

Water Committee Meeting
Tuesday, February 1, 2022 6:00 PM
Lower Platte North NRD Office
P.O. Box 126
Wahoo, NE 68066

1. UNFINISHED BUSINESS

2. USGS STREAM FLOW GAUGING SITES

Matt Moser from USGS presented to the Committee on the Leahara water quality gage and streamgages located on Shell Creek, Wahoo Creek, along with a dedicated GW monitoring well. Matt will be at the Board Meeting on February 10th to update the full Board.

The USGS and LPN have partnered for numerous years on streamgages and GW monitoring well. The cost for these sites is \$34,265 with LPN share \$17,635.

LPN has partnered with LPSNRD, Papio NRD, M.U.D, LWS and USGS for 6 years in collecting water quality information. The purpose of this site is outlined in the attachment "Leshara Quality Gage at Leshara" under bullet 2. This group is proposing an additional 3 years, with LPN shares as follows: Year 1 (FY23) - \$6,400; Year 2 (FY24) - \$5,320; Year 3 (FY25) - \$4,360

3. REGULATORY

3.A. GROUND WATER MANAGEMENT AREA

3.A.1. Well Permit Program

3.A.1.a. Duane Johnson Well Permit Application

Duane Johnson has submitted an application to drill a new well in the NW1/4 S14-T15N-R8E, Saunders County. This well will irrigate ~55 certified irrigated acres that are currently serviced from well G-004921, located in the SW1/4 of the same section. Attached is a map of the section and the surrounding area, as well as AEM profiles flown through the section.

Committee and staff discussed that the second well potentially could make Duane more efficient, as the original well would not run 7 days a week. It was suggested that a test hole be drilled as the AEM flight results show where aquifer bearing material could be limited.

Also added is a Geo-physical E-log for a well being proposed by Duane Johnson south of Ithaca.

The e-log was discussed and the concern that when pumping occurs, would salt begin to expand into the aquifer? Duane plans on installing a monitoring well to collect water samples.

3.A.1.b. Lyle Alswager Well Permit Application

Lyle Alswager has submitted an application to drill a new irrigation well in the SE1/4 NE1/4 S1-T18N-R1W, Platte County, SQS #2. The well will irrigate 121 certified irrigated acres that are currently serviced from well G-073135 located in the NW1/4 of the same section. Attached are two AEM profiles that were flown over the proposed well location, as well as a three-dimensional view of SQS #2.

Well G-073135 is irrigating 2 pivots on 244 acres and has used 7.45 inches/acre over the last 2 years. Committee and staff discussed the efficiency side of 1 well, handling 2 pivots and trying to get over all of the acres in a 1 week's time. The committee reviewed the amount of water used over the last 2 years and commented on the producer's efficiency. The AEM flights show that this area has a better aquifer than other parts of the SQS #2 area. The committee wanted to make sure no increase in acres would occur and allow this because of family estate planning.

As per LPNDRD Ground Water Rules and Regulations Section U, Rule 2.1, a good cause variance can be allowed if a producer provides written documentation to justify approving the variance.

3.A.1.c. 2021 Approved Well Permit Summary

Location of Approved Well Permits for 2021

County	Irrigation - New	Irrigation - Replacement	Stock	Commercial	Municipal	Other	Total
Butler	0	3	0	0	0	0	3
Colfax	2	5	0	0	0	0	7
Dodge	2	4	0	0	0	0	6
Boone	1	0	0	0	0	0	1
Madison	0	1	0	0	0	0	1
Platte	2	2	0	0	0	1	5
Saunders	1	4	0	0	1	0	6
Total	8	19	0	0	1	1	29

3.A.2. CERTIFIED IRRIGATED ACRES TRANSFER POLICY

Staff has attached a draft policy for discussion. (Updated Number 5 from Committee Meeting). The last 3 pages are the application forms.

3.A.3. Variance Scoring Sheet

The staff is working on a draft for review.

Committee and staff discussed the logistics of adding best management practices into the scoring system. The issue is enforcement of the variance conditions in future years. Staff will continue to evaluate the point systems on new wells and expansion of acres.

3.A.4. LPNNRD Operator Certification

Upcoming Classes

Feb 3 - Wahoo at 10 am

Feb 7 - Lindsay at 1 pm

Feb 15 - David City at 9:30 am

Feb 24 - Columbus at 10 am

3.A.5. Lower Platte River Basin Water Management Plan Coalition (LPRBC)

John Engel from HDR made a presentation to the Board in January. Attached are the recommended numbers for the next 5 years.

The proposal that is presently being discussed is a 25-year analysis, which would allow LPN 2,759 for the next 5 years. The previous allotment was 2,276, which the LPN will carry over 982 AF from the previous 5 years. That will allow 3,941 new AF+Carryover from 2022 thru 2026.

The Coalition Board, of which Bob Hilger is LPN representative, will be meeting in April.

Committee discussed municipal and industrial use and how it is reported to the Coalition. They also discussed whether the District is too conservative about the amount of allotment allowed per year. At the present time, the District allows 200 Acre Feet of new water use for irrigated acres.

3.A.6. Flow Meter Program

The staff has been receiving calls from producers on meters that don't consistently work. Two meters that have been a problem are GrowSmart and Senninger. The staff plans on presenting a new approved meter list at the March Committee Meeting.

Another issue is timely water use reports. Would the Committee consider that after 45 days from the reporting deadline, staff would read the producer's meter but charge them \$50?

