

Water Committee Meeting
Monday, November 24, 2014 5:00 PM
Lower Platte North NRD Office
P.O. Box 126
Wahoo, NE 68066

1. REGULATORY

1.A. GROUND WATER MANAGEMENT AREA

1.A.1. DNR Draft Revised Rules Title457

DNR will conduct public hearings for consideration of revising rules to determine whether a Basin is Fully Appropriated. The two closest hearings are scheduled for:
December 10, 2014 at 9:00 am in Norfolk
December 15, 2014 at 2:00 pm in Lincoln

Most of the revised rules deal with definitions (see attached sheet).

1.A.2. Irrigated Acres for 2015 in the HCA and NHCA

The district continues to receive well permit applications for approved variances.

1.A.3. Variance Request in the Hydrologically Connected Area (Limited Development Area)

No new variance applications have been received.

1.A.3.a. Jeffrey Stork New Well Variance

Jeff Stork has applied to install a well to irrigate 22 acres in Dodge County. The proposed well is located 35 ft. from a domestic well owned by Gary Kremlacek. This is in the Platte River Uplands subarea which is just north-east of Fremont and is in a restricted development area. Staff met with Jeff Stork, John Tank, and the domestic well owner, Gary and Tammy Kremlacek (and attorney) on 11/24/2014 at 4:00 pm. Jeff Stork has agreed to pay for trenching a new line from the Kremlacek domestic well to Mr. Kremlacek's house, but not for a new domestic well. The Kremlacek well is ~40 years old and ~110 feet deep. It is difficult to find adequate water in this area and even Mr. Stork had several test holes dug before an adequate formation was found near Mr. Kremlacek's domestic well.

After much discussion, the parties agreed to talk among themselves to see if a solution could be resolved by the next Water Committee meeting.

1.A.4. Variance Requests in the Non-Hydrologically Connected Area (Normal Development Area)

No new variance applications have been received.

1.A.5. Variance Requests in the Restricted Development Areas

No new updates.

1.A.6. Well Permit Program

1.A.6.a. Well Permits Approved

Wells Permits Approved: #

Landowner	Number of Wells	Number of New Irrigated Acres	Type of Well	County	Subarea
Charles Emanuel	1	0	Replacement	Dodge	North Bend
Jonathan Temme	1	135	New	Boone	Upper Newman Grove
John Temme	1	135	New	Boone	Upper Newman Grove
Eugene Stock	1	0	Supplemental	Platte	Middle Shell Creek

The total number of approved permits for 2014 is 69.

Location of Approved Well Permits for 2014: Correct as of 11/24/2014

County	Irrigation - New	Irrigation - Replacement	Stock	Commercial	Municipal	Other	Total
Butler	1	5	0	0	0	0	6
Colfax	1	2	0	0	0	0	3
Dodge	5	9	0	1	0	1	16
Boone	7	1	0	0	0	0	8
Madison	1	0	0	0	0	0	1
Platte	5	5	1	0	0	1	12
Saunders	13	7	0	0	0	3	23
Total	33	29	1	1	0	5	69

1.A.6.b. John Temme New Well Application

John Temme is requesting a new well in Section 14-T22N-R6W in Boone County. Mr. Temme was approved for 66 acres in section 22 through the HCA variance program. He would like to drill the well in section 14 to irrigate the approved 66 acres as well as 76 acres in section 14 (see attached map). The 76 acres are currently part of a 207 acre system serviced by well G-067547.

1.A.6.c. Jane Stara Revocable Trust Replacement Well

The Stara's are requesting a replacement well in Section 19-T15N-R4E in Butler County (within the Butler-Saunders SQS). This is the first replacement well application received in this SQS.

1.A.6.d. Supplemental Well Permit Applications in the Platte Colfax SQS.

The district has two supplemental well permit applications on file within the Platte-Colfax Special Quantity Subarea. The committee tabled these applications during the summer of 2014 with the intention of reviewing them after the fall ground water levels were recorded.

1.A.6.d.1. Tim, Richard & Alice Sprunk Supplemental Well Application

Tim, Richard & Alice Sprunk have submitted a well permit application for a supplemental well in the Platte-Colfax Special Quantity Subarea. The well will be located in the SE 1/4 of the SW 1/4 of Section 10-T18N-R1W. They currently irrigate one full size pivot and two small pivots totaling 234 acres (see attached map). The new well will provide water to the full size pivot while the old well will pump water to the two small pivots and the occasional cattle tank. Attached are the test holes provided by Mr. Sprunk.

Staff recommendation is to not approve supplemental wells in the SQS.

