

Nebraska Surface Water Monitoring Council (NSWMC)

Spring Meeting, 2023

Tuesday March 28, 2023, 10:00 AM-12:00 PM

Hybrid Meeting

In person at USGS Nebraska Water Science Center, 5231 South 19th St, Lincoln;

Or via Microsoft Teams

Call-in at 202-640-1187, Phone Conference ID: 118 574 217#

Minutes

Attendees:

- NDA: Craig Romary
- NDEE: Daniel Morales Dane Pauley, Danielle Hardesty, Anni Poetzl, Margaret Bass, Elbert Traylor, Anthony , Justin Haas, Dave Bubbs, Dan Ross, Tom Buell, Tara Anderson, Dave Schumacher
- USACE: Brent Dinkel,
- LENRD: Brian Bruckner,
- LPNNRD: Daryl Anderson, Ryan Chapman
- NARD: Dustin Wilcox, Jennifer Swanson
- NDNR: Elizabeth Esseks,
- LLNRD: Jason Moudry,
- LPSNRD: Dick Ehrman, Drew Ratkovec
- LBBNRD: Tyler Weishahn
- NGPC: Mike Archer
- UNL: Dan Snow, Crystal Powers
- LLCHD: Chris Schroeder, Mike Gude
- USGS: Dave Rus, Steve Peterson, Jason Lambrecht, Nathan Schaepe

1. Welcome
2. Agency updates
 - a. USGS
 - i. Surface-water quality work
 1. National Water Quality Network sampling: Dismal R, Maple Cr, Elkhorn, Platte at Louisville
 2. Continuous Water Quality, <https://waterwatch.usgs.gov/wqwatch/map?state=ne&pcode=00010>
 3. Arsenic and other metals in the lower Platte corridor
 4. HIVIS project putting in real-time cameras at several bridges in Nebraska
 5. Wrapping up project work: Missouri River around Omaha; Platte River at Ashland for eDNA
 - ii. Data modernization

1. Real-time sites have already updated, e.g.
<https://waterdata.usgs.gov/monitoring-location/06805500/>
2. Sample data moving to the WQ Portal format within the year
 - a. User interface: <https://www.waterqualitydata.us/>
 - b. Web-services:
https://www.waterqualitydata.us/webservices_documentation/
- iii. Stakeholder in-person workshop, next Tuesday 9-noon at USGS Nebraska Water Science Center
- b. Neb Dept of Ag: Annual list of active ingredients in pesticides (pesticides of interest) in use and in the environment; Was delayed during COVID but back on the web
 - i. FYI, EPA will accept all types of water quality data – not just that collected by USGS or the state water agency – for use in their registration review process. Data outside of these sources are accepted AND, depending on the quality and other factors, data outside of these sources can have a huge impact on EPA’s risk assessment for pesticides.
- c. NDEE
 - i. Ambient stream sites
 1. Status and trends sites since 2001
 - ii. Ambient lakes
 - iii. Additional streams/lakes - Rotating basin
 1. North and South Platte; White and Hat Basins; 2 yr sampling of the lakes
 2. Weekly stream sampling May- Sept;
 3. Fish tissue of edible fish
 - iv. Bio – tissue and Habitat
 1. Data available on request
 - a. Some of the data go to WQX
 - v. Public Beach:
 1. Conversion to the 8 ug/L but 1 week closure seemed to be fairly smooth with the public
 2. Adding a site on Lake Mac at Ogallala beach and a site on Calamus; No longer sampling at Valentine Lake
 - a. Private lake sample requests go to Midwest Labs (~\$50/sample for microcystin)
 - vi. Special Studies:
 1. Pesticide study (ag and urban and control sites) monthly May-Aug 2022 for water and sediment and aquatic macroinverts; UNL WSL doing the analyses; High concentrations during runoff; Sites within a days drive of Lincoln;
 - a. USGS has some older data for comparison at several sites in eastern Nebraska

