

20 Schools Attend Children’s Groundwater Festival

In May, 20 schools attended the Nebraska Children’s Groundwater Festival held at Central Community College and College Park in Grand Island including 700 fifth-graders from Ansley, Broken Bow, Columbus, Doniphan, Fairfield, Grand Island, Harvard, Humphrey, Litchfield, Ord, Platte Center, Saint Paul, Scotia, Stuart, Superior and York.

The Festival is held annually with over 31,000 students educated at the event since 1988. During their visit, students attend seven in-depth sessions about groundwater taught by water and natural resources professionals from 30 local, state, federal and private organizations. The hands-on activities cover topics on the water cycle, aquifers, unpurified water, macroinvertebrates, infiltration, landfills, non-point source pollution, beverages using groundwater, agriculture, wetlands, invasive species, soil health, wastewater, city water systems, and wildlife’s dependence on groundwater. Over 60 volunteers help with setup, the lunch tent, assist presenters and work as classroom guides.

Central Platte NRD coordinates the Festival, which was the first to be formed nationally and has been replicated in 42 states in the U.S. and in Mexico, Canada, India and the United Kingdom. Based on the pre- and post-test results from the students who attend, the festival has demonstrated a positive impact on their awareness, knowledge, and ultimately, their behavior in groundwater protection.

Financial sponsors: Central Platte NRD, the City of Grand Island Utilities Department, Fred Otradovsky, Hornady Manufacturing Co, Lower Loup NRD, Copycat Printing & Signs, Chesterman Coca-Cola, Donna Wanitschke, Kiwanis Club, Sam’s Club, Pepsi Bottling Group, Walmart North, Roger and Julie Frandsen, Hy-Vee, Lee’s Family Restaurant, Middle Niobrara NRD, Bryan and Sue Powell, Super Saver Five Points and Super Saver 2<sup>nd</sup> Street.



Proposed Ground Water Management Plan Updates

Jim Schneider, Olsson Engineering of Lincoln, updated Central Platte NRD’s Board on the rewrite of the NRD’s Ground Water Management Plan. Olsson is incorporating new data and insight acquired since the approval of the plan in 1985, including hydrogeologic, climate and socio-economic data of the groundwater resources.

Over the last 37 years, the NRD’s rules and regulations have changed significantly and groundwater management goals have evolved to satisfy requirements of the CPNRD’s Integrated Management Plan, the Upper Platte River Basin Plan and the Platte River Recovery Implementation Plan.

Olsson has updated the plan triggers, data sets and maps, and completed over 200 scenarios with data from the 2022 Cooperative Hydrology Study model (COHYST) to predict 50-year simulations. The water quality portion of the plan was not changed. Below are the specific proposed changes:

- Allow subdistricts to be subdivided based on level of development and hydrology.
- New phase triggers to reflect percentages of maximum acceptable declines.
- Add management regulations to require meters and allocation to address groundwater decline instead of reducing irrigated acres.

The proposed Plan will be reviewed by the CPNRD Board and staff. Public hearings will be announced prior to the Plan being approved.

Important Dates

* January 1	Nitrogen Certification test due
* March 31	Crop Report due for Groundwater Management Program
* April 15	CPNRD-Ron Bishop Memorial College Scholarship applications due
* June 1	Chemigation applications due
* July 14	50th Anniversary Open House, 3:00-6:00, 215 Kaufman Ave, Grand Island
* Sept 1- March 1	Transfer applications for irrigated acres accepted
* September 15	Chemigation reinspections must be completed
* Nov 1 - April 1	Tree and weed barrier orders accepted

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IN PERSPECTIVE

Central Platte NRD Newsletter

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215 Kaufman Ave Grand Island NE (308) 385-6282 cpnrd.org

50th Anniversary Celebration

Grand Island Mayor Roger Steele will kick off Central Platte NRD’s 50th Anniversary Open House with a proclamation at 3:00 p.m. on Thursday, July 14<sup>th</sup> at CPNRD’s office located at 215 Kaufman Ave in Grand Island. Governor Ricketts will start the weeklong celebration, by proclaiming July 11-15 as NRD Week to recognize the 50<sup>th</sup> Anniversary of Nebraska’s Natural Resources Districts.



