

Water Committee Meeting
Wednesday, July 28, 2021 7:00 PM
Lower Platte North NRD Office
P.O. Box 126
Wahoo, NE 68066

1. UNFINISHED BUSINESS

2. REGULATORY

A. GROUND WATER MANAGEMENT AREA

1. Supplemental Well Permit Request

Discussion at Committee: Kody explained to the Committee that the wells would start pumping initially at 800 GPM, but could not keep the flow as the irrigation season continue.

Seyon Farms, with Kody Karloff as tenant, applied for a replacement well permit for G-105753 located in Section 2-14N-9E. The new well has been drilled but has the same issue as the old well; keeping pressure in the pivot is an issue. Rod from AWS well drilling notified NRD staff and made them aware that this could be an issue before drilling. Kody is requesting to keep the old well and join the 2 wells together to help in suppling enough water into the system. This would require NRD approval to issue a supplemental well permit or convert the replacement well permit to a new permit. Supplemental well policy is attached along with a map of the location. This is in the HCA (Blue Area) of the District.

Below is Rod's reply, attached is the test hole log:

"Hello Daryl,

In regards to the irrigation well (Lutton), the desired flow rate for the system would be 800 gallons per minute (gpm) as originally there are two pivots working off of one well. The newly constructed well can flow at a rate of approximately 600 GPM so we are proposing to use the old well with the new well and flow each at 400 GPM. With a total of 800 GPM, this will allow the producer to adequately irrigate the crops. We are seeking approval for combining two wells with a total flow rate of 800 GPM.

Kind Regards,
Rod Wimer

Regards,

Audra Wirth
 AWS WELL COMPANY, INC
 1597 County Road 10, PO BOX 246
 Mead, NE 68041
 402-624-3895

2. Cost Share Programs

a. Irrigation Well Sample Kits

B. CHEMIGATION

C. As of 7/28/21, the LPNNRD Chemigation Program has 658 active renewal permits and 45 active new permit applications for a current total of 703.

D.	E. # of Per mits	F. In sp ec te d	G. Insp ec ti ons Re mai ning	H. Can cell atio ns	I. Rei nspe ctio ns Co mpl eted
J. New	K. 45	L. 42	M. 2	N. 1	O.
P. Renewals	Q. 658	R. 214	S. 39 (4 rein spec tion s)	T.	U. 14
V. Total	W. 703	X. 256	Y. 41	Z.	AA. 14

BB. GROUND WATER QUALITY SAMPLING

3. GROUND WATER PROGRAMS

A. DECOMMISSIONED WELL PROGRAM

1. Well Estimates

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

3. Well Owner	4. Type of Well	5. Cost Share Estimate	6. County
7. Dan Laska	8. Domestic/Stock	9. \$437.25	10. Platte
11.	12.	13.	14.
15.	16.	17.	18.

19. Plugged Wells

20. # wells have been plugged, reviewed, and ready for cost share payment approval this month.

21. Well Owner	22. Type of Well	23. Cost Share Estimate	24. County
25.	26.	27.	28.
29.	30.	31.	32.
33.	34.	35.	36.

B. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

1. Phase Area Update

An invoice is attached from UNL Water Center for \$2,640, which the Board approved this amount at the May Board meeting. This amount will be submitted to the NET grant for reimbursement.

Attached is the previous draft proposal for this area.

Comments from Matt Bailey after a meeting with him, Chris Yosten and Carl Groteluschen along Meghan Langden (UNMC) and Casey Harper (Ag teacher)

Just following up with you on our meeting last week. Here's what I took away as

possible BMP's for the area west of Schuyler.

1-Cover Crops. Personally, not super excited about it, but through conversations with agronomists and extension, I understand the concept well enough to think it should be an option.

2- Soybeans. There's a lot of chemistry on the market for this endeavor.

Unfortunately, I haven't found one that works for cheap. \$18-30/acre. Not always a silver bullet either. At least it's a crop we're familiar with and could be easier to incorporate cover crops down the road.

3-Chemigation. Injection units are around \$2000-4000. It's not for everyone. I've got several systems that, due to age and reliability, I would hesitate to hook up a new injector to. This might encourage spoon-feeding the crop. Also, possibly eliminates the need for stabilizer. If nothing else, it does mandate some interaction between producers and staff. (site inspection)

Not one of these is a solution. I'm sure of that. They're all places to start. Definitely conversation starters. I am super excited about the chance to work with Schuyler Community Schools. I'm glad the committee is willing to throw so many resources in my backyard. Hopefully they play along. Julie will be an awesome asset to the team.

Again, thanks for your help. I really appreciate being in the loop. Let me know how to help.

Bailey

Staff comments

Cover Crops — NRCS payment multi-species 33.62/acre, Single Species 24.04/acre. There is 30,840 acres that were reported in 2020. If 10 percent of these acres planted cover crops that would be 3,084 acres and \$103,684 for cover crop payment.

Soybeans - If cost-share is \$25/acre, then that would \$77,100 for 10% of the acres.

Chemigation - There is 328 irrigated fields, so if we cost-share on 10% of these field at \$2,000/field that would \$65,600.

Total cost for all 3 practices would be \$246,384. If you look at this over 2 years, that would be \$492,768 for best management practices.

Other practice ideas

- Waive the Chemigation Permit fee for 3 – 5 years (\$90 for new, \$30 for renewal)
- Incentive for decreasing nitrogen use like 25 lbs — \$10/acre)
- Reward producers that do extra BMPs. Like 1 star for one thing, 2 stars for two and so forth.

2.

Staff has met with Casey Harper (Schuyler Ag teacher) and Julie Kriekemeier (Extension assistance for Colfax County) in hope of increasing the education in the area.

Attached is an outline of some ideas for education in the Nitrogen Management Area.

Committee discussed with staff the different ideas. It was also suggested considering corn hybrids that developed nodules to supply its own nitrogen and a dedicated demonstration farm. Staff will continue working in these areas for increase awareness and the possibility of forming an after school Natural Resource Club. Committee decided to set aside an extra \$75,000 in the budget and discuss at a later date on what items to consider for cost-sharing. Staff will continue to pursue grants to help in the funding.

3. Phoenix Database

An invoice is attached from Phoenix Webgroup for \$9,387.50 for updating the online reporting site. This contract (approved April 2021) was split into 2 payments with the first one at signing and the second payment in the new fiscal year.

