

Water Committee Meeting  
Wednesday, November 28, 2018 5:00 PM  
Lower Platte North NRD Office  
P.O. Box 126  
Wahoo, NE 68066

## 1. Water Committee

### 1.A. Video

### 1.B. UNFINISHED BUSINESS

### 1.C. REGULATORY

#### 1.C.1. GROUND WATER MANAGEMENT AREA

##### 1.C.1.a. Marian Meduna Variance Extension

The District has received an extension request on variance LPN-NDV-016-0039 located in Sections 4&5 of T14N-R6E, Saunders County, Weston Subarea, Non-Hydrologically Connected Area. The new well variance was originally approved in September of 2016. The well was drilled within one year of the approval date (12/16/2016), and by rule the irrigation system needs to be in place by the end of 2018. Per staff's discussion with Ms. Meduna in the office, she was agreeable to a 90 day extension should the Board allow it.

##### 1.C.1.b. USGS STREAM FLOW GAUGING SITES

Chris Hobza and Matt Moser representing USGS were gave an update on the stream gages and Platte/Elkhorn Study.

Attached is the contract with USGS to continue with these sites. Also does the Board want to include LPN-80 to the contract for 2019?

Regarding continuation as a partner with the Leshara Water Quality gauge, staff will meet with USGS to review the benefits and costs (\$24,808 over three years) for continuing with that site.

##### 1.C.1.c. Expansion of Acres

Ryan Loseke has submitted a request to increase 5.6 irrigated acres on a field located in S24-T18N-R1E, Colfax County. Well G-120056 is certified to irrigate 121.73 and has an estimated annual consumptive use of 26.29 acre feet which cannot be exceeded should the acres be approved by the Board. Attached is a map of the field.

##### 1.C.1.d. Well Permit Program

1.C.1.d.1. Well Permits Approved

Wells Permits Approved: 2

<b>Landowner</b>	<b>Number of Wells</b>	<b>Number of New Irrigated Acres</b>	<b>Type of Well</b>	<b>County</b>	<b>Subarea</b>
Hynek Farms	1	0	Irrigation (Supplemental)	Saunders	Morse Bluff
Ruzicka Farms Inc	1	0	Irrigation (Replacement)	Dodge	North Bend

The total number of approved permits for 2018 is 22

Location of Approved Well Permits for 2018: Correct as of 11/28/2018

<b>County</b>	<b>Irrigation - New</b>	<b>Irrigation - Replacement</b>	<b>Stock</b>	<b>Commercial</b>	<b>Municipal</b>	<b>Other</b>	<b>Total</b>
<b>Butler</b>	1	0	1	0	0	0	2
<b>Colfax</b>	0	2	0	0	0	0	2
<b>Dodge</b>	1	2	0	0	1	0	4
<b>Boone</b>	1	0	0	0	0	0	1
<b>Madison</b>	2	0	0	0	0	0	2
<b>Platte</b>	2	1	1	0	0	0	4
<b>Saunders</b>	3	3	0	0	0	1	7
<b>Total</b>	10	8	2	0	1	1	22

1.C.1.d.2. Kyle Herchenbach Livestock Well Permit Application

Kyle Herchenbach has applied for a new livestock well in the NW1/4 SW 1/4 of S23-T20N-R3W in Platte County, Lower Newman Grove subarea. The well will be used to supply water to a new chicken operation. There will be a second well drilled under the same permit for redundancy.

1.C.1.e. UNL-DNR-LPN Agreement and Contract for SQS#2 Area

In November Oaklund and Jackie Polacek (UNL) installed cable and logger in ten UNL priority sites. As UNL analyzes their spatial distribution they may have a couple of more strategic wells. Oaklund has installed shelters at a couple more wells.

Attached is a agreement and contract to relinquish the transducer to the LPN after 2023 in which LPN will take care of the maintenance and provide data to both agencies.

1.C.1.f. Cost Share Programs

1.C.1.f.1. Irrigation Well Sample Kits

314 irrigation kits have been mailed. One mailed to Micek in November (Bellwood Phase 2 Area) has not yet been returned. All sample results have been mailed to producers.