The Water Committee took no action.

1.A.6.d.2. Mark Hoessel Supplemental Well Application

Mark Hoessel has applied for a new supplemental well in the NE 1/4 of the NE 1/4 of Section 11-T19N-R1E in Platte County. He currently irrigates 5 pivots totaling 234 acres off of one well. If approved, the new well will irrigate the two smaller pivots to the south and potentially the south pivot across the road to the east (see attached map). All systems are currently connected, so the new well would also be used as a back up if the original well has issues. The test hole provided by Mr. Hoessel is also attached.

The Water Committee took no action.

1.A.6.e. Wurnemunde Replacement Well Amendment

Catherine Wurnemunde has asked the district to amend her previously approved replacement well permit. They would like to leave the old well and use it as a stock well pumping less than 50gpm. This well is located in NW1/4 of the SE1/4, Section 24, T21N, R5W in Boone County.

1.A.7. Potential Violation of Expanded Irrigation

Staff is currently investigating an expansion of irrigation violation north of Rodgers. The violation was confirmed after reviewing the mapped GPS points and the current 2014 aeriels. Staff would like to wait until the acre certification is returned before pursuing this violation further. Acre certifications for Dodge county are due by February 1st, 2015.

1.A.8. Special Quantity Subareas

1.A.8.a. LPNNRD SQS Operator Certification Classes

Section R, Rule 2.3 says that the board shall establish education requirements by December 15 for the following year.

SQS Classes – Agenda Outline

1. **Reason for SQS** (Goal to preserve long term irrigation but address mid-summer declines, Multi-layer confined aquifers, Pocket aquifers, Recent irrigation development, 2012 drought, Hydrographs from continuous reading monitoring wells)
2. **Boundaries of SQS** (Show maps)
3. **Who Needs to Attend** (Landowners, managers, or operators of irrigation system or basically the person making the decisions / ultimately the landowner is the responsible party)
4. **Rolling Allocation** (Explain the process and penalty if you use too much water)
5. **Flow Meters and Maintenance** (Approved list of flow meters, proper installation, and reading and reporting the reading to the LPNNRD)
6. **SQS Area Rules** (Improper meter installation, meter installed by May 1, 2015, well water level measurement twice per year, rotation, allocation, random inspections by NRD)

Two educational classes have been set up for producers in the Butler-Saunders SQS for:

- Wednesday, January 14, 2015, at 2:00 p.m. (afternoon)
- Tuesday, February 17, 2015, at 7:00 p.m. (evening)

Letters will be mailed to producers to tell them of the classes. Since proper installation of the flow meter is required, staff would also prefer that attendance by the operator of the irrigation systems, also be required this first year.

A slightly different letter will be mailed to producers in the Platte-Colfax SQS area noting a potential change in the date that flow meters have to be installed (May 1, 2016). This will require a change in our rules and to hold a public hearing.

1.A.9. Lower Platte River Basin Water Management Plan Coalition (LPRBC)

The next meeting of the Technical committee is at the LENRD in Norfolk on December 2, 2014. Main agenda items will be the Goals and Objectives and Water Banking.

The next Managers meeting is in O'Neil at the UENRD on December 12, 2014.

1.A.10. Voluntary Integrated Water Management Plan - LENRD and LPNNRD

- The last Coordination meeting was held on November 20, 2014 at 10:00 am at Olsson's new office near the Lincoln Arena. Most of the discussion focused on water banking, especially within the State of Colorado. The LPRBC is currently discussing this item.
- The NRD has received an Invoice for \$2,685.73 from Olsson Assoc. for services rendered through November 13, 2014 (see attached invoice).
- The LPNNRD has received a draft copy of the Water Balance Study (see attached report and figures). Angle has reviewed the study and the main concern is the use of CALMIT 2005 data, which is 9 years old and additional irrigation has been added since then (see attached review). However, this is still the best information that is currently available.

1.A.11. Cost Share Programs

1.A.11.a. Irrigation Well Sample Kits

A total of 367 kits have been requested and sent (one of these was mailed in mid November). The results from 356 of these kits have been received from HHS/Lincoln; range is 0.00 to 101.0 ppm.

1.A.11.b. Domestic Well Sample Kits

Kit was sent to Hough in mid November. This cost-share program is available only in the Phase 2 areas.