C. MONITORING WELLS

A quote has been received for \$3,042.35 from In-Situ for installing 3 data loggers. Russ spoke with Dean Grotelueschen when at the Dakota East site. Dean is David Grotelueschen brother. He asked Russ if loggers had been installed in the two shelters at their wells. Now that we're in new Fiscal Year can cables for the following be ordered? Dean said they have not yet irrigated from the 'new' well and wanted to know if we would install logger before they began pumping.

- G-133243 (inactive well - has small shelter and METOS pole/unit in place) - cable length 270'
- G-133949<2R> (second well replacement completed in 2020; has small shelter) - cable length 270'

D. Bruce Schmit well is ½ mile from Highway 81 in Butler County. Small shelter and METOS pole/unit in place at G-035639R - cable length 310'

4. Groundwater Budget 2021-22

Staff will go over the budget items at meeting.

5. SURFACE WATER PROGRAMS

A. STATE LAKES, FOR THE WEEK OF

This week's beach Bacteria and Harmful Algal Bloom results are now posted on the NDEE web page ([Current Health Alerts and Sampling Results For This Week](#)).

Eight beaches will be on "Health Alert" this week. NDEE in conjunction with numerous collaborators monitor public beaches and sample for microcystin, a toxin produced as a result of a Harmful Algal Bloom. A lake that exceeds 8 ppb of microcystin will be placed on "Health Alert". That lake will remain under "Health Alert" Status until such time that it has tested below 8 ppb. 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.

B. Current Lakes on HAB* Health Alert			
C. Lake	D. County	E. Microcystin (ppb)	F. Sample
G. Bluestem Lake	H. Lancaster	I. 14.41	J. 7/19/20
K. Calamus Reservoir	L. Garfield	M. >35	N. 7/19/20
O. Kirkman's Cove Lake	P. Richardson	Q. 8.51	R. 7/19/20
S. Maskenthine Reservoir	T. Stanton	U. 10.43	V. 7/19/20
W. Pawnee Lake -- East Beach	X. Lancaster	Y. 14.64	Z. 7/19/20
AA. Pawnee Lake -- West Beach	BB. Lancaster	CC. 28.04	DD. 7/19/20
EE. Swan Creek Lake (5A)	FF. Saline	GG. 27.56	HH. 7/19/20
II. Willow Creek Reservoir	JJ. Pierce	KK. 14	LL. 7/19/20

MM.

E. coli bacteria 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 we want people to be aware and use their own judgment on their use.

NN. Lakes with High <i>E.coli</i> Bacteria			
OO. Lake	PP. County	QQ. <i>E.coli</i> (mpn)	RR. Sample
SS. Branched Oak Lake - Liebers Point Beach	TT. Lancaster	UU. 921	VV. 7/19/20
WW. Cottonmill Park Swim Lake	XX. Buffalo	YY. >2419	ZZ. 7/19/20
AAA. Fremont Lake No. 10 (SRA)	BBB. Dodge	CCC. 3725	DDD. 7/19/20
EEE. Louisville Lake No. 2 (SRA)	FFF. Cass	GGG. 687	HHH. 7/19/20
III. Valentine Mill Pond	JJJ. Cherry	KKK. 579	LLL. 7/19/20

MMM.

Sunshine, warm weather and excess nutrients in the water has led to a very large number of lakes being on Health Alert this week. Remember we can not sample all lakes in the state and only sample those that have public beaches or a large number of people coming into contact with the water. It is important that you know what to look for when out at your favorite lake.

For further information about our BeachWatch Program, E.coli, HABs and the microcystin toxin please visit the links on our BeachWatch website. (<https://deq-iis.ne.gov/zs/bw/>). This information is updated weekly on our web site.

NNN. USGS STREAM FLOW GAUGING SITES

An invoice is attached from USGS for streamgages and groundwater monitoring well for \$17,340. This is part of the continuing contract with this agency. Streamgages are located on Shell Creek and Wahoo Creek along with a real-time groundwater monitoring well near Leshara.

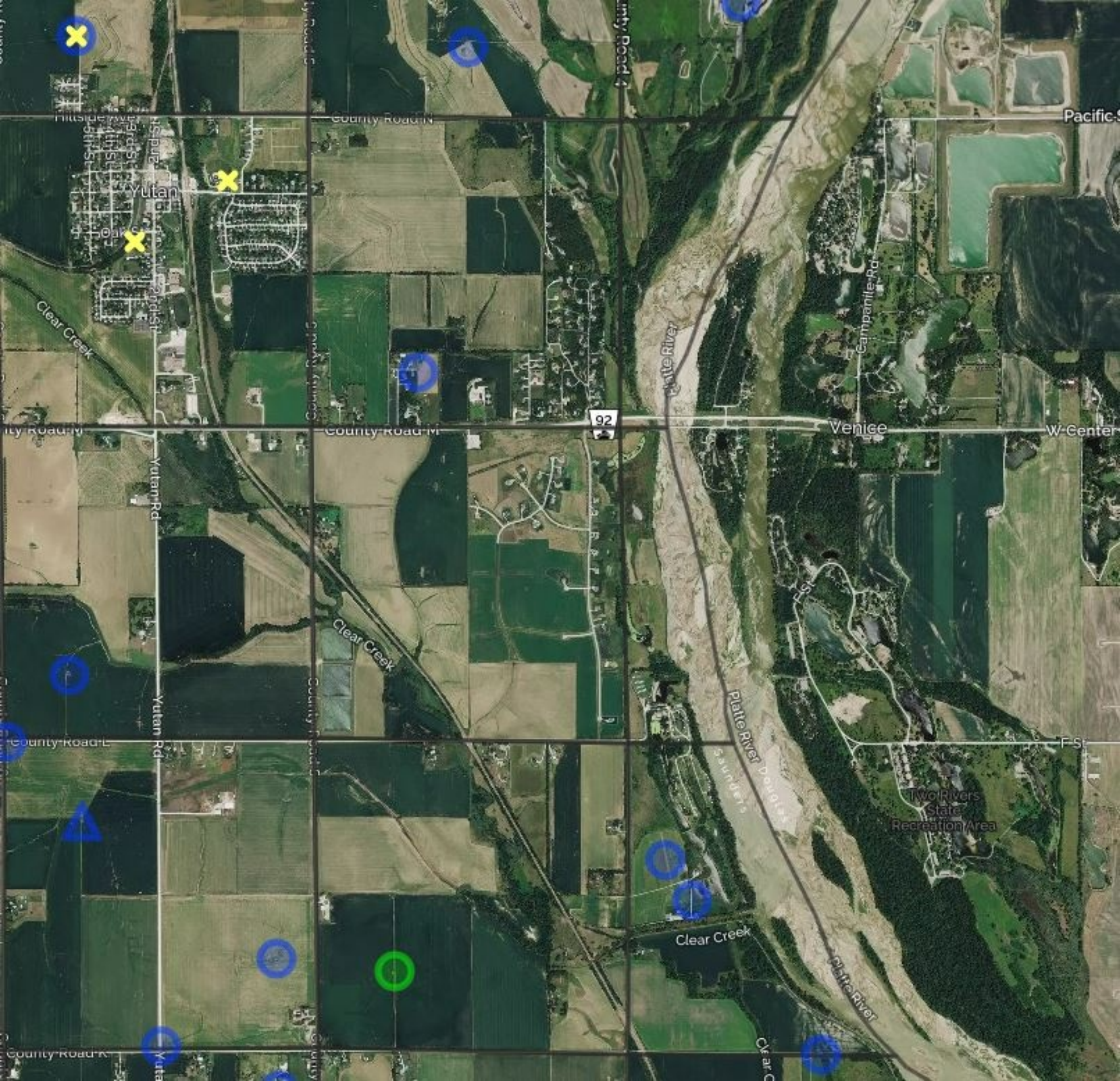
Streamgage information website — <https://waterdata.usgs.gov/ne/nwis/rt>

