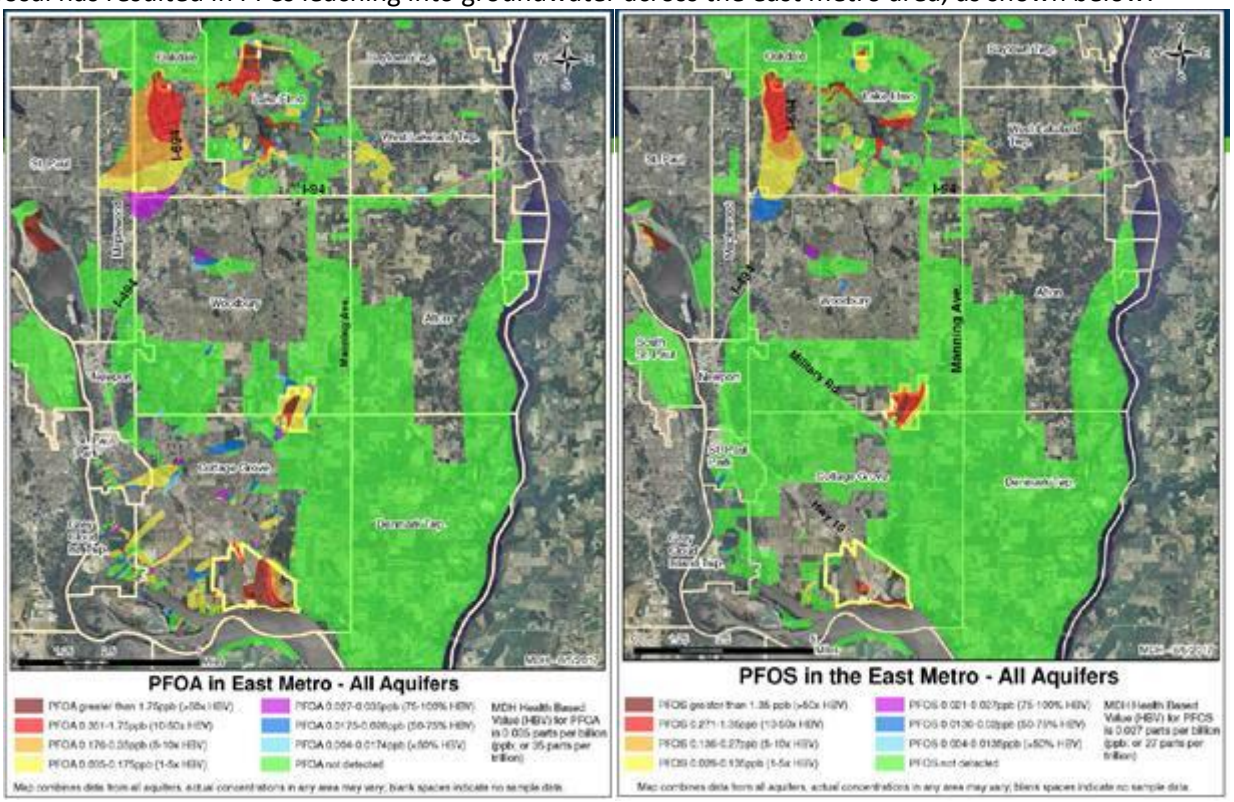
- health effects (i.e., immune suppression and developmental changes, liver effects, and changes in thyroid hormone levels with most data from laboratory animal studies at high exposure levels),
- toxicological effects based on serum concentration information (since PFOS and PFOA stay in the human body longer, an internal measure of exposure is best), and
- exposure (since accumulated levels can cross the placenta and a portion can be transferred to breastmilk).

