

Nebraska Surface Water Monitoring Council (NSWMC)

Thursday April 30, 2026

10:00 AM – 12:00 PM

NDEE Office: 245 Fallbrook Blvd (Room 023)

Hybrid Meeting

1. Welcome and Introductions

Attendance (in person): Tara Anderson (NDOT), Kali Boroughs (DWEE), Greg Michl (DWEE), Brent Dinkel (USACE), Matt Moser (USGS), Dillon Vogt (JEO), Bethany Owens (JEO), Jessica Corman (UNL), Erik Prenosil (DWEE), Mike Archer (NGPC), Justin Haas (DWEE), Dave Schumacher (DWEE), Nathan Schaepe (USGS), Scott Summerside (DWEE), Isabella Peterson (DWEE), Sean Kruse (DWEE), Jim Olson (LENRD / LCNRD NRCS), Doug Hallam (LENRD), Craig Romary (NDA), Brandon Beethe (DWEE), Brian Barnes (DWEE), Kate Bird (DWEE), Jennifer Swanson (NARD)

(Online): Troy Gilmore (UNL), Michael Gude (City of Lincoln), Shannon Bartelt-Hunt (UNL), Tyler Weishahn (LBBNRD), Jeremy Gehle (LPSNRD), Anni Poetzi (UNL), Alexa Davis (DWEE), Ian Ghanavanti (PMNRD), Craig Matulka (LPSNRD), Daniel Kroll (DWEE), Dustin Wilcox (NARD), Ann Briggs (UNL), Cacey Wilken (LLNRD), Brenda Densmore (USGS), Crystal Powers (UNL)

2. Agency Updates Round Table

3. Presentations

Matt Moser (USGS – Physical Scientist)

"Arsenic and Isotope Concentrations in the Lower Platte River Valley of Eastern Nebraska, early 1970s to 2023"

The USGS, in partnership with the City of Lincoln, analyzed stream arsenic concentrations in the lower Platte River valley from 1970s to 2023, and groundwater around the Lincoln Water System well field from 1990s-2023. In addition, isotopic ratios of groundwater around the Lincoln wellfield were assessed. This presentation looks at the results of that study.

Dr. Shannon Bartelt-Hunt (UNL Professor and Donald R. Voelte Jr. and Nancy A. Keegan Chair of Engineering – Department of Civil and Environmental Engineering)

"PFAS Occurrence in small WWTPs in Nebraska"

4. Monitoring council(s) business

a. Meetings of interest

- i. Nebraska Water Center – Water and Natural Resources Tour – Republican River Basin – June 22-24, 2026 <https://watercenter.unl.edu/news/registration-open-2026-water-and-natural-resources-tour/>
- ii. American Fisheries Society Annual Conference – Aug 30 – Sept 3, 2026 <https://afsannualmeeting.fisheries.org/>
- iii. North American Lake Management Society International Symposium – November 3-6, 2026 <https://www.nalms.org/nalms2026/>

Nebraska Surface Water Council
Agency Updates
Thursday, April 30, 2026

US Army Corps of Engineers

Brent Dinkel (Brent.A.Dinkel@usace.army.mil)

Salt and Papillion Creek Reservoir Monitoring:

- Continued monitoring at Branched Oak, Wagon Train, Ed Zorinsky, and Glenn Cunningham in coordination with the NDEE. Similar monitoring at all other reservoirs pending available water (more comprehensive every third year).
- Zebra mussel eDNA sampling will be conducted in June and September at all reservoirs.
- Hypolimnetic withdrawal at Cunningham will be started first week of May. Targeting 4 cfs continuous near-bottom withdrawal through September pending water availability. Additional hourly ammonia monitoring downstream to ensure ammonia levels remain safe for aquatic life.
- Beginning initial investigation of wind assisted horizontal flushing to also address algal blooms. Would use near-surface slide gate to flush dense cyanobacteria blooms downstream if opportunity presents itself.

Beach Watch Monitoring:

- Continued beach watch monitoring at Lewis and Clark, Lake Yankton, and Glenn Cunningham in coordination with the NDEE.