Groundwater information website —

<https://waterdata.usgs.gov/ne/nwis/current/?type=gw>

6. OTHER

A. COMMENTS FROM THE PUBLIC



**APPLICATION FOR A PERMIT TO CONSTRUCT A WATER WELL
IN THE LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**

DNR & NRD USE ONLY			
Permit No. <u>LPN-021-1725</u>	Date Approved/Denied <u>4/22/2021</u>	NRD Representative <u>[Signature]</u>	
Permit Type: New, Replacement or Late	Date Received <u>4/22/2021</u>	Paid: Cash or Check <u>1867</u>	
Date Post-inspected	Registration No.		<u>550</u>

ALL APPLICANTS SEEKING A WATER WELL PERMIT MUST COMPLETE PAGES 1 AND 2, AND THE APPROPRIATE SECTION BASED ON THE PURPOSE OF THE WELL. (CLASS 1 - 4 WELL PERMIT)
 WATER WELL PERMITS FOR IRRIGATED ACRES GREATER THAN 160 ACRES IN SIZE OR TOTAL ANNUAL WATER USE BETWEEN 150 AND 300 ACRE FEET PER YEAR MUST COMPLETE PAGES 1, 2, AND 3, AND THE APPROPRIATE SECTION BASED ON THE PURPOSE OF THE WELL. (CLASS 3 WELL PERMIT)
 WATER WELL PERMITS FOR TOTAL ANNUAL WATER USE EQUAL TO OR GREATER THAN 300 ACRE FEET PER YEAR, REGARDLESS OF NUMBER OF IRRIGATION ACRES, MUST COMPLETE PAGES 1, 2, AND 4, AND THE APPROPRIATE SECTION BASED ON THE PURPOSE OF THE WELL. (CLASS 4 WELL PERMIT)

1. NAME AND ADDRESS OF LAND OWNER: <u>Seyon Farms LLC</u> <u>1442 Silver St</u> <u>Ashland, NE 68003</u> Phone: <u>402-944-3383</u>	NAME AND ADDRESS OF CONTACT: <u>Kody Karloff</u> <u>1346 Yutan Road</u> <u>Yutan, NE 68073</u> Phone: <u>402-616-3572</u>
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David Lutton

2. PURPOSE OF NEW WATER WELL (indicate one):

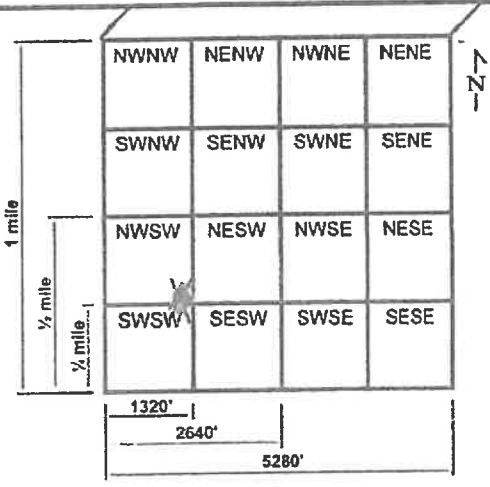
<input checked="" type="checkbox"/> Irrigation (Complete section A)	<input type="checkbox"/> Dewatering (Over 30 days, Complete section B)
<input type="checkbox"/> Livestock (Complete section C)	<input type="checkbox"/> Domestic (Irr. on one acre or larger, Complete section D)
<input type="checkbox"/> Industrial (Complete section E)	<input type="checkbox"/> Public Water Supply (Complete section F)
<input type="checkbox"/> Recovery or Remediation (Complete section G)	
<input type="checkbox"/> Other (specify) _____	(Complete section H)

3. IDENTIFY LOCATION OF PROPOSED WELL:

A. Saunders County, 1/4 of the SW 1/4 of Section 27 Township 14 North, Range 9E East/West. (circle one)

B. The box at the right represents one square mile, (section). Indicate with an "X", the proposed location of the well. Outline the proposed water use area. If the water is to be used outside the above written legal description, give legal description of water use area, 1/4 of the 1/4 of Section 27, Township 14 North, Range 9E East/West.

C. The well will be located 1320 feet from the North/South section line, and will be 1320 feet from the East/West section line. Or enter Lat. / Long.
 Latitude Degree _____ Minute _____ Second _____
 Longitude Degree _____ Minute _____ Second _____



4. REPLACEMENT AND ABANDONED WELL INFORMATION:

A. Is this a replacement well? Yes, No. If yes, fill out the rest of this section.

B. Registration number of well to be replaced: G-105753

C. Well to be replaced was last operated (month/year): 6/21

D. Replacement well is 50 feet from original well.

E. Decommissioning of Original well on (month/day/year): _____

F. If water use is for irrigation, list the number of acres watered by the original well: 204

G. If water use is for irrigation, will replacement well, water the same tract of land as the decommissioned well?
 Yes, No: If No, list the number of additional acres _____ and legal description _____ 1/4 of the _____ 1/4 of Section _____, Township _____ North, Range _____ East/West. (circle one)

- A replacement water well must deliver water to the same tract of land as the original water well, pump from a comparable aquifer, and yield approximately the same gallons per minute and total annual water use as the original water well.