The resultant MDH HBVs are less than the EPA FHAs:

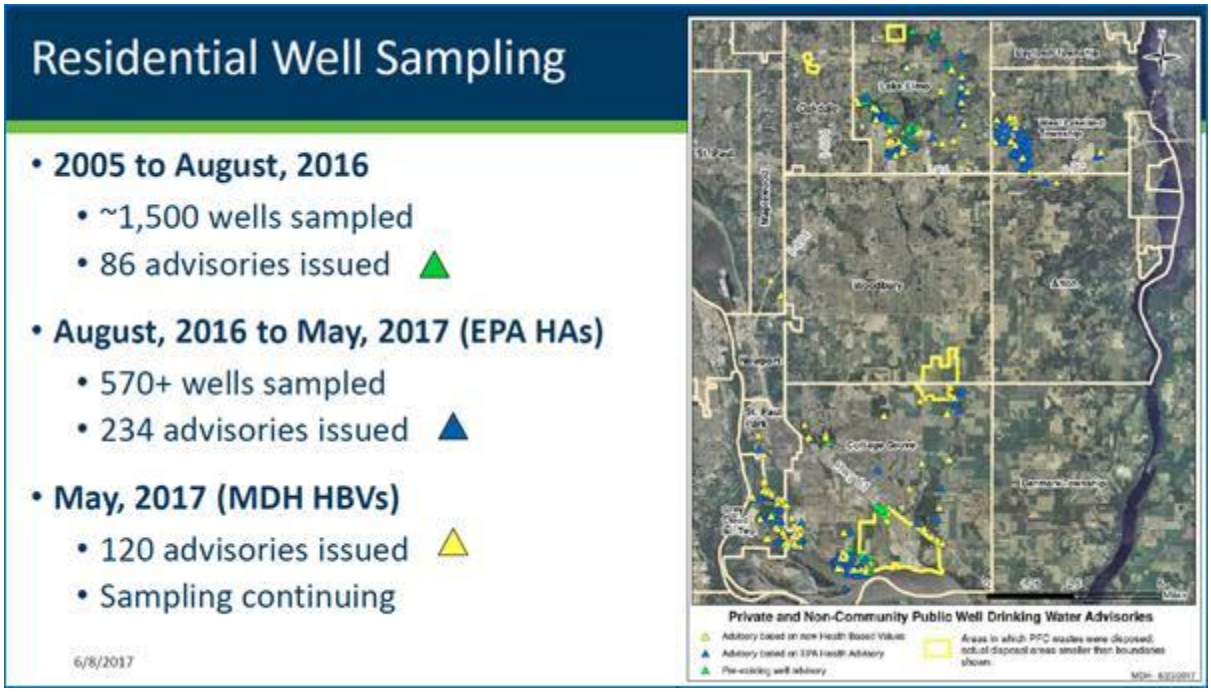
	MDH	EPA
Before	HBV for PFOS & PFOA 300 ppt	Provisional Health Advisories: 200 ppt for PFOS 400 ppt for PFOA
Now	Revised HBVs: 27 ppt for PFOS 35 ppt for PFOA	Final Health Advisories: 70 ppt for PFOS and PFOA, alone or combined

The use of HBVs is not specified in law or rule, but rather, they can be used to: provide health information, issue well advisories for private wells, guide community and non-community water suppliers, and assess potential health risks at contaminated sites.

3M began producing PFCs in the late 1940's to develop stain and stick resistant products. Associated disposal has resulted in PFCs leaching into groundwater across the east metro area, as shown below:



When PFCs were detected in drinking water, MDH began working with municipal water suppliers and MPCA began testing private, residential wells near the disposal areas. With growing knowledge about groundwater flow, surface water-groundwater interactions, and geological conditions, the expected size and location of the contaminant plumes has changed, necessitating more sampling. With the lowering of HBVs, by both EPA and MDH, additional sampling is being conducted to determine if additional private well owners need to have whole-home granular activated carbon filters installed. A risk based method is used to determine which wells are sampled first.



From regular monitoring of city wells, MDH has learned that 5 cities have wells with PFCs higher than MDH guidance:

- Oakdale (6 of 8 wells)
- Cottage Grove (8 of 11 wells)
- Woodbury (4 of 17)
- Lake Elmo (1 of 3 wells)
- St. Paul Park (1 of 3 wells)

However, all the cities are meeting MDH guidance for finished water, either through treatment (Oakdale; planned for Cottage Grove), pumping management (all), or water restrictions (Cottage Grove). With only 3 of its wells meeting standards without treatment, Cottage Grove can only provide enough water for indoor uses; hence their watering ban until the new treatment system installed – expected in 4-6 weeks. Installation is proceeding for four 80,000-pound and four 40,000 pound granular activated carbon filters at their affected wells.