Missouri River Monitoring:

- Continued monitoring along the Missouri River downstream of Fort Randall Dam to Rulo, NE in coordination with the NDEE.

Department of Water, Environment, and Energy

SW Monitoring Section

David Schumacher (david.schumacher@nebraska.gov)

In 2026, the monitoring budgets of all six of the main DWEE surface water monitoring programs will be reduced by 20% to match the 20% reduction in federal grant funding that DWEE will receive this year.

Ambient Stream Monitoring Program

- Network of 101 fixed stations. 6 Missouri River locations collected by USACE.
- Main stem and tributary streams.
- Thirty-four parameters analyzed at each sampling location.
- In 2026, samples will be collected monthly and year-round except for the months of February and December.
- The South Platte and Middle Niobrara NRDs assist by collecting samples for this program.
- Long-term changes to water quality can be assessed.

Public Beach Monitoring Program

- 57 public beaches at 52 lakes across Nebraska will be sampled weekly for 18 weeks beginning May 18th through September 14th for microcystin and *E. coli* in 2026.
- Wagon Train Lake will not be sampled this year due to low water levels.

- Wirth Brothers Lake will be added back to the list of lakes sampled in 2026 after the lake filled back to near full pool.
- A new PBMP Beach Watch GIS interactive map app. for the DWEE website was launched last year. (<https://gis.ne.gov/portal/apps/experiencebuilder/experience/?id=5e204827d1344382aa3b353cabe094e5>).
- Numerous sampling partners assist each year by collecting samples for this program. These include Central District Health Dept., NPPD, USACE, the Upper Republican, Lower Republican, South Platte, Middle Niobrara, Lower Loup, Nemaha, and Lower Elkhorn NRDs

Basin Rotation Monitoring Program

- Geographically focuses water quality sampling in one to three major river basins per year.
- Weekly monitoring of rivers and streams from May-September.
- Fourteen parameters analyzed at each sampling location.
- In 2026, DWEE will sample 34 sites within the Niobrara River basin.
- The Middle Niobrara NRD will be assisting by collecting samples for this program in 2025.

Stream Biological Monitoring Program

- Diversity and numbers of resident aquatic macroinvertebrate and fish communities are evaluated to assess the overall health of streams.
- Sites are chosen within the framework of the basin rotation schedule.
- Approximately 32 sites are planned to be sampled in 2026 within the Niobrara River basin.
- The NGPC Steam Team contributes by sharing data collected from 4-5 streams each year that DWEE can use in making biological assessments.

Fish Tissue Monitoring Program

- Assess fish tissue for toxins, such as mercury and polychlorinated biphenyl compounds (PCBs).
- Current fish tissue consumption advisories at 137 locations (130 lakes and 7 river/stream segments).
- In 2026, sampling will be conducted at approximately 40 sites within the Niobrara River basin.
- Each year the NGPC assists in sampling some of the large reservoirs during their fall surveys.

Ambient Lake Monitoring Program

- Consists of a core of 31 long term trend lakes that are monitored by DWEE (24), United States Army Corps of Engineers (4), and the Lower Loup (1) and Nemaha (2) NRDs to characterize and assess a variety of different lakes and reservoirs within the state.
- Additionally, each year 3-4 basin lakes are targeted for sampling for 2 consecutive years within a set of river basins that follows DWEE's six-year basin rotation scheme with at least one lake sampled within each river basin.
- In 2026, sampling will occur at 20 trend lakes and 5 basin lakes.
- The trend lakes that were removed for this year are Crescent Lake, Goose Lake, Oliver Reservoir, and Smith Lake.
- Cottonwood Lake is the only basin lake added to the monitoring list in 2026.
- Davis Creek Reservoir, Elwood Reservoir, Ravenna Lake and West Mormon Island Lake are basin lakes that enter the last year of monitoring in 2026.

Fish Kill and Citizen Complaint Investigations

- Dead fish and other surface water concerns are relayed to DWEE throughout the year.
- On-site investigations and water quality sampling were performed at sites of many of the complaints.
- Eleven fish kills were investigated from July 1, 2024, to June 30, 2025: Eight resulted from low dissolved oxygen levels and three resulted from an unknown cause.