5. SPECIFICATIONS OF INTENDED WELL AND PUMP:

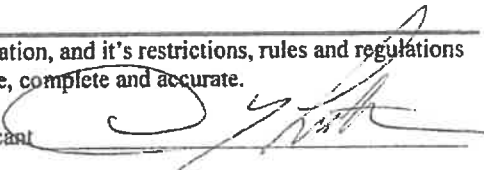
- A. Approximate date when construction will begin (month/day/year): 7/1/21
B. Expected total well depth: 225 feet.
C. Well Casing Diameter: 8 inches.
D. Pump Column Diameter: 8 inches.
E. Estimated pumping capacity: 650 GPM.
F. Expected total annual water use in Acre Inches / Year 4-5 or Total Gallons / Year _____
G. The system is to be powered by Electric Fuel
H. Will the well be used in a system with other wells? Yes, No. If Yes, How many _____
List well registration number and legal description of each well in Section 6 below.
I. Name of Well Driller: HWS-Mead (Please attach test hole log, if available.)

6. List additional information requested in this Section or attached additional sheet.

7. Addition information and requirements for Lower Platte North NRD review.

- Attach current tax assessor records including map, parcel number, and current land use such as irrigated acres.
- Attach aerial photo showing location of water source(s) and area water or reuse water is to be used.
- All new and replacement water wells must install a District approved flow meter and report water pumped annually to the LPNNRD by January 31st of the following year.
- Water well permit conditions maybe required for approval by the Lower Platte North NRD for each individual well.

8. I certify that I am familiar with the information contained in this application, and it's restrictions, rules and regulations and that to the best of my knowledge and belief such information is true, complete and accurate.

Date 6-21-21 Signature of Applicant 
Signature of Well System Operator, if different than Applicant _____
NRD Certification Number of Landowner or Operator 7127 (Required for irrigation, livestock, domestic (with irrigation on one acre or more of land), industrial, and public water supply wells.) 9/1/2022

9. Lower Platte North NRD Use Only. Comments by District Representative.

Flow Meter Required

**APPLICATION FOR A PERMIT TO CONSTRUCT A WATER WELL
IN THE LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**

**WATER WELL PERMIT FOR IRRIGATED ACRES GREATER THAN 160 ACRES IN SIZE OR TOTAL
ANNUAL WATER USE BETWEEN 150 AND 300 ACRE FEET PER YEAR, PROVIDE INFORMATION
REQUESTED ON PAGES 1, 2, AND 3. (CLASS 3 WELL PERMIT)**

10. WATER SOURCE INFORMATION:

In a TWO-mile radius around the water source location, provide the following information to the LPNNRD in both paper copy and electronically in Excel Spreadsheet (Microsoft) or Access Database (Microsoft) format.

- A. List of all registered wells in this area giving registration number, well identification number, legal description, latitude / longitude or UTM coordinates in NAD 83, elevation in feet above mean sea level, and well log for each well.
 - B. List of all test holes in the area that have been published by Conservation and Survey Division of the University of Nebraska.
 - C. List of all surface water rights in this area giving appropriation number, priority date, legal description, use, status, current total acres (if applicable), and grant amount.
-

11. WATER USE LOCATION INFORMATION:

In the location where the water will be used, provide the following information to the LPNNRD in both paper copy and electronically in Word (Microsoft) format.

- A. Description of expanded water use including: latitude / longitude or UTM coordinates in NAD 83 of water use location and timeframe or schedule when water will be used.
 - B. Amount of water that will be reused or recycled at this new location.
 - C. Description of how water will be used at this new location, i.e. process water vs. cooling water, etc. and estimated total annual water use for each purpose.
-

**APPLICATION FOR A PERMIT TO CONSTRUCT A WATER WELL
IN THE LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**

**WATER WELL PERMIT FOR TOTAL ANNUAL WATER USE EQUAL TO OR GREATER THAN 300 ACRE
FEET PER YEAR, REGARDLESS OF NUMBER OF IRRIGATED ACRES, PROVIDE INFORMATION
REQUESTED ON PAGES 1, 2, AND 4. (CLASS 4 WELL PERMIT)**

12. WATER SOURCE INFORMATION:

In a FIVE-mile radius around the water source location, provide the following information to the LPNNRD in both paper copy and electronically in Excel Spreadsheet (Microsoft) or Access Database (Microsoft) format.

- A. List of all registered wells in this area giving registration number, well identification number, legal description, elevation in feet above mean sea level, latitude / longitude or UTM coordinates in NAD 83, and well log for each well.
 - B. List of all test holes in the area that have been published by Conservation and Survey Division of the University of Nebraska.
 - C. List of all surface water rights in this area giving appropriation number, priority date, legal description, use, status, current total acres (if applicable), and grant amount.
-

13. WATER USE LOCATION INFORMATION:

In the location where the water will be used, provide the following information to the LPNNRD in both paper copy and electronically in Word (Microsoft) format.

- A. Description of expanded water use including: latitude / longitude or UTM coordinates in NAD 83 of water use location and timeframe or schedule when water will be used.
 - B. Amount of water that will be reused or recycled at this new location.
 - C. Description of how water will be used at this new location, i.e. process water vs. cooling water, etc. and estimated total annual water use for each purpose.
-

14. AQUIFER PUMP TEST:

In the location of the proposed water source a District approved aquifer pump test is to be performed to obtain geologic data that will be used in the ensuing ground water modeling effort. Data from the pump test is to be reported to the LPNNRD in both paper copy and electronically in Excel Spreadsheet (Microsoft) or Access Database (Microsoft) format.

- A. Description of pumping well should include legal description of well, latitude / longitude or UTM coordinates in NAD 83, elevation of well in feet above mean sea level, total amount of water pumped, gallons per minute during pump test, duration of pump test, well construction, well log, water discharge location and method.
 - B. Description of each monitoring well should include legal description of well, latitude / longitude or UTM coordinates in NAD 83, spacing in feet and direction from pumping well, elevation of well in feet above mean sea level, well log, and well construction.
 - C. Depth to bedrock, bedrock material, and name of geologic formation.
-

15. GROUNDWATER MODEL:

In a FIVE-mile radius of the location of the proposed water source a ground water model using MODFLOW software, or similar software approved by LPNNRD, is to be done. Data from the ground water model is to be reported to the LPNNRD in both paper copy and electronically using the appropriate software.