- iv. Ongoing modeling
- v. Drought plans and Drought dashboard developments
- vi. Republican compact call year – Goal to be in compliance w/ the compact
- h. NARD
 - i. Not a lot of SW work: 80 NRD recreational lakes – link to the NDEE HAB site
 - 1. NRD recreation year outreach: Take a picture while you're out there and win a prize
- i. LENRD
 - i. Willow Creek – 319 Willow Cr watershed improvement project; Tim Olsen doing WQ outreach (Open house last week that appears to be leading to interest in EQUIP BMP enrollment); Decrease in MC threshold has led to more lakes getting flagged
 - ii. Really dry up there
 - iii. Ongoing Beach sampling
 - iv. GW
 - 1. fund for RO systems: Have had a lot of interest and have been working to publicize it;
 - 2. Started a water-testing assistance program (nitrate and bacteria in house and ag-herbicides, including Glyphosate and AMPA w/ WSL)
 - 3. Comprehensive well sampling continues
- j. LLNRD:
 - i. Beach sampling ongoing including new Calamus site
 - 1. Past hits at Calamus were a little perplexing and looking into it)
 - ii. Clear Creek into Pibel Lake 319 monitoring and work
 - 1. Includes continuous water quality
 - iii. S. Loup project related to e. Coli impairment and eDNA sources
- k. LPNNRD
 - i. Lot of the same work as the other NRDs
 - ii. Flood-related projects around Fremont – detention basins and levees
 - iii. Wahoo Creek special study last year
 - iv. Shell Creek special study monitoring in 2024(?)
 - v. HS volunteer monitoring program on Shell continues in 2023 w/ NDEE coordination
 - 1. April 10 field trip to visit some urban BMPs and some labs; UNL lab,...
 - 2. Will present at the SWCS national meeting in Iowa at end of Summer (4 part presentation involving the various Shell Cr activities)
- l. UNL

- i. Pesticide risk assessment on May 3
 - ii. Nebraska Water Tour June 19-22 in NE Nebraska
 - 1. Let Crystal know if there's a project between Norfolk and L&C Lake that you'd like to highlight
 - iii. Neb Water Conference in October – Highlighting urban green infrastructure
 - iv. Next 3 Water Center seminars are related to water quality, <https://watercenter.unl.edu/resources/SpringSeminar/Spring%202023%20Seminars.pdf>
 - 1. Kremer lecture 4/5 – Paul Bradley talking about Drinking Water Quality research
 - 2. David Walters will be talking about contaminant transport 4/19
 - v. Kelly Smalling will be giving a lecture on USGS work on PFAS in tap-water on Wednesday at 1PM, Wednesday, April 5, 2023 | 1:30 - 2:30 p.m., Nebraska Hall, Room W185, Lincoln, Neb.
 - vi. Monitoring:
 - 1. Know your well program (including Arsenic as well as other metals and herbicides)
 - 2. Glyphosate method developed at NWL: running the NE Neb well samples now
 - 3. Some GW work for LPS and LL NRDs
 - 4. PFAS: Starting a project looking at PFAS from WWTPs at 20 sites across Neb (Influent and Effluent and biosolids)
 - m. USACE
 - i. Mo R sampling
 - ii. Lake sampling on Salts and Papios this year
 - 1. eDNA for zebra mussels
 - 2. Low level release monitoring from Connestoga and Cunningham reservoirs
3. Monitoring council(s) business
- a. Meetings of interest:
 - i. [13th National Monitoring Conference – North American Lake Management Society \(NALMS\)](#), April 24-28, Virginia Beach, VA
 - ii. [2023 Water for Food Global Conference \(nebraska.edu\)](#) May 08 - May 11, Location: Nebraska Innovation Campus Conference Center
 - iii. NE SWCS Annual Meeting & Tours; Arbor Day Lodge and Lied Conference Center, Nebraska City, NE; June 28 - June 30, 2023 (Wednesday - Friday), <http://nebraskaswcs.org/current-events--news.html>
 - iv. 78th SWCS International Annual Conference, August 6-9, 2023; Des Moines, Iowa; <https://www.swcs.org/events/conferences/2023-annual-conference/>
 - b. Recent literature of interest – See the end of the minutes
 - c. What is the mission of the NSWMC?

