

Water Committee Meeting
Wednesday, October 1, 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. Irrigated Acres for 2015 in the HCA and NHCA

All approval and denial letters have been sent to the applicants.

1.A.2. Variance Request in the Hydrologically Connected Area (Limited Development Area)

The district has received one well permit application with several more on the way.

1.A.3. Variance Requests in the Non-Hydrologically Connected Area (Normal Development Area)

No well permit applications have been returned.

1.A.4. Variance Requests in the Restricted Development Areas

No new variance requests.

1.A.5. Well Permit Program

1.A.5.a. Well Permits Approved

Wells Permits Approved: 2

Landowner	Number of Wells	Number of New Irrigated Acres	Type of Well	County	Subarea
Robert Ladenburger	1	80	Irrigation	Saunders	Morse Bluff

The total number of approved permits for 2014 is 65

Location of Approved Well Permits by County for 2014: Correct as of 10/28/2014

County	Irrigation - new	Irrigation – replacement	Stock	Commercial /Industrial	Municipal	Other	Total
Butler	1	5	0	0	0	0	6
Colfax	1	2	0	0	0	0	3
Dodge	5	8	0	1	0	1	15
Boone	5	1	0	0	0	0	6
Madison	1	0	0	0	0	0	1
Platte	4	5	1	0	0	1	11
Saunders	13	7	0	0	0	3	23
Total	30	28	1	1	0	5	65

1.A.6. 2014 Well Interference Complaints

Follow up to Bryon Rozic well interference complaint. If the LPNNRD declared this as a SQS it would encompass 15 irrigation wells in a nine section block (~ one mile radius) of which 5 of these wells are in the RDA of the Yutan subarea and are most likely to affect his well. A total of 51 irrigation wells in a 25 section block (~ two mile radius) of which 10 are in the RDA of the Yutan subarea.

Mr. Rozic states that during the non-irrigation season he has six feet of water in his well.

1.A.7. Fall Fertilizer Application Date

For our radio ad spot Troy Thompson will contact radio station KTIC to remind producers that they need to wait until November 1st before fall fertilizer can be applied on non-sandy soils. For sandy soils fertilization is not allowed until after March 1st. This ad should begin running next week.

1.A.8. Special Quantity Subareas

- At the previous Board meeting the proposed flow meter list was approved (see attached). The rolling allocation has been set at 27 acre inches for a three year period in the Butler-Saunders SQS starting in 2015. The allocation for the Platte-Colfax SQS will not take effect until 2016, but the installation of flow meters is required in both subareas by May 1, 2015.
- Hilger and Angle have invited Great Plains Meter (they sell McCrometer flow meters) to attend our next Water Committee meeting on October 29, 2014 to discuss proper installation of flow meters and maintenance. The District will need to decide if the LPNNRD will run its own maintenance program or contract it out.

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

- The last Manager's meeting of the LPRBC was held on September 12, 2014 at the LPNNRD in Wahoo. The agenda addressed comments from the Technical Committee on Goals and Objectives as originally discussed by the LPRBC Board and Manager's Committee.
- The next meeting of the LPRBC Technical Committee is set for October 28, 2014 at the Lower Loup NRD in Ord, NE. The main topic on the agenda will be the discussion of water banking.

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

- The last coordination meeting between LENRD, LPNNRD, and Olsson Associates was held on September 2, 2014 at the LPNNRD office in Wahoo NE. The Water Inventory and Water Balance Study will not be finished until later this fall.
- The next Stakeholder meeting is scheduled for October 7, 2014 at 2:00 p.m. at the LPNNRD office.
- The NRD has received an Invoice for \$18,913.73 from Olsson Assoc. for services rendered through September 6, 2014 (see attached invoice).

1.A.11. Cost Share Programs

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

356 kits have been requested and sent (eleven of these have been requested since Labor Day). The results from 334 of these kits and been received from HHS/Lincoln; range is 0.00 to 101.0 ppm. Six water samples were taken to the lab on Monday (September 29th). Letters have been mailed to producers who still have outstanding sample kits. Two more water samples have been received this week.

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

Seven kit requests have been received and kits have been mailed. The results from six of these kits has been received and these results have been returned to the homeowner. This cost-share program is available only in the Phase 2 areas.