- A. Model should list boundary conditions used, grid size, include all high capacity wells in modeled area, streams and rivers in the modeled area, expected recharge rates, location and flow amounts, hydrologic conductivity and transmissivity values used.
 - B. At least one iteration, reviewed and approved by LPNNRD, should model steady state conditions over a five-year period with a no flow boundary, and little or no recharge to simulate drought conditions.
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**APPLICATION FOR A PERMIT TO CONSTRUCT A WATER WELL
IN THE LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT**

PURPOSE OF WELL

IRRIGATION WELLS (SECTION A)

- A. How many acres will be irrigated? 204 acres
- B. Crops to be planted: Corn / Soybean Crop rotation schedule _____
- C. Type of irrigation system. Center Pivot, Gravity, Other (specify) _____
- D. The irrigation system is to be powered by Electric Fuel
- E. Expected total annual consumptive water use in Acre Inches / Year 6 or
Total Gallons / Year _____
- F. Will Fertilizer, Chemicals or Animal waste be applied through the system? Yes, No

DEWATERING WELLS OVER 30 DAYS (SECTION B)

- A. Purpose of dewatering well, such as installation of building foundation, etc. _____
- B. Expected total number of days the dewatering well will be in use _____
- C. Approximate dates (month/day/year) in operation: Start _____ End _____
- D. Legal description of water discharge location: _____ 1/4 of the _____ 1/4 of Section _____, Township _____ North,
Range _____ East/West and name of river, stream or water body _____
- E. Will discharge water be used for another purpose, such as livestock, irrigation, etc.? Yes, No
If Yes, list purpose, location and expected total amount of water use in acre-inches / year or total gallons / year.

LIVESTOCK WELLS (SECTION C)

- A. Name of facility _____
- B. Type of Livestock: Feeder Cattle, Dairy Cattle, Swine over 55 lbs., Swine under 55 lbs.,
 Sheep, Poultry, Horses
- C. Average number of livestock per year _____ and average weight per animal _____ lbs.
- D. Peak number of livestock _____ and time of year _____
- E. Is facility approved by Nebraska Department of Environmental Quality? Yes, No. If Yes, list NDEQ
certification IIS number _____ If No, complete the rest of this section.
- F. Type of facility: Open lot, Covered Building
- G. If facility is Open lot, list soil type _____
- H. Estimated depth to ground water under feedlot _____ ft.
- I. Describe manure collection system of feedlot _____

- J. Name and distance of nearest surface watercourse from feedlot _____
- K. For each manure land application site, list legal description and size in acres, method of application, and distance
from feedlot operation. _____

DOMESTIC WELLS WITH IRRIGATION ON ONE ACRE OR MORE (SECTION D)

- A. Check all that apply:
 - a. Water use: Lawn and number of acres to be irrigated _____ acres.
 - b. Water use: Commercial garden and number of acres to be irrigated _____ acres.
 - c. Water use: Tree Farm and number of acres to be irrigated _____ acres.
 - d. Water use: Type of livestock _____ and number _____
- B. Type of irrigation system. Sprinkler, Drip Tape, Other (specify) _____
- C. If applicable, give Street address and town _____

* One acre equals 43,560 square feet.

INDUSTRIAL AND COMMERCIAL WELLS**(SECTION E)**

- A. Name of facility _____
- B. Products produced by facility _____
- C. In Section 6 or on a separate sheet of paper, list well registration number and legal description of current wells supplying water to this facility.
- D. In Section 6 or on a separate sheet of paper, provide a short description how water is used within the facility and the expected annual amount of water for each use. For example: "The manufacturing plant will use 45% of total annual water use, or 1.45 million gallons per year, for electroplating of galvanized pipe and the remaining 55% of total annual water use, or 1.77 million gallons per year, will be used for non-contact cooling water throughout the plant".
- E. Will any of the used water or waste water from this facility be re-used for another purpose? Yes, No.
If Yes, list purpose, location and expected total amount of water use in acre-inches / year or total gallons / year.
- _____
- _____

PUBLIC WATER SUPPLY WELLS**(SECTION F)**

- A. On a separate sheet of paper, list the well registration numbers and legal description of current wells supplying water to this community.
- B. Attach a list of the five largest industrial water users that your community supplies water to, and the total annual amount of water supplied to each of these industries for the last five years.
- C. For these same industries list the total annual amount of water returned to the community as waste water for each of the last five years.
- D. Will waste water be used for another purpose, such as livestock, irrigation, etc.? Yes, No
If Yes, list purpose, location and expected total amount of water use in acre-inches / year or total gallons / year.
- _____
- _____
- E. Attach a list of the golf courses that the community supplies water to and list the location and number of acres for each one.

RECOVERY OR REMEDIATION WELLS**(SECTION G)**

- A. Reason for recovery or remediation well, i.e. leaking underground storage tank. _____
- B. Contaminates of concern _____
- C. Treatment method of contaminants _____
- D. Approximate dates (month/day/year) in operation: Start _____ End _____
- E. Legal description of water discharge location: _____ ¼ of the _____ ¼ of Section _____, Township _____ North, Range _____ East/West and name of river, stream or water body _____
- F. Will cleanup water be used for another purpose, such as livestock, irrigation, etc.? Yes, No
If Yes, list purpose, location and expected total amount of water use in acre-inches / year or total gallons / year.
- _____
- _____

OTHER WELLS**(SECTION H)**

- A. Purpose of water use _____
- B. Will the well be used for one calendar year or less? Yes, No
- a. If Yes, list approximate dates (month/day/year) the well will be in operation: Start _____
End _____
- b. If No, list the approximate dates (months) or seasons of the calendar year that well is expected to be in peak or highest use. _____
- C. Legal description of water discharge location: _____ ¼ of the _____ ¼ of Section _____, Township _____ North, Range _____ East/West and name of river, stream or water body _____
-

This form must be completed in full and accompanied by a non-refundable \$50.00 filing fee (payable to the Lower Platte North Natural Resources District). In addition, for Class 3 well permits an added fee of \$250.00 is required for District review. For Class 4 well permits an added fee of \$500.00 is required for District review. Forward this application and filing fees to:

**Lower Platte North Natural Resources District
P.O. Box 126
Wahoo, NE 68066
Phone: (402) 443-4675**

Please take the time and fill out the information correctly. The District will return an incomplete or defective application, with 60 days being allowed for resubmission. The District shall issue all permits with conditions attached, or denied not later than 30 days after receipt of a complete and properly prepared application.