To learn more about these compounds and their health values, go to MDH: Perfluorochemicals (PFCs) and Health or EPA: Drinking Water Health Advisories for PFOA and PFOS.

EMERGING CONTAMINANTS

MDH has a contaminants of emerging concern (CECs) program to develop health risk information about chemicals in drinking water that don't have either federal or state standards. CECs can result from the presence of pharmaceuticals, consumer products, industrial and manufacturing chemicals, and pesticides in the environment.

Anyone can nominate contaminants to be reviewed. MDH has developed a screening and scoring process to make risk-based decisions about which chemicals will undergo full evaluation and calculation of a Health Based Value. To date, MDH has developed full HBVs for 36 chemicals. For chemicals that are screened and scored but which have a lower priority, a Screening Profile is developed that provides contaminant information, how it is used, how it enters the environment, whether it has been detected in MN waters, and possible health impacts from exposure.

Due to a concern about the process used to select chemicals for review, the U of MN was directed to evaluate MDH's CEC program. In general, they found the program to be sound, but encouraged MDH to gather more input from stakeholders. Since then, MDH has been holding annual stakeholder forums to share program information and get input of future program directions. At this year's forum, attendees learned how:

- MDH is leveraging existing datasets to prioritize CECs,
- MPCA and its partners are trying to prevent chemical pollution by promoting alternative, toxic free products and formulations,
- MPCA is developing aquatic toxicity values to evaluate potential for harm in the aquatic environment
- MDH is improving its analytical capabilities with non-targeted chemical analyses

Attendees were then asked to share their view of MN perceptions on CECs and what they should know, along with recommendations for actions to reduce the presence of CECs in the environment.

AG DRAINAGE

The Drainage Work Group is back in action now that Session is over. A large portion of this month's meeting was devoted to helping members "catch up" on drainage events and legislative actions that have taken place since last January and in identifying where "in progress" activities were left. However, members did get an in-depth presentation on the Collaborative for Sediment Source Reduction (CSSR) research and outreach efforts that were conducted in the MN River Basin [described in an earlier weekly LWC update].

WBL PROTECTIVE ELEVATION

One condition of the White Bear Lake (WBL) settlement agreement was that DNR had to set a protective elevation for the lake. In the past, setting a protective elevation for a lake was typically completed in conjunction with the issuance of a permit to take water from that lake. The WBL protective elevation is unusual in that it affects a lake, but the nearby water appropriation permits are not for pumping directly from the lake. Despite this difference, DNR followed the direction and criteria set forth in statute and rule to complete the technical evaluation needed to decide on the protective elevation. Information about the protective elevation and how it was set are contained in DNR's White Bear Lake Protective Elevation Findings of Fact and their fact sheet.

The protective elevation is not a water level that will be maintained in the lake. Rather, it is an elevation that will trigger DNR action, such as reviewing nearby appropriation permits to determine whether they need to be modified to prevent further lake level declines. Therefore, DNR needs to develop an implementation plan that will set out the actions they will take in response to the protective elevation being reached. DNR hosted a meeting this week to explain why they set the protective elevation at 922' and to get input from stakeholders on what actions they would like to see DNR take should lake levels reach 922'. Suggestions received included: setting a higher protective elevation (with public input into that process, particularly that of the WBL Conservation District), raising the outlet elevation, modifying Ramsey Beach so it can be used at lower levels, removing the requirement for grass lawns (in favor of more xeriscaping), promoting more water reuse, and removing vegetation that grew when water levels were low to control phosphorous.

The DNR will accept written comments concerning the protective elevation through June 22. Please send comments to WBLelevation.dnr@state.mn.us or MN DNR, 500 Lafayette Road, St. Paul, MN 55155-4025 Attention: Dan Miller.