- i. WQ monitoring assessment of 2000,
<http://dee.ne.gov/publica.nsf/PubsForm.xsp?documentId=D30AD10C815061E906256AB7006F2409&action=openDocument>
 - ii. Charter document,
[http://dee.ne.gov/GroundW.nsf/dd5cab6801f1723585256474005327c8/0857c7ae6545b50086257aed00551e1c/\\$FILE/NSWMC_Charter.pdf](http://dee.ne.gov/GroundW.nsf/dd5cab6801f1723585256474005327c8/0857c7ae6545b50086257aed00551e1c/$FILE/NSWMC_Charter.pdf)
- d. In the context of our mission,
- i. What are some wins?
 - 1. Group coordination
 - a. Meetings in F2F make it easier to meet in between
 - 2. Data exchange
 - a. Getting data into WQX is complicated; Dave Ihrle (NDEE) retired but was putting data into their internal database (2015-2021 is in WQX and publically available)
 - 3. In follow up to Mike's comment, participation in this group serves as a platform for information sharing, as well as a medium to connect people from multiple agencies who are involved in the day to day activities of surface water monitoring. I am sitting here thinking that I should have included several of my own internal staff on this call, since they are the ones who are conducting field activities and meeting with landowners to influence the adoption of practices that can provide dual benefits to surface water.
 - 4. Due to this group, I have a rough idea of what's happening statewide
 - 5. I know who to call if I have questions – I believe this is the most important aspect is the relationships made and knowing who to reach out to.
 - ii. What are some ways we can improve?
 - 1. Agency update could be done beforehand to make the F2F meetings more focused
 - a. Some other perspectives: I think attendee updates are the most important; Short presentations on specific topics are good but shouldn't be prioritized over member updates, collaboration, meet and greet.
 - 2. Getting Expert talks
 - 3. Who's not here that should be here? Continue to invite others in the surface water monitoring realm to attend
- e. What topics do you want to cover in the meetings?
- i. How can we use these monitoring data beyond their intended projects (like for other studies or for outreach?)
 - ii. Field practices
 - iii. Equipment?
 - iv. Hands on is popular
 - v. Data exchange and come up with some draft ways to preserve these data

1. GIS and spatial considerations that share the data and still protect landowners
- f. Topics in-between meetings:
 - i. I would like to see a simple, statewide interactive map regarding surface water sampling efforts in the state: location, parameters, frequency, primary contact. Hosted by NDEE?
- g. Selection of the next chairperson
 - i. Tara at NDEE willing to become the next Chairperson
- h. Member list
 - i. Dave or Tara to reach out to reps from each agency to find out who else to add

Recent literature that may be of interest to Nebraska

- Importance of snowmelt on soil nitrate leaching to groundwater – A model study, 2023, Sahila Beegum, Arindam Malakar, Chittaranjan Ray, Daniel D. Snow: Journal of Contaminant Hydrology, Volume 255, <https://doi.org/10.1016/j.jconhyd.2023.104163>.
- Borsuah, Josephus Foday, "Insecticide Fate and Transport in Rivers Adjacent to Agricultural Intensive Regions" (2022). ETD collection for University of Nebraska - Lincoln. AAI29323121. <https://digitalcommons.unl.edu/dissertations/AAI29323121>
- Drought affects sex ratio and growth of painted turtles in a long-term study in Nebraska, Larkin A. Powell, Ellen P. Dolph, Charrissa R. Neil, 2023, Climate Change Ecology, <https://doi.org/10.1016/j.ecochg.2023.100072>.
- Walsh, J. F., & Perreault, M. (2023). What's with the water: The nature of reporting on the problem of nitrates in Nebraska. Newspaper Research Journal, 44(1), 53–70. <https://doi.org/10.1177/07395329221143381>
- Quality of Groundwater Used for Public Supply in the Continental United States: A Comprehensive Assessment, 2022, Kenneth Belitz and others, ACS EST Water 2022, 2, 2645–2656, <https://doi.org/10.1021/acsestwater.2c00390>
- A Pivotal New Approach to Groundwater Quality Assessment, 2022, Mikaela L. Cherry*, Troy E. Gilmore, Tiffany Messer, Yusong Li, and Jeffrey Westrop: ACS EST Water 2022, 2, 12, 2297–2304, <https://doi.org/10.1021/acsestwater.2c00121>
- Lessons Learned from the 2019 Nebraska Floods: Implications for Emergency Management, Mass Care, and Food Security, 2022, Eric E. Calloway and others: Int. J. Environ. Res. Public Health 2022, 19(18), 11345; <https://doi.org/10.3390/ijerph191811345>
- Walkenhorst, L. , 2022. Efficiency of Bank Filtration in the Removal of Cyanotoxins Under Different Levels of Nutrients. UNL MS Thesis
- Investigation of a Possible Relationship between Anthropogenic and Geogenic Water Contaminants and Birth Defects Occurrence in Rural Nebraska, 2022, Balkissa S. Ouattara and others: Water 2022, 14(15), 2289; <https://doi.org/10.3390/w14152289>