WATER WELL PERMIT RESTRICTIONS

1. A well permit is required prior to the construction of a water well. If construction of a water well is commenced prior to obtaining a permit, a late permit must be completed and accompanied by a \$250.00 application fee. Construction or operation of a new water well without an approved water well permit shall result in the District issuing a 'cease and desist order' against further construction or use of that water well.
2. An irrigation well shall not be constructed within 1000 feet of any registered industrial or public water supply well or within 600 feet of a registered irrigation well; A public water supply well shall not be constructed within 1000 feet of any registered irrigation, industrial or other public water supplier's well; An industrial well shall not be constructed within 1000 feet of any registered irrigation, industrial or public water supply well pursuant to §46-609 and §46-651. These spacing restrictions shall not apply to water wells owned by the same person. Any person may apply to the Nebraska Department of Natural Resources for a special permit to drill a water well without regard to the spacing requirements pursuant to §46-653. The District may adopt stricter well spacing requirements based on different aquifer subareas. Check with the District office if you have any questions.
3. This permit does not register the well with the Department of Natural Resources. All wells are required to be registered by the well driller with the Nebraska Department of Natural Resources within 60 days after the well is completed.
4. A replacement water well is one, which replaces an abandoned water well that has been operated within the last three years, and is constructed to water the same tract of land as the abandoned water well that is being replaced. A replacement water well must be pumping from a comparable aquifer and yield approximately the same gallons per minute and total annual water uses as the original water well it is replacing. As of January 1, 1997, both new and replacement wells need a permit from the Lower Platte North Natural Resources District.
5. Consumptive water use in acre-inches is determined from the Department of Natural Resources (DNR) Net Corn Crop Irrigation Requirement map or a similar map produced by the University of Nebraska.
6. If the well is being replaced it must be properly abandoned according to state guidelines. A copy of these guidelines is available from the Lower Platte North NRD.
7. If the water well is not constructed within a one-year period from the date of approval, a new permit is needed.
8. Water wells may not be drilled within 50 feet of a stream bank without first obtaining a surface water right for that water withdrawal from the Department of Natural Resources pursuant to §46-637.
9. Any person who, on or after January 1, 1997, commences or causes construction of such a well for which the required permit has not been obtained, or who knowingly furnishes false information regarding such a permit, shall be guilty of a Class IV misdemeanor pursuant to §46-602.01 and §46-613.02.
10. Permits are not required for test holes or temporary dewatering wells (30 days or less). Permits are needed for water wells designed to pump 50 gallons per minute or less in Level 3 and Stay management areas.
11. Tax assessor records submitted with water well permit must include map, parcel number and an accurate account of current land use, such as irrigated acres.
12. With the well permit application, submit an aerial photograph with markings to show the location of the water source(s) and the location of where the water is to be used.
13. Any person, who knowingly furnishes false information regarding a water well permit, shall be subject to the imposition of penalties imposed through the controls adopted by the District pursuant to §46-746.
14. All new or replacement water wells must install a District approved flow meter and report water pumped annually in acre-inches per year or total gallons per year on LPNNRD approved forms by January 31st of each following year.
15. If multiple water sources are used, landowner must supply flow records from each water source in acre-inches per year or total gallons per year on LPNNRD approved forms by January 31st of each following year.
16. Water well permit applications require that the applicant or operator of irrigation, livestock, domestic (with irrigation on one acre or more of land), industrial, and public water supply wells by NRD certified.

**** Landowners must list new irrigated acres with the County Assessor, update the DNR well registration, and comply with any additional conditions within 90 days of LPNNRD approval of this water well permit. LPNNRD staff may perform a site visit to verify information provided in the well permit application. ****



County Road L

County Road L

County Road J

County Road J

County Road J

County Road K

County Road K

County Road K

LPNNRD Policy on Requirements for Supplemental Wells

Approved at LPNNRD Board Meeting on April 8, 2013.

Approved on February 10, 2014 with GWMA Rule Change

1. Landowner must show that it is a well problem and not an aquifer problem to get approval for a supplemental well by having the well driller sign off on their request.
2. If land is being sold and the well is separated from the irrigated ground, then the NRD could approve a new well, provided that the existing and new wells are not connected. These acres would be certified with separate wells listing the water source.
3. New wells require a flow meter to be installed. Supplemental wells that are run in series are also required to have a flow meter properly installed on the system that will meter all the water applied to the field(s).
4. Permits for supplemental wells are “conditional permits” and can be treated differently than other wells in the NRD. Acre inch allocations may be set by LPNNRD on all the acres that are supplied water by the supplemental well now or at any future time.
5. If GWEL in a groundwater sub-area hits the trigger level for a Level 2 or Level 3 Management Area for three consecutive years, then supplemental wells will not be approved within this sub-area.
6. If the aquifer is confined and/or has limited saturated thickness and/or has low transmissivity issues, then the supplemental well will not be approved.
7. Supplemental wells will be granted to systems which irrigate more than 160 acres from a single well providing there are not concerns with size and aquifer conditions such as confined aquifers, if the aquifer is thin or aquifer is not of areal extent.
8. Restrict gpm from supplemental well to what the pivot originally needed to operate.
9. Restrict gpm from supplemental well to make up any loss in the original rated output in gpm of the primarily or original well.
10. The supplemental well has to deliver water to the same tract of ground as the wells in the existing irrigation system.
11. Test hole is required for any supplemental well permit application.



#12/ft

DRILLING LOG

Date: 6-29-21

Owner: Dave Lutton
Farmer Steve & Cody
Karloff

Driller: _____

Well Location: _____

Latitude 41 Minute 12 Second 43

Longitude 96 Minute 22 Second 56

PURPOSE OF WELL: Test Hole

Test Hole Depth 175' Well Depth _____

Test Hole Dia. 6" Bore Hole Dia _____

Loop Depth _____ # of Loops _____ Size _____

Casing Length _____ O.D. _____ "I.D. _____ "

Wall Thickness _____ " Type of Material _____

Trade Name _____ Screen Length _____ "

Screen O.D. _____ " I.D. _____ " Slot _____ Type _____

Gravel From _____ ' To _____ ' Pack Sand _____ ' to _____

Bentonite Seal from _____ ' to _____ ' _____

Static Water Level _____ ' _____

Pumping Water Level _____ ' at _____ gpm

Estimated Capacity of well _____ gpm

DEPTH IN FEET

FROM	TO	MATERIAL DRILLED / COLOR	HARDNESS
0	3	Black Clay	SOFT
3	15	TAN clay	SOFT
15	58	Brown clay	SOFT
58	60	med gravel	Loose
60	75	med orange SAND	SOFT
75	85	yellow & Gray Clay	STIFF
85	100	med orange SANDSTONE	Cemented
100	110	yellow & Gray Clay	STIFF
110	120	med orange SANDSTONE	Cemented
120	121	Hard layer	Hard
121	120 125	Blue clay	SOFT
125	130	med orange SANDSTONE	Cemented
130	140	Blue clay	SOFT
140	156	Orange med TO coarse SAND	
156	160	CONglomerate coarse SAND & Gravel	