**JOIN US** for food, games and both indoor and outdoor activities at the Central Platte NRD office to learn what the NRD has accomplished and what’s in the works for the future. Visit booths featuring CPNRD’s progress in water management, wetlands, crane decks, flood control, prescribed fire/grasslands, GIS, trees, and cost-share. **PICK UP** a water sampling bottle for your domestic and/or irrigation well and learn what average nitrate levels are in your community.

**SEE** CPNRD’s prescribed fire trucks and gear, tree planting machine, past/current soil moisture monitoring equipment, and the schematic design of the proposed education center/office to be located northwest of Grand Island.

**DOOR PRIZES!** Central Platte NRD and the communities across the District are giving you a chance to win:

- \* RTIC 52 gallon light-weight cooler, backpack coolers, yardsticks and more - Central Platte NRD
  - \* Pony Express Package: Wild Horse Golf Club, Frito-Lay, Old Depot Vineyard & Winery- Gothenburg Chamber of Commerce
  - \* (6) Kearneyopoly Games- Kearney Chamber of Commerce
  - \* (2) Turkey Creek Float Trip Gift Certificates - Kearney Paddle Sports
  - \* Fishing Pole, Lures - APEX Marine of Grand Island
  - \* (2) Travel Mugs - Gibbon Chamber of Commerce
  - \* Silver Maple Wood/Turquoise Candy Dish - Grand Island Chamber of Commerce
- .... more prizes to be announced!

**Watch for additional prizes and learn more about the Open House activities at: [www.cpnrd.org](http://www.cpnrd.org) or call (308) 385-6282.**

Also In This Issue

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NRD “Bring Your Art” Contest

As part of the NRD’s Open House, youth ages 5-18 are invited to bring a drawing or painting (8.5 x 11) titled *KNOW YOUR NRD*.

Artwork will be judged on how well it represents at least one of the NRD’s responsibilities. Artwork will be displayed and voted on by staff and attendees from 3:00-5:15 p.m. during the Open House with winners announced at 5:30 that evening.

Top four winners will receive backpack coolers. To learn more contact **Marcia Lee (308) 385-6282** or [lee@cpnrd.org](mailto:lee@cpnrd.org).



## Why It’s Crucial to Sample Domestic Wells



Many rural homes in Nebraska have a private well rather than water supplied and treated by a municipality. Groundwater quality differs greatly throughout the state. Your home may have completely different water issues than your neighbor down the road. That’s why it’s crucial to test your water at least once a year to reduce health risks and ensure that your family has good quality water. *The safety and quality of the water is your responsibility when you have a private well.* Well water may require some softening and filtration to make it ideal for drinking, cooking and cleaning. Here are other things you should know.

**1. Well Water is Groundwater that is Untreated** Groundwater is essentially rain that has moved through the soil and into the aquifer, likely absorbing a lot of other things along the way that could contaminate it.

**2. Water Stains/Smells** Stains in sinks, tubs and toilets may be lime scale due to hardness, however, more severe stains from well water come from high iron content. Iron is not a safety concern, but it can change the taste of your water and cause orange stains that are difficult to remove. The only way to prevent stains is to install special iron filtration systems that can also filter out sulfur, which usually has the smell of rotten eggs.

**3. Nitrates** Nitrate is the most common chemical contaminant in the world’s groundwater and aquifers, including the CPNRD. Several communities have levels higher than EPA’s recommended maximum contaminant level of 10 parts per million (ppm). A reverse osmosis (R.O.) system is recommended to treat water contaminated with nitrates.

Nebraska farmers rely heavily on irrigation and Nitrogen fertilizer to grow millions of acres used in the global food supply chain; however, nitrogen that doesn’t get used by the crop ends up in Nebraska’s streams, lakes and ground water. The primary source of contamination is overapplication on irrigated crops over decades.

Jesse Bell, PhD and director of Claire M. Hubbard Professor of Water, Climate and Health at the University of Nebraska Medical Center reported to the CPNRD Board in March that Nebraska has one of the highest rates of pediatric cancer in the nation. UNMC and other states have found a correlation between nitrogen fertilizers, animal and human waste. The greatest exposure has been found in agricultural areas and private wells. High nitrate concentration in drinking water have been linked to Methemoglobinemia, colorectal cancer, thyroid disease and neural tube defects. Other cancers and diseases linked to high nitrate concentrations: kidney and bladder cancer, Non-Hodgkin Lymphoma, Alzheimer’s, Diabetes and Parkinson’s Disease.