- Eighty-four complaints about surface water pollution were taken by the Surface Water Monitoring Section in the last year; many were forwarded to other DWEE programs.

Regional Monitoring Network

- Collaboration between the USEPA and numerous states, tribes, and other organizations to collect continuous stream discharges and temperatures and other chemical and biological data.
- Data are used as baselines for long term comparisons of stream condition.
- Having many sensors deployed nationwide that collect continuous data allows USEPA and other partners to detect significant yet subtle trends in stream condition.
- DWEE has been monitoring 7 streams since May 2017.
- Each location has a sensor that collects water level and temperature every thirty minutes, typically bolted to a post driven into the stream bottom.
- Each of the study locations is also sampled as part of the DWEE Ambient Stream Monitoring Program.

Governor's Water Quality and Quantity Task Force

Isabella.Peterson@nebraska.gov

On March 25, the Governor's Water Quality and Quantity Task Force held a public meeting and unanimously adopted 14 recommended goals outlined in a Final Report that was submitted to the Governor.

The Task Force, which convened in the Spring of 2025, met more than twenty times across its four subcommittees and full body. Members engaged in monthly discussions and heard presentations from subject-matter experts throughout the process. Their work focused on developing practical, actionable solutions to protect Nebraska's vital water resources, with an emphasis on incentives and education rather than new regulatory requirements.

Key recommendations include: increased statewide water measurement through voluntary efforts and cost-share opportunities; developing and distributing statewide educational materials, with a priority on direct engagement with producers; promoting in-season nitrate applications and advanced nutrient management technologies; strengthening proactive protections for drinking water systems while identifying opportunities for regionalization; and leveraging diverse funding mechanisms, including ONE RED grant opportunities.

Implementing the recommended goals and action items will be a key priority for DWEE and its partners moving forward. The full report and all materials are available at: dwee.nebraska.gov/water-quality-and-quantity-task-force.

Nebraska Game and Parks Commission

(mike.archer@Nebraska.gov)

NGPC AIS Program

- Aquatic vegetation surveys on 30 to 40 public waterbodies statewide
- Herbicide treatments completed in early Spring to control Curlyleaf Pondweed at Ravenna Lake, Maskenthine, Prairie View, Smith Lake WMA, Czechland, and Liberty Cove
- Herbicide treatments planned to control both Hybrid and Eurasian Watermilfoil at Chappell Lake, Hershey WMA, Cottonmill Park, and Bufflehead WMA
- Watercraft inspections statewide from Memorial Day to Labor Day

- Monthly water samples taken and analyzed from ~50 public waterbodies monthly during the boating season for Zebra Mussel early detection
- Several education and outreach events to increase awareness of AIS and promote responsible boating actions to prevent AIS spread
- NGPC efforts to monitor Bigheaded Carp Monitoring continue. Fish still present below North Platte Diversion Dam (2nd year in a row). Fortunately, no observations at either sites upstream in North & South Platte Systems.
- Waiting on a grant approval to create an I-Carp team to work at identifying leading edge of migration and examine methods for removal.

NGPC Stream Monitoring and Research

- Intensive sampling effort in Niobrara River. Investigating changes in fish populations post Spencer Dam.
- Milburn Dam – further investigations and ongoing discussions with Irrigation District regarding continuing fish bypass operations
- Working with UNL to identify best locations for mussel reintroductions.

NGPC Aquatic Habitat and Angler Access Program

- Soldier Creek Restoration – Carter P Johnson dam has been breached and lake is drained. Anticipated completion in 2027. Work includes:
 - Improved access at 3 additional locations.
 - Remaindering of stream
 - Improved instream habitat
- Rock Creek Lake/2026 Republican River Augmentation. Removal of sediment that has accumulated into the sediment basin of Rock Creek Lake.
- Windmill SRA – Improved flood control, deepening of lakes, and installation of Floating Treatment Wetlands
- Missouri River access projects recently completed include:
 - Indian Cave State Park
 - Verdel Landing WMA

NGPC Hatchery

- Valentine Recirculating Aquaculture System (RAS).
 - Significantly reduces our reliance on surface water availability
 - Provides for a higher density of fish numbers

NGPC Watershed Ecology Program

- Working with Platte River conservation groups to update Central Platte River fish presence and composition.