PAGE 2 DRILLING LOG

DEPTH IN FEET

FROM TO

MATERIAL DRILLED / COLOR

HARDNESS

160 165

Gray shale

STIFF

165 173

Red clay

173 175

Down pressure Red + Gray shale Strips of limestone

GEOLOGICAL DRILLING KEY:

TYPE:

HARDINESS:

COLOR:

- CLAY
- CLAY STONE
- COBBLES
- FINE SAND
- GRAVEL
- LIMESTONE
- OCHRE
- SAND MED-COARSE
- SAND W/CLAY / SILT
- SAND W/GRAVEL
- SANDSTONE
- SANDY CLAY
- SHALE
- SILT
- SILTSTONE
- TOPSOIL

- CEMENTED
- CONSOLIDATED
- DENSE / STIFF
- HARD
- LOOSE
- SOFT
- VERY HARD
- UNCONSOLIDATED

- BLACK
- BLUE
- BROWN
- GRAY
- GREEN
- ORANGE
- PEPPER
- RED
- TAN
- WHITE
- YELLOW



INVOICE

TO:
Daryl Andersen - Water Resources Mgr
Lower Platte North NRD
PO Box 126
511 Commercial Park Road
Wahoo, NE 68066-0126

OFFICE OF SPONSORED PROGRAMS
151 Whittier Research Center
PO Box 830861
Lincoln, NE 68583-0861
FED ID # 47-0049123

SPONSOR AWARD TITLE / NUMBER
LPN NRD Vadose Zone Soil Project

INVOICE NUMBER: 2662110084-01

INVOICE PERIOD: 02/01/2021 to 05/31/2021

RSA #139302
Directed by Dr. Daniel Snow

PAYMENT DUE: 07/31/21

REFERENCE NUMBER: 26-6211-0084-001

PLEASE REFERENCE ON REMITTANCE

ANALYSIS OF CLAIMED CURRENT AND CUMULATIVE COSTS

MAJOR COST ELEMENTS	EXPENSES	
	CURRENT	CUMULATIVE
Salaries and Wages	\$0.00	\$0.00
Employee Benefits	\$0.00	\$0.00
Operating Expenses	\$2,400.00	\$2,400.00
Consumable Supplies	\$0.00	\$0.00
Travel-Domestic	\$0.00	\$0.00
Equipment	\$0.00	\$0.00
Indirect Cost @ 10%	\$240.00	\$240.00
Total Amount	\$2,640.00	\$2,640.00
Current period expenses - Amount Due		\$2,640.00

NOTE: Payment due in 30 days - July 31, 2021

PLEASE REMIT A COPY OF THE INVOICE ALONG WITH THE PAYMENT TO ENSURE PROPER CREDIT.

"I certify that all expenditures reported (or payment requested) are for appropriate purposes and in accordance with the agreements noted above."

Kathi Malone - Project Specialist

kmalone2@unl.edu

(402) 472-3430

Invoice Date:

July 1, 2021

FINAL

(Draft) RCPP Grant through NRCS

Project and Timelines

Location: Bellwood and Schuyler-Richland Nitrogen Management Areas

Grant Timeline: November 2021 – November 2025

Tentative Timeline Procedure

- November – December 2021
 - Coffee shop discussion (limit to 10 people)
 - Furnish rolls and coffee.
 - Might need a couple evening times.
 - Setup dates and time for twice a week.
 - 2-3 staff members would be present (Kris and Karen included)
 - Staff would assist producers in entering application reports online at these events to save time on entering the paper copy.
 - Future years producers would understand how to enter reports online.
 - Would have a questionnaire on best management practices to determine how many producers are willing to participate in new practices. (Ideas on questions?)
 - Would educate producers on yield goals and recommendations.
 - Utilize the nitrate tool on BMP benefits.
 - Hopefully would utilize some videos on health and nitrates.
- January – February 2022
 - Follow-up with producers who did not attend earlier.
 - Follow-up with producers who agreed to participate initially with BMPs.
 - Determine what practices to include in the grant and incentives needed.
 - Staff would collect water samples from domestic wells and then follow-up with individuals who have higher readings.
 - Cost-share on RO Units?
- Education by I & E and Water staff (2021 – 2025)
 - Work with FFA and/or Science Groups
 - Present at least 2 times yearly to adult organizations.

- Present to elementary classes
- Utilize University of Nebraska Medical Center on Health Risk
 - LPS, Papio and LPN had discussion on videos and presentations. They were very open on helping develop the videos and assist with presentations. This dialogue will continue.
 - Develop a program with Med Center on Risks and Awareness
 - Interested in being a partner in a grant.
- Establish a bi-lingual program on water quality.
- Incentive ideas for producers to voluntarily meet with staff.
 - Dinner meeting with producers who meet with us in November/December?
 - Awards for most practices, acres, reduction etc.?
 - Nitrogen Certification requirements?
 - Hat, coat, cup?
 - Soil or Water Sampling incentive?

Best Management Practices for Considerations

- Irrigation Systems and Water Management
 - Start Implementation – Fall/Winter 2022-23
 - SDI – 35%
 - Conservation Activity Plan for Irrigation Scheduling, Moisture Sensors, Chemigation, reduce non-point pollution etc. – 75%
 - Gravity to Pivot – approximate 30%
 - Nozzle Conversions – 40%
 - Flow Meters - \$111/inch (8-inch pipe would be \$888)
- Nitrogen Management
 - Start Implementation – Crop Year 2022
 - No-till, soil sampling and analysis, split applications.
 - Crop Rotations
- Cover Crops
 - Start Implementation – Summer/Fall 2022
 - Seeds and Applications.
- How many producers and acres are unknown for incentives?
- Certain practices and not a lot of choices?

LPNNRD in the Classroom

- Casey Harper, Schuyler FFA Instructor
- Daryl Andersen, Water Resources Manager
- Sydney Abbott, Education Coordinator
- Lacey Sabatka, Information Coordinator

September | Classroom project: 3 – 5 Days in the classroom

Day 1: What are natural resources? What is a Natural Resources District and what do they do? Where are the watersheds in Nebraska? **Discuss the case study we will be going through the last day, so they have an idea of what to focus on the next few days. Maybe we don't need to add this in here, for them, we'll just plan it into the time?**

Day 2: What is soil and what do we use it for? What is the vadose zone? NRD vadose sampling results, point and non-point source pollution.