Dr. Jesse Bell, University of Nebraska Medical Center

High nitrate levels also create problems for small communities and rural water users. When a town’s drinking water well gets contaminated, a treatment plant isn’t usually an option because of cost, maintenance requirements and land space. Communities must explore options such as drilling a new well, blending water from multiple wells together, or hooking up to another community’s water system. To achieve this, communities apply for grants and loans and/or raise water rates.

**4. Naturally Occurring Elements & Minerals in Nebraska** Because water is a powerful solvent, groundwater dissolves organic matter including minerals found in the soil and rocks.

**\*Calcium & Magnesium** These elements are what make well water hard and usually require a water softening system. They may not have a direct impact on your health, but could result in dry, itchy skin.

**\*Uranium** A radioactive element found in certain kinds of rocks and soils within Nebraska’s geology. Uranium is colorless, odorless and tasteless. The only way it can be detected in drinking water is to sample for lab testing. The chronic health effect associated with long-term ingestion of uranium is increased risk of kidney damage.

**\*Radon** A cancer-causing natural radioactive gas that you can’t see, smell, or taste. If present in your home, it may pose a danger to you and your family’s health.

**\*Arsenic** Some Nebraska groundwater supplies contain arsenic in high enough concentrations to present an increased risk of chronic poisoning. Research is being done to determine the exact connections between level of arsenic, duration of exposure, exposure combined with other elements, and health effects.

See how to sample your water and where to take your sample on the following page...

## How to Sample Your Well

Sampling your well at least once a year will give you a good representation of the aquifer at the well location. Always contact the lab before sample collection since different water tests often require different methods of collection and delivery. Lab staff may suggest specialized water tests based on your location or needs. Water quality data are only as good as the water samples from which the measurements are made. The following collection steps are general, be sure to contact your lab for specific instructions to prevent contamination and improve accuracy.

- 1. Label your sample bottle(s) with a permanent pen.** Include where the sample is being collected, either address or owner’s name.
- 2. Observe your well for any damage.** If the wellhead is damaged, consider requesting a sterile bottle for bacteria testing and contact a licensed well driller for repairs.
- 3. Locate your sampling point.** An exterior faucet or hydrant closest to the well is best.
- 4. Allow faucet or hydrant to run for 5 to 10 minutes.** This ensures a fresh sample from the well.
- 5. Avoid contaminating your sample.** Carefully remove the cap and do not touch the inside of the bottle.
- 6. Proper Storing:** Fill the bottle and store it in a cooler with ice or an ice pack.
- 7. Deliver sample to the lab.** See local lab information below.

Sampling once a year will help you observe trends and give you insight into filtration needs. Be sure to collect a sample after wellhead damage or repair and major flooding. If you have a reverse osmosis filtration system in your home, consider testing the filtered water and the unfiltered water. Reverse osmosis filters need to be changed regularly to maintain effectiveness. Comparing the two sample values will provide a good indicator of how that system is working.

### LOCAL LABS

Call the lab prior to dropping off sample. Include name, address, phone number and email address on sample.

LAB NAME	ADDRESS/PHONE #
<b>Platte Valley Laboratories</b> (308) 468-5975	<b>Gibbon:</b> W-501 Brewer’s Test \$17.50   Coliform Analysis \$15.00 1002 Hwy 30   soillab.com
<b>Regen Ag Labs</b> (308) 440-7560	<b>Pleasanton:</b> Basic Water Analysis \$30.00 31740 Hwy 10   regenaglab.com
<b>Ward Laboratories</b> (800) 887-7645	<b>Kearney:</b> Household Complete Mineral Analysis \$30.00 4007 Cherry Ave   www.wardlab.com
<b>ServiTech Laboratories</b> (402) 463-3522	Drinking Water Suitability Analysis \$52.00   Coliform: \$69.00 1602 Park West Dr.   servitechlabs.com Call (402) 463-3522 prior to dropping sample off: <b>Hastings: 1602 Park West Drive</b> Pick up daily, Monday – Friday, 8:00 am -5:00 pm <b>Columbus: Frontier Coop, 2066 14th Ave</b> Pick up 8:00 am on Thursdays, during soil season <b>Grand Island: Toner’s, 3721 W. Nebraska Hwy</b> Pick up daily, Monday - Friday, 9:00 am <b>Kearney: Toner’s, 714 3rd Ave</b> Pick up 8:30 am <b>York: 3D Supply, 3605 N. Delaware</b> Pick up 9:00 am Wed. year-round/Friday soil season