Nebraska Groundwater Quality Clearinghouse

(csteele3@unl.edu)

Since the October status report, a large number of new wells have been approved for the clearinghouse and water quality results submitted for 2020-2025 reviewed for addition to the clearinghouse.

The Data Coordinator and Dave Miesbach have been reaching out to assist collaborators individually to prepare results for submission to the clearinghouse. NRDs that have not submitted water quality results to the new application are encouraged to reach out to the Data Coordinator, Colleen Steele, to streamline the process of learning the application. Results should be submitted chronologically starting with 2020.

Testing of enhancements to the application is expected to begin at the end of April.

US Geological Survey

(dlrus@usgs.gov)

1. Water quality – SW - data collection:

1.1 2025: 11,387 results so far for stream samples; (Major ions, trace elements, nutrients, field parameters, bacteria, pesticides, PFAS)

1.2 Ongoing sampling at National WQ Network sites (Maple Cr, Elkhorn R, Platte R, and Dismal R) as well as samples collected at the Salt Cr at Waverly and the Salt Cr at Ashland

1.3 Microbial source tracking and PFAS sampling on the Niobrara River near Valentine this spring/summer

1.4 Continuous WQ monitoring sites:

1.4.1 Four sites in Lower Platte R corridor, Niobrara River near Sparks and Verdel, pH and WT monitor on N Platte River @ Scottsbluff.

1.4.2 Also have real-time water temperature on Platte at Venice and Overton, Dismal nr Thedford, and Niobrara R. at near Niobrara.

2. Lots of Water Quality activities in Kansas, including intensive sampling downstream of Tuttle Creek Lake during Water Injection Dredging demonstrations.

3. Newer USGS web product- <https://apps.usgs.gov/watermap/> WaterMAP stands for **Water Monitoring Above the Planet**, and combines multiple publicly available **remote sensing** and in-situ datasets to display for broad public use. These datasets are specifically focused on surface water applications including monitoring rivers, lakes, reservoirs. Data types include both water quantity and quality, as well as climatological conditions such as ice cover.

4. Central Plains Water Science Center Quarterly Seminar

4.1 Our talk in January featured USGS PFAS expert Andrea Tokranov

4.2 Our next talk will feature Michelle Hladik talking about Neonicotinoids currently scheduled for July 22 at noon and info will come out with our quarterly newsletter.

Some recent water-quality reports of potential interest – not all USGS

Moser, M.T., Cherry, M.L., and Hall, B.M., 2026, Arsenic and isotope concentrations in the lower Platte River valley of eastern Nebraska, early 1970s to 2023: U.S. Geological Survey Scientific Investigations Report 2026–5138, 23 p., <https://doi.org/10.3133/sir20265138>

Jascika A.A. Maclean, Shannon Bartelt-Hunt, Daniel D. Snow, Josephus F. Borsuah, Raquel Wielens Becker, Moushumi Hazra, 2025, Aquatic occurrence, fate and potential ecotoxicity of insecticide and fungicide residues originating from a biofuels production facility using pesticide-treated seeds: *Journal of Hazardous Materials*, Volume 486, <https://doi.org/10.1016/j.jhazmat.2024.136922>.

Sarah Tucker, Daniel D. Snow, Rachael Birn, Elizabeth Cole, Alex Egbuchiem, He Bai, JoEllyn McMillan, Kristina W. Kintziger, Aaron Yoder, 2026, Per- and polyfluoroalkyl substances (PFAS) mixtures in rural Nebraska drinking water: Characterization and human health risk screening: *Hygiene and Environmental Health Advances*, Volume 18, <https://doi.org/10.1016/j.heha.2026.100176>.