Kit #	Date sent	Date collected	Nitrate	Bacteria	Remarks
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			result (in ppm)	0 = no hit 1 = hit	
14-3386	7/9/2014	7/15/2014	10.1	0	
14-3461	7/21/2014	8/4/2014	0.00	0	
14-3462	7/22/2014	8/4/2014	7.93	0	
14-3463	7/22/2014	8/4/2014	17.5	0	
14-3508	8/1/2014				Doug Romshek - not yet used
14-3608	8/18/2014	8/26/2014	11.5	x	Ewert - bacteria > 30 hours
14-3630	8/20/2014	8/26/2014	15.7	x	Klug - only returned nitrate bottle

1.A.11.c. Nebraska Agricultural Water Management Network (NAWMN)

Payment has been received from the 33 producers that ordered equipment.

1.A.12. Bellwood Phase 2 Area

2014 is the twelfth year of this Phase 2 Area. 101 producer sample results have been received (range of 0.00 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% (52 of 101)	14% (14 of 101)	35% (35 of 101)

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

2014 is the eleventh year of this Phase 2 Area. 233 producer sample results have been received (range of 0.00 to 101.0).

Year	Nitrate-nitrogen Range	Percent	Percent	Percent
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		Nitrate-nitrogen 0 to 8.0 ppm	Nitrate-nitrogen 8.01 to 10.00 ppm	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% (63 of 233)	9% (21 of 233)	64% (149 of 233)

Attached are sample results comparing producer collected samples to NRD sampling data.

1.A.14. LPNNRD Certification

Three on-line tests have been completed and one take-home test has been returned:

Cert #	Cert date	Name	Re-cert	Comments
6129	9/2/2014	Grant Fitzgerald	new	for acres cert
6130	9/2/2014	Anthony Stepanek	new	
6131	9/2/2014	Eric Nelson	Yes	for acres cert
6132	9/11/2014	Greg Kucera	new	for Variance

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

Saunders County: Over 1300 returned at this point with more daily.

Dodge County: Chris Poole says over half the county has been recreated in GIS at this point. The original data we obtained from GISW was beyond poorly done, the acres are consistently 40% under actual acres (I think this is due to a copy paste error on their part, not the assessor as their actual records are very close to what I come up with). Work has slowed down as the incredibly high resolution June 2012 aerials that showed pipe laid out in fields only covered a portion of the county. We will be ready to send Dodge out by the time Harvest wraps up. Tentatively, I'm guessing there will be under 900 so we'll send them in one shot with a due date of January 30th, 2015.

1.B. CHEMIGATION

No new updates on inspections. For 2013 we have 377 renewals and 28 new permit applications for a current total of 405.

Chemigation fees were briefly discussed at one of the sessions at the NARD conference.

- Several NRD’s feel we should have the same fee structure or at least similar to one another. The maximum we can charge is: New = \$150, Renewal = \$100, Emergency = \$500. We don’t want to set it to high since that could encourage illegal chemigation.
- Our estimated cost is \$88 per inspection and that includes staff time and vehicle expense including gas. Staff feel that going with this proposed fee structure shown below would cover our costs, especially if we do inspection of renewals once every three years as State Law allows.
- Staff proposed fee structure is:
 - New = \$90
 - Renewal = \$30
 - Emergency = \$250

	Lower Platte North NRD	Upper Big Blue NRD	Little Blue NRD	Upper Loup NRD	Lower Elkhorn NRD	Maximum NRD’s can charge
New	\$90	\$60	\$60	\$50	\$50 to \$60	\$150
Renewal	\$30	\$20	\$20	\$30	\$30 to \$40	\$100
Emergency	\$250	\$250	\$250			\$500

1.C. LIVESTOCK WASTE PERMITS

The LPNNRD has received 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

Two 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
Greg Haskins	1 stock well 1 hand dug well	\$1,078.31	Butler

2.A.2. Plugged Wells

No wells are ready for cost share payment approval this month.

2.B. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

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

Schomer and Angle attended the latest training session of the ELM model after the NARD Conference. This involved the use of GIS, MODFLOW, and writing of computer code in 'batch files'. The next training is scheduled for early December.

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

The AEM flights are now scheduled for the week of October 12 to 18 over the northern half of Eastern Nebraska (see attached map). This will include most of the LPNNRD.

Katie Cameron (ENWRA Coordinator) has asked NRD staff to look over the routes and have someone drive the flightlines in our District for any last minute complications. This could include flying parallel to utility lines, buried pipelines, or crossing over buildings.

She will provide to us:

- draft flyers (for posting in towns or public places)
- draft land owner postcards and parcel lists
- draft public/media announcements (newspapers, tv, radio)
- planned landing/take-off locations

ENWRA is planning 7-10 days ahead for sending these notifications out and a media day is planned in Norfolk for the first week of production flights.