REPORTS

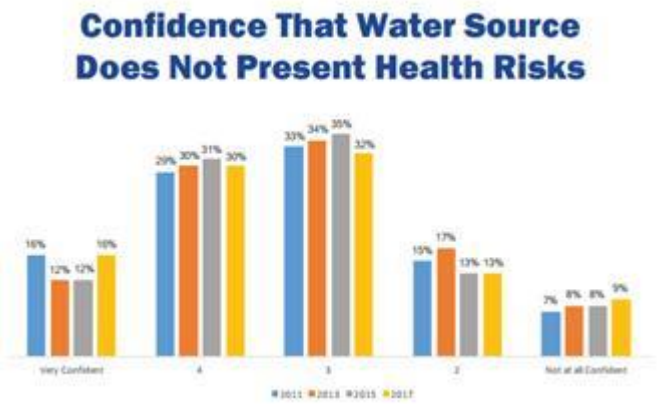
STATE OF MN WATER

- DNR: MN Stream Flow Report 6/5/17

- National Drought Mitigation Center: 6/6/17 MN Drought Monitor; NW abnormally dry area grows, and moderate drought area within that appears

NEW REPORTS

- Water Quality Association: Summary & Highlights National Study of Consumers' Opinions & Perceptions Regarding Water Quality 2017 Edition



- US Water Alliance: An Equitable Water Future-A National Briefing Paper; among other factors, this report looks at the human dimension of water management, focusing on how water can expand opportunity for the U.S.'s most vulnerable people; 3 pillars of equitable water management are formulated:
    1. Ensure all people have access to clean, safe, affordable water service;
    2. Maximize the community and economic benefits of water infrastructure investment; and,
    3. Foster community resilience in the face of a changing climate.
- Friends of the Mississippi River: 2016 Annual Report

UPCOMING EVENTS

- June 12-13: **4R Nutrient Stewardship Summit**; Radisson Blu Downtown Minneapolis Hotel; $200; agenda here; registration here
- June 14: **Environmental Quality Board Meeting – Flooding and Climate Change**, 5:30 pm; Community Conference and Training Room, 303 S. State Street, Waseca; agenda and additional information here
- **June 15: LWC Meeting, 10:30 am to 12:30 pm; Rm 5 State Office Building**; agenda posted here
- June 21: **Benefits of cover crops**; 8 am-12:30 pm; Renville Community Center (221 N Main St); more details here
- June 21-23: **MN Association of Watershed Districts Summer Field tour**; details here
- June 22: Alliance for Water Efficiency **Net Blue: Supporting Water-Neutral Community Growth webinar**; free; information & registration link here
- June 28: **Soil health field day**; 9:30 am-4:30 pm; West Central Research and Outreach Center (46352 MN Hwy 329, Morris); free; details here
- July 25: **MN 4R Technology Review Field Day**; 9 am to 3 pm; Dave Legvold Farm (5103 315th St W, Northfield); free; agenda & registration link here
- July 31: **"25 by 25" Water Quality Town Hall**, evening, Rochester, details to come here
- Aug 1-3: **Farmfest**; more information here
- Aug 7-9: **WaterWorks! Drinking Water Institute for Educators**; Lakeville; details here
- Aug 16: **"25 by 25" Water Quality Town Hall**, evening, Marshall, details to come here
- Aug 17: **"25 by 25" Water Quality Town Hall**, evening, Mankato, details to come here

- Aug 22: **MN Technical Assistance Program Intern Symposium**; U of MN McNamara Alumni Center; more info here
- Sept 5: **"25 by 25" Water Quality Town Hall**, evening, Crookston, details to come here
- Sept 6: **"25 by 25" Water Quality Town Hall**, evening, St Cloud, details to come here
- Sept 12: **"25 by 25" Water Quality Town Hall**, evening, Ely, details to come here
- Sept 13: **"25 by 25" Water Quality Town Hall**, evening, Bemidji, details to come here
- Sept 19-20: **Great Lakes Commission Annual Meeting**; Duluth Entertainment Convention Center; more details to come
- Sept 26: **"25 by 25" Water Quality Town Hall**, evening, Minneapolis, details to come here
- Oct 4: **"25 by 25" Water Quality Town Hall**, evening, Burnsville, details to come here
- Oct 5: **"25 by 25" Water Quality Town Hall**, evening, Maplewood, details to come here
- Nov 1-3: **BWSR Academy** Cragun's Conference Center; Brainerd; registration to come in August