## Why Samples Are Required

Producers in Phases II and III of the Groundwater Quality Management Program are required to submit an annual crop report form along with water and soil samples. The management program requires samples in these areas to provide the NRD with producer-driven data to analyze and refine water quality management decisions. Although the District nitrate level average in groundwater is showing a decline, many parts of the NRD are still well above the recommended 10 ppm drinking water standard. Producers who do not submit the report forms are in violation of the CPNRD Rules and Regulations and are issued Cease and Desist orders. Potential penalties for violation are: fines ranging from \$1,000 - \$5,000 per violation per day and/or loss of irrigated acres, ineligibility for NRD cost-share and restriction from transferring irrigated acres. *Water sampling bottles will be available at the CPNRD Open House on July 14<sup>th</sup>.*

## Kegley Encourages Enrollment in RCPP Soil Program



Ryan Kegley, CPNRD Director, Kearney, NE

Just one year after signing up for the Nebraska Soil Carbon Project, Ryan Kegley of Kearney, saw several benefits to planting cover crops. Kegley serves as a director on the Central Platte NRD board and said he’d thought about planting cover crops for a couple of years and then saw the opportunities available with the NRCS RCPP-Nebraska Soil Carbon Program. He liked the Program’s flexibility since it allowed him to choose what mix of cover crops he wanted to plant and at what seeding rate.

Kegley said, “With the cost of fuel and irrigation, I think everyone needs to look at ways that will help reduce the amount of water needed to grow a crop.” He also thinks people should look at the amount of topsoil that was blown away this spring because of fields left bare after harvest.

The benefits Kegley has seen on his fields so far are weed suppression, residue left over from the rye that prevented dirt erosion, additional feed for his cows enabling them to graze on their own without hauling feed to them, and water infiltration that reduces the amount of water needed during irrigation.

Kegley chose two properties to enroll in the RCPP program that were planted to soybeans for fall harvest. He selected rye for his cover crop because of its extensive root growth, and because it was available at a decent price. The rye was able to be drilled right after harvest so it had a longer growth period. He also has pivots on the properties so he knew he would get a good stand even if conditions were dry.

Kegley grazed pairs on the cover crop while calving and then had a couple hundred bales of feed to supplement before going to grass. He used the cover crop differently on the two fields. On one he grazed one for three weeks, strip tilled it, and then planted into it. He then went back and sprayed to terminate the rye. On the other field, the rye was cut and bailed, getting roughly 3.5 tons per acre of feed. He then strip tilled that field and planted it to corn.

The Nebraska Soil Carbon Program has several carbon payment opportunities. Payments producers receive are tied to practices implemented on the acres, not the carbon outcomes, to reduce the amount of risk involved for producers. Kegley believes he will see even more improvement in the next few years, saying “I’m planning on being able to use less water. With the cover crop residue we’ll have less evaporation, less runoff and better water infiltration.”

To learn about options and payments available to you, contact Courtney Widup (308) 385-6282 or widup@cpnrd.org.



This 66-acre property is the second field Kegley enrolled in the RCPP program that was not grazed.



## Taxpayer \$\$ Spent on Water Quality Violations



As part of the Ground Water Management Program, certified violation letters are sent to producers and landowners in Phases II/III who are in violation of the NRD’s Rules & Regulations. Violations occur when annual crop reports are not submitted and/or water and soil samples are not provided. As a local government entity, the NRD receives local property taxes. The cost of these letters and legal fees for those who do not comply is paid for by taxpayers in the District. An average cost to taxpayers each year is over \$17,000: Below is the breakdown of costs:

**Mail:** \$450/year for regular mail and certified postage

**Staff Time:** \$2,000

**Legal Fees:** \$14,890

**Average Annual Total: \$17,340**