Day 3: UNMC/Water, Health and Climate Program presentation – Jesse Bell will discuss drought and climate effects.

Day 4: Water issue scenario **(Stakeholders Case Study: Solutions to a Contamination Issue)** problem solving and possible solutions. PEST (political, economical, social, technological) activity.

December | Test Your Well Night

Casey **will** choose an event to coordinate this with. LPNNRD will visit the classroom prior to this event to train students to use the colorimeters. LPNNRD and UNMC representative will be available at the event to discuss the possibility of water quality issues and what steps to take should someone have well water issues. LPNNRD will have a laptop set up showing NRD videos. **Daryl mentioned a RO unit (in Stanton?) that could be available to have on hand to show them how it works...?**

April | Event with Schuyler Elementary

Plan for a 2-hour event: 20-minute presentations with 5 minutes between to switch to next session.

Limit to one or two grades depending on how many students per class.

Possible activities: edible aquifers, UNL large aquifer model, general natural resources presentation, drones and relation to agriculture and mapping.(the use of drones in agriculture and mapping), a crumpled watershed model.

Phoenix Web Group, Inc
10824 N. 142nd Street, P.O.
BOX 307
Waverly, NE 68462
402-786-5111

Invoice 130726

BILL TO

Eric Gottschalk
Lower Platte North NRD
P.O. Box 126
Wahoo, NE 68066

DATE
07/22/2021

PLEASE PAY
\$9,387.50

DUE DATE
07/31/2021

DATE	ACTIVITY	QTY	RATE	AMOUNT
07/22/2021	Project Final Payment for work order LPNNRD 210209 Producer Entry Site Modifications	1	9,387.50	9,387.50

Thank you for your business.

TOTAL DUE

\$9,387.50

THANK YOU.



Quote – Q-71955

In-Situ, Inc.
221 E. Lincoln Avenue
Fort Collins, CO 80524
U.S.A.

Tel: (800) 446-7488
Fax: (970) 498-1598
Email: sales@in-situ.com
Web: www.in-situ.com

Issued By: Tony Walker
Date: July 12, 2021
Quote Valid for 30 days

Sales Manager Chris Howard	Customer ID 004961	Payment Terms NET 30 DAYS	Shipping Method FedEx Ground	INCO Terms	Final Destination United States Nebraska
--------------------------------------	------------------------------	-------------------------------------	--	-------------------	---

Quote To: Lower Platte North NRD P.O. BOX 126 Wahoo, Nebraska 68066 United States
Attn: Russell Oaklund roaklund@lpnrd.org (402) 443-4675

Ship To: Lower Platte North NRD 511 COMMERCIAL PARK ROAD WAHOO, Nebraska 68066 United States
Comments: Please allow 10 business days to prepare your order prior to shipping. Please be sure to confirm exact transducer psi ranges, and exact cable lengths one last time before finalizing your order. Order Expedite option available for an added fee. Thank you!

Equipment								
Line	Product Description	Part Number	Unit of Sale	Qty.	Unit List Price	Total List Price	Disc.	Customer Total Price
1.	Rugged Twist-Lock Cable, Vented, TPU, SM Spool, Twist-Lock,None	0052000-01-02-07-00	270 ft	2	\$1,105.00	\$2,210.00	15.00%	\$1,878.50
2.	Rugged Twist-Lock Cable, Vented, TPU, SM Spool, Twist-Lock,None	0052000-01-02-07-00	310 ft	1	\$1,245.00	\$1,245.00	15.00%	\$1,058.25
Subtotal:								\$2,936.75

Quote Total		
<p><i>Tax is not normally quoted due to State & local variability. If you need to have Tax included in this quotation, please contact us.</i></p> <p><i>If your organization is a tax-exempt entity, please email or fax a copy of your tax-exempt certificate to taxcerts@in-situ.com or fax to (970) 498-1598.</i></p> <p><i>Tax rates will be based on delivery address of the order.</i></p>		
	Sales Tax:	\$0.00
<p><i>For further information regarding the Warranty or Terms and Conditions, please refer to our website at http://in-situ.com/terms-conditions/</i></p> <p><i>All quoted product & service prices are in U.S. Dollars unless specifically noted otherwise.</i></p>		
	Shipping:	\$105.60
Total Amount (Excludes Optional Items):		USD \$3,042.35



In-Situ, Inc.
221 E. Lincoln Avenue
Fort Collins, CO 80524
U.S.A.

Tel: (800) 446-7488
Fax: (970) 498-1598
Email: sales@in-situ.com
Web: www.in-situ.com

Quote – Q-71955

Issued By: Tony Walker
Date: July 12, 2021
Quote Valid for 30 days

Managing your data has never been this easy!

Our intuitive [VuSitu Mobile App](#) allows you to view data from the field on your smartphone or tablet. For long-term or remote sites, integrate In-Situ instruments with our [wireless telemetry systems](#) and cloud-based [HydroVu Data Services](#) for real-time, decision-quality data. Ask your sales rep for more information.



UNITED STATES DEPARTMENT OF THE INTERIOR
DOWN PAYMENT (BILL) REQUEST

Make Remittance Payable To: U.S. Geological Survey
Billing Contact: Lisa Dietsch, AO Phone: 402-328-4116

Bill #: 90911379
Customer: 6000000136
Date: 07/08/2021
Due Date: 09/06/2021

Remit Payment To: United States Geological Survey
P.O. Box 6200-27
Portland, OR 97228-6200

Payer: LOWER PLATTE NORTH NRD
Attn: Eric Gottschalk
P.O. BOX 126
WAHOO NE 68066

Additional forms of payment may be accepted. Please email GS-A-HQ_RMS@USGS.GOV or call 703-648-7683 for additional information.

To pay through Pay.gov go to <https://www.pay.gov>.

Checks must be made payable to U.S. Geological Survey. Please detach the top portion or include bill number on all remittances.

Amount of Payment: \$ _____

Date	Description	Qty	Unit Price		Amount
			Cost	Per	
07/08/2021	Streamgages at Shell Creek near Columbus and Wahoo Creek at Ashland, and one real-time groundwater level monitoring site, as agreed upon in the Joint Funding Agreement between the Lower Platte North NRD and the US Geological Survey. JFA No. 21NRJFA00170 21NRJFA00170	1	17,340.00	1	17,340.00

7/13/21

Amount Due this Bill: 17,340.00

Accounting Classification:
Sales Order: 97201
Sales Office: GENR
Customer: 6000000136
Accounting #: 11179902

TIN: *****2716

Approved by _____
Date _____
Expense _____
Fund _____
6 (amount) _____
Income acct _____