Kit #	Date sent	Date collected	Nitrate result (in ppm)	Bacteria 0 = no hit 1 = hit	Remarks
14-3716	11/10/2014	11/12/2014	19.9	?	[138]Hough - bacteria > 30 hours

As per instructions Hough collected the sample in the morning and took it to the Bellwood Post Office before it closed at noon. Through the mail system the kit went by Priority Mail from Bellwood to Norfolk to Lincoln. It wasn't received in Lincoln until the morning of 11/14/2014 which is more than the 30-hour window for the bacteria sample. Oaklund contacted the Post Office in Bellwood and Wahoo regarding the U S Mail's postal product "Priority Mail 1-Day". A second bacteria sample bottle was sent to Hough last week. Hough collected the sample on 11/19/2014 and mailed it as Priority Mail at the Post Office in Bellwood but this time with a tracking number (see attachment). The tracking showed that priority mail now going through Norfolk will

exceed the 30-hour window for bacteria sampling. When Oaklund again contacted U S Mail he was told that the package was received by the Updated Delivery Date and that Priority Mail 1-Day service is not a guarantee of one day delivery. The Postal Service then made recommendation of Express Mail to guarantee overnight delivery. The cost of Express Mail is \$19.99.

What all this means is that future mailing of bacteria samples will no longer be an option.

1.A.12. Bellwood Phase 2 Area

2014 is the twelfth year of this Phase 2 Area. Five more results have been received since the last month for a total of 106 producer sample results (range of 0.0 to 22.3 ppm).

Year	Nitrate-nitrogen Range	Percent Nitrate-nitrogen 0 to 8.0 ppm	Percent Nitrate-nitrogen 8.01 to 10.00 ppm	Percent Nitrate-nitrogen greater than 10 ppm
2004	0 to 25 ppm	46.3% (44 of 95)	8.4% (8 of 95)	45.3% (43 of 95)
2005	0 to 25 ppm	47% (44 of 94)	15% (14 of 94)	38% (36 of 94)
2006	0 to 24 ppm	41% (29 of 71)	14% (10 of 71)	45% (32 of 71)
2007	0 to 31 ppm	48% (48 of 100)	9% (9 of 100)	43% (43 of 100)
2008	0 to 28 ppm	53.75% (43 of 80)	7.5% (6 of 80)	38.75% (31 of 80)
2009	0 to 22 ppm	45.5% (41 of 90)	15.5% (14 of 90)	39% (35 of 90)
2010	0 to 35.7 ppm	48.65% (54 of 111)	11.71% (13 of 111)	39.64% (44 of 111)
2011	0 to 26.6 ppm	51% (56 of 110)	6% (7 of 110)	43% (47 of 110)
2012	0 to 28.9 ppm	57% (61 of 107)	9% (10 of 107)	34% (36 of 107)
2013	0 to 25.8 ppm	50% (53 of 107)	9% (10 of 107)	41% (44 of 107)
2014	0 to 22.3 ppm	51% (54 of 106)	13% (14 of 106)	36% (38 of 106)

1.A.13. Richland - Schuyler Phase 2 Area

2014 is the eleventh year of this Phase 2 Area. Eleven more results have been received the last month for a total of 250 producer sample results (range of 0.0 to 101.0 ppm).

Year	Nitrate-nitrogen Range	Percent Nitrate-nitrogen 0 to 8.0 ppm	Percent Nitrate-nitrogen 8.01 to 10.00 ppm	Percent Nitrate-nitrogen greater than 10 ppm
2004	0 to 47 ppm	30% (42 of 139)	10% (14 of 139)	60% (83 of 139)
2005	0 to 120 ppm	31.3% (74 of 236)	10.2% (24 of 236)	58.5% (138 of 236)
2006	0 to 53 ppm	28% (50 of 181)	14% (26 of 181)	58% (105 of 181)
2007	0 to 99 ppm	32% (75 of 231)	10% (22 of 231)	58% (134 of 227)
2008	0 to 46 ppm	28% (53 of 190)	12% (23 of 190)	60% (114 of 190)
2009	0 to 57 ppm	33% (72 of 216)	6% (13 of 216)	61% (131 of 216)
2010	0 to 57.5 ppm	31% (70 of 229)	7% (15 of 229)	62% (142 of 229)
2011	0 to 65.8 ppm	28% (67 of 241)	9% (21 of 241)	63% (153 of 241)
2012	0 to 52.6 ppm	29% (70 of 241)	9% (21 of 241)	62% (150 of 241)
2013	0 to 94.0 ppm	25% (63 of 252)	9% (23 of 252)	66% (166 of 252)
2014	0 to 101.0 ppm	27.2% (68 of 250)	8.4% (21 of 250)	64.4% (160 of 250)

1.A.14. LPNNRD Certification

1.A.14.a. LPNNRD Operator Certification Classes

No on-line tests have been completed since the last committee meeting. Staff of LPNNRD will meet with UNL County Extension Educators next Monday, December 1st, to set up classes.