2.C. NEW MONITORING WELLS

Staff have reviewed several possible locations for test holes and new monitoring wells. This will be prioritized and sent to C&SD for their review. It is hoped to have the test holes done by next Spring and install any monitoring wells after that.

2.D. GROUND WATER ENERGY LEVELS

Attached are graphs of the ground water energy levels from select monitoring wells that were

measured in the Wann Basin subarea on August 26, 2014. Results were emailed to all federal, state, and local agencies for their use.

The Fall readings of all District GWEL wells will start in late October.

2.E. GROUND WATER QUALITY SAMPLING

Monitoring Wells:

Staff continued its water sampling of our dedicated monitoring wells. Eight more of these were sampled in mid September, in eastern Saunders County. These are tested for pesticides, nitrates, and major ions. The value for measuring major ions is its a useful technique to identify different aquifers based on their geochemistry. For example, differences between alluvial aquifers such as near rivers and streams compared to sandstone aquifers.

Richland -Schuyler Intensive Sampling:

Staff sampled 114 wells in Colfax County, 91 of which are in the Richland-Schuyler Phase 2 area.

- Nitrate results range from 0 to 70.3 ppm. At 20% of these sites a duplicate sample was taken (17 to HHS, 7 to Midwest) and these duplicates replicated the nitrate result(s). 15 blank samples (distilled water) were also collected and all of these came back as <RL.

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
2014	0 to 70.3 ppm	28% (32 of 114)	4% (5 of 114)	68% (77 of 114)

- In nine of these sections (five of which are in the Phase 2 Area) pesticide samples were collected. These pesticide samples were sent to HHS Lab in Lincoln and one pesticide sample was sent to Midwest Lab in Omaha. All parameters at these sites were less than the Reporting Limit.
- In ten of the sections a “suite” of constituents were collected → sodium, potassium, calcium, magnesium, sulfate, chloride, bicarbonate, and carbonate. A Maximum Contaminant Level for many of these hasn’t yet been established. All of the results were less than the Critical Level. Again, major ions are a useful way to identify different aquifers.

3. SURFACE WATER PROGRAMS

3.A. STATE LAKES, FOR THE WEEK OF SEPTEMBER 22, 2014

DEQ sampling of Nebraska lakes will end the week of September 29th to October 3rd. In 2015 DEQ will start sampling Lake Wanahoo for bacteria and toxic algae and continue sampling of the Fremont State Lakes.

3.A.1. Bacteria Sampling

ONE LAKE tested high for *E. coli* bacteria this week. *E. coli* levels measured above 235 colonies/100 ml of sample are considered a higher risk for illness when swimming. Considering the more rapid changes in bacteria conditions, signs are not posted with these higher levels although DEQ wants people to be aware and use their own judgment on their use.

Lakes with High E. coli Bacteria Level

- **Rockford Lake in Gage County**

3.A.2. Toxic Algae

FOUR LAKES will be on “Health Alert” the week of September 22nd. Even though all four lakes tested below our threshold of 20 ppb this week they did test over last week so they will remain on **“Health Alert”** for the remainder of the recreation season. It is DEQ policy that any lake that has microcystin levels over the established criterion of 20 ppb will be placed on “Health Alert” Status until such time that it has tested below 20 ppb for two continuous weeks. If a lake is under a Health Alert, signs will be posted recommending people avoid full body contact activities such as swimming, wading, skiing, jet skiing, etc. Non-contact activities such as boating, fishing, and camping are OK.

Kirkman’s Cove tested below 20 ppb for the second consecutive week so it will be reopened for full contact recreation.

Lakes with High Microcystin Level

- **Big Indian Creek Lake in Gage County**
- **Iron Horse Trail Lake in Pawnee County**
- **Lone Star Lake in Fillmore County**
- **Willow Creek Lake in Pierce County**

3.B. USGS WATER QUALITY MONITORING ON SHELL CREEK

USGS has submitted an invoice for water quality monitoring on Shell Creek for \$8,050.00 (see attached invoice).

3.C. USGS STREAM FLOW GAUGING SITES

USGS has submitted an invoice for stream flow gauging on Shell Creek and Wahoo Creeks and a real time GWEL site south of Mead NE for \$3,983.00. (see attached invoice).

4. OTHER

4.A. GMDA ANNUAL CONFERENCE

The GMDA Annual Conference will be held in Scottsdale AZ on January 6 - 8, 2015. The main topic will cover the engineering and management of irrigation from the Central Arizona Project. Kansas is thinking about doing a similar project in their State using Missouri River water, but that is several years in the future.

4.B. COMMENTS FROM THE PUBLIC