As of today (2/1/2022), the district has recorded 1,149 meter readings. Out of the 1,149 meter readings recorded, 1,023 are irrigation wells. There are around 40 irrigation meter readings that have not been recorded yet. The deadline for reporting meter readings is December 15th. Out of the 1,149 meter readings that have been recorded, 247 came in from December 16th-30th and around 260 were reported after January 1st. So just over half are

reporting by the deadline. Should we look into a better way of contacting the producers for this information, such as text alerts? Just looking to improve our communication with producers and patrons of our district. Any discussion?

Attached is the invoice for \$12,980.00 from Tri City for performing their routine maintenance on the flow meters within Zone 2 of the LPNNRD District. 213 flow meters were maintained in late November-early December. Out of the 213 meters maintained, 211 of those were mechanical meters and two others were electronic meters. The battery changes are also included on the invoice, which in turn gets billed to the producer for those battery changes for reimbursement to the LPNNRD. There were 5-10 that needed repair beyond the regular maintenance. The extra meter repair billings is handled directly between the producer and Tri City if they so choose to have them do the repairs. The producers with the extra repairs have all been contacted and are allowing Tri City to do the repairs. Tri city also has their contact information.

4. GROUND WATER PROGRAMS

4.A. DECOMMISSIONED WELL PROGRAM

4.A.1. Well Estimates

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

Well Owner	Type of Well	Cost Share Estimate	County

4.A.2. Plugged Wells

Two (2) wells have been plugged, reviewed, and ready for cost share payment approval this month.

Well Owner	Type of Well	Cost Share Estimate	County
Justin Krafka	Irrigation	\$1,000.00	Butler

Kerry Knuth	Stock	\$968.18	Saunders
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4.B. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

4.B.1. Phase Area Update

A producer within the Schulyer-Richard Nitrogen Management Area was wondering about cost-share on iron chlorosis chemistry on soybean for 120 acres of soybeans. At the present time, the NRD still has \$3,000 left on the NET grant for demonstration fields. Is this an item that the NRD wants to cost-share in the future? Other items that should be considered for future cost-share?

Committee discussed that if this practice encourages corn-soybean crop rotation, it will decrease the amount of nitrogen fertilizer applied. The area around Richland-Schulyer is a challenge for growing soybeans because of higher ph and iron levels. They asked staff to work with the producer to set up a demonstration field for this product.

If the NRD is interested in working with the NRCS, the RCPP grant deadline is coming up on April 13. A survey that was conducted by staff at the online meetings is attached.

Staff went over the survey from meetings held in November and December. They directed staff to investigate an RCPP grant with NRCS with the practices identified in the survey.

Attached is a study conducted by Lower Loup NRD on age dating the water, which can assist in nitrogen loading and management. LLNRD has asked if LPN is interested in doing a similar study from Columbus to Fremont. USGS is obtaining a price for this study and then the NRDs could jointly apply for a grant.

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

ENWRA long range plans are shown below along with an attachment of area of interest for recharge projects. ENWRA agreement ends in June and wanting to extend this for another 5 years. Katie Cameron will be at the March 1st Water Committee Meeting.

Long Range Plan related: We have mapped like \$10 Million of priority areas with AEM projects for the ENWRA area using ENWRA as a vehicle for grants and cooperation while spending in an efficient manner because of good planning and pooling funds and resources (CSD/USGS/DNR partners) so a high quality framework is mostly built now (not just AEM but all existing studies are part of the framework, there are some remaining infills still needed in places too - reference Word doc of LPN related Dropbox folder links attached too). , the water budget would be the next goal

to focus on but regional water budget very long term but maybe we can use ENWRA to get at complexities encountered by the current model work and/or help build NRD scale water budget components (water budget pilot areas to identify for each NRD? To see how DNR LPMT model and/or your geologic models did with incorporating the AEM). Here is what we had from the last Long Range Plan update meeting in Dec. 2019 (dated Mar 2020):

- Map Isolated/limited quantity aquifers (all NRDs)
- ~~Fremont to Arlington~~ - this one covered in the current grant
- ~~Map Upper Shell Creek Subarea~~. We got rid of this one at the 2019 meeting.
- Advance geologic test holes, maintain and add monitoring wells (\$9150 back to each NRD on 2-3 yr cycle for these and other hydrogeo assessment work) - do you have more areas in mind, you are scheduled for FY23
- Continuing Sponsorship of the Nebraska GeoCloud - covered by ENWRA, consultants have been using it, NRDs have projects in Nebraska viewer, new visual tools created for the public
- Map recharge areas add recharge stations - the current grant is the first step toward this component. It is important for models, maybe use ENWRA for new aquifer test grants and possibly put new ground truthing stations in
- Eval HCAs - update CSD datasets; work with DNR to get the Lower Platte Missouri River Tribs model (LPMT) updated with AEM and NGC frameworks - CSD data is always in progress, even more critical to have more done when new maps come out
- Map saline groundwater - map salt spring & stream reaches and the salt/fresh (Maha) boundary in the Dakota formation using a variety of methods. It would be important maybe we pick a year for LPSNRD/LPNNRD to get a GIS salt surface (2D grid) I could make a rough example map for discussion.
- Alluvial AQ- identifying gaining/losing reach, streambed characteristics, potential cross aquifer connections - is always needed. Maybe take a known area you have done assessment work in and put an example of future ENWRA project ideas together.
- Water budget
- Groundwater Quality concerns
- Website development to promote further scientific uses of the data and benefits to water managers - our website will need revamping in the next 5 year cycle, maybe with better link-ups with Nebraska GeoCloud and more tutorials. What about new products from the geologic model? Keep tabs on new technology or applications

4.B.3. GMDA Winter Conference 2022

Attached is a report from the conference.

5. OTHER

5.A. COMMENTS FROM THE PUBLIC