1.A.15. Certifying Acres in Saunders and Dodge Counties

Chris Poole reports that he and Tyler Benal are inputting Saunders County information into the computers. All parcels for Dodge county have been mailed out with a return date of February 1, 2015.

1.B. CHEMIGATION

Currently we have 456 chemigation permits in our District. Staff is updating our rules for future review by DEQ and our Board. We will have to go to public hearing to update these.

1.C. LIVESTOCK WASTE PERMITS

No new livestock permit applications from DEQ since the last Water Committee meeting.

2. GROUND WATER PROGRAMS

2.A. DECOMMISSIONED WELL PROGRAM

2.A.1. Well Estimates

Six new wells has been reviewed and approved by Gottschalk for decommissioning since the last Committee meeting.

Well Owner	Type of Well	Cost Share Estimate	County
Jane Stara Rev. Trust	Irrigation	\$943.11	Butler
Goedeken Farms Inc.	Irrigation	\$602.48	Platte
Charles Emmanuel & Sons Inc.	2 x Irrigation	\$1,001.59	Dodge
Bernard Hain	2 x Stock	\$901.56	Butler

2.A.2. Plugged Wells

No wells have been plugged, reviewed, or ready for cost share payment approval this month.

2.B. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

2.B.1. Elkhorn Loup Model (ELM)

No new update.

2.B.2. Eastern Nebraska Water Resources Assessment (ENWRA)

Katie Cameron (ENWRA Coordinator) has arranged to have the latest findings of the recent AEM flights to be presented at the next NARD Conference near the end of January.

NET grant is still under review by their committee, and results not expected until February 2015.

2.C. GROUND WATER ENERGY LEVELS

Staff completed its collection of the Fall GWEL readings in early November. The Ground Water Level Summary Comparison of Fall 2013 to Fall 2014 is an attachment. These readings are encouraging and show rainfall in June and late August were helpful.

As a reminder, the LPNNRD has three subareas that could be declared as Level 2 management areas next spring if those readings are below the trigger level: David City, Bellwood, and Fremont East.

2.D. GROUND WATER QUALITY SAMPLING

Results for the sixteen monitoring well sites sampled thus far have been received. One nitrate result was 11.8 ppm.

2.E. FORMER ORDNANCE PLANT NEAR MEAD

The last Public Availability meeting was held on November 12, 2014 at the Yutan VFW Country club building.

- The 2013 Containment Evaluation has been completed with the recommendation to install an additional extraction well (EW-18) at the leading edge of the LL2 plume that will be placed between EW-7 and EW-9. To date several extraction (EW wells) and focussed extraction wells (FEW) have been shut off, primarily due to these wells pulling the contaminant plumes away from other extraction wells. The wells shut down are EW-8 (LL1), EW-10 (LL2), EW-6, EW-5, EW-16, EW-3, (all LL3), EW-2 (LL4). Extraction wells still operating include EW-12 and EW-17 (LL1), EW-9 and EW-7 (LL2), FEW-14 and EW-4 (LL3), FEW-15 and EW-1R (LL4).
- The highest RDX (explosives) concentrations are in LL2, while the highest TCE concentrations are in LL1 and LL4.

- The second 5 Year review has been completed. This is required by the Corps to take a fresh look at the clean-up efforts and evaluate any new technology that could shorten the cleanup time or cut cost.
- On site UV treatment systems have been installed on several extraction wells (EW-4, 7 and 9, FEW-11 and 14) to the point that the main treatment plant is no longer needed and therefore has been shutdown since April 30, 2014. Reuse of the cleanup water is still available on the existing discharge lines, but users have had to install booster pumps to increase the pressure for use in center pivots.
- Public availability meetings have gone from quarterly to semi-annual.
- The Pilot Studies for in-situ treatment within the aquifer for RDX and TCE are still on-going.

3. SURFACE WATER PROGRAMS

3.A. USGS STREAM FLOW GAUGING SITES

Attached is a funding agreement with USGS to continue flow monitoring on Shell Creek near Columbus, Wahoo Creek near Ashland, and a real time ground water level monitoring site at ARDC.

4. OTHER

4.A. GMDA ANNUAL CONFERENCE

GMDA Annual Conference is scheduled for January 6-8, 2015. The main agenda will be on the Central Arizona Water Project that provides water for agriculture, municipalities, and industries. This project will likely service as a model for future California and Kansas water projects.

4.B. COMMENTS FROM THE PUBLIC