1.C.1.g. Bellwood Phase 2 Area

2018 is the sixteen year for this Phase 2 Area. Five fertilizer application reports have been received for this area.

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% (55 of 108)	13% (14 of 108)	36% (39 of 108)
2015	0 to 32.3 ppm	43% (31 of 72)	8% (6 of 72)	49% (35 of 72)
2016	0 to 35.1 ppm	34% (25 of 74)	11% (8 of 74)	55% (41 of 74)
2017	0 to 23.5 ppm	36% (27 of 74)	15% (11 of 74)	49% (36 of 74)
2018	0 to 30.9 ppm	39% (24 of 62)	11% (7 of 62)	50% (31 of 62)

#### 1.C.1.h. Richland - Schuyler Phase 2 Area

2018 is the third year of this Phase 2 Area. There are 45 registered active irrigation wells in the ten sections of this new area. Three fertilizer application reports have been received for this area.

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
2016	1.47 to 41.8 ppm	29% (10 of 34)	9% (3 of 34)	62% (21 of 34)
2017	2.44 to 25.4 ppm	23% (8 of 35)	(0 of 35)	77% (27 of 35)
2018	1.75 to 29.3 ppm	26% (5 of 19)	11% (2 of 19)	63% (12 of 19)

#### 1.C.1.i. Richland - Schuyler Phase 3 Area

2018 is the third year of this Phase 3 Area. This Phase 3 area went into effect September 1, 2015. The 55 sections of this area first went into a Phase 2 Area in 2004. Five fertilizer application reports have been received for this area.

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% (68 of 251)	9% (22 of 251)	64% (161 of 251)
2015	0 to 53.3 ppm	23% (55 of 238)	12% (29 of 238)	65% (154 of 238)
2016	0 to 50.5 ppm	25% (58 of 228)	10% (22 of 228)	65% (148 of 228)
2017	0 to 53.4 ppm	25% (60 of 238)	6% (14 of 238)	69% (164 of 238)
2018	0 to 56.9 ppm	25% (46 of 182)	7% (12 of 182)	68% (124 pf 182)

#### 1.C.1.j. LPNNRD Operator Certification

One online test was completed in November (see following table).

Cert #	Cert date	Name	Re-cert	Comments
7134	11/13/2018	Michael Lindhorst	no	

#### 1.C.1.j.1. 2019 LPNNRD Certification Classes for Nitrogen and Water Management

The 2019 class schedule has been set. The 2019 classes will start with a test allowing any attendee who passes the test to leave and be certified.

Class	Date & time	Location
# 1	Thursday, January 3rd @ 3:30 p.m.	Fremont - Extension Office
	? Note: Corn Expo at Christensen Field ?	(after the Corn Expo)
# 2	Monday, January 14th @ 7:00 p.m.	ENREC - Mead (formerly ARDC)
# 3	Friday, February 1st @ 9:30 a.m.	Columbus - Ag Park ?
# 4	Monday, February 4th @ 1:00 p.m.	David City - Butler County Events Center at Fairgrounds
# 5	Thursday, February 7th @ 9:30 a.m.	Lindsay - Village Office
# 6	Wednesday, February 20th @ 9:30 a.m.	Columbus - Ag Park ?
# 7	Monday, March 11th @ 6:00 p.m. ♦	Fremont - Extension Office
# 8	Tuesday, March 12th @ 9:30 a.m.	David City - Butler County Events Center at Fairgrounds
# 9	Wednesday, March 20th @ 7:00 p.m.	ENREC - Mead (formerly ARDC)
# 10	Thursday, March 21st @ 7:00 p.m.	Columbus - Ag Park ?

	? Ag Park classes will be on second floor. Entrance is	<b>Ten classes</b>
	on south side - accessible by stairs or elevator.	
◆	"Zoom" class	

### 1.C.2. CHEMIGATION

Attached is the annual report that is sent to NDEQ.

Nitrogen: (Gallons) 181,491 ---equivalates to 644,293 lbs

Nitrogen: (Pounds) 2,331,067

= Total : 2,975,360 lbs of N

Acres Treated: 41,704

Avg. Application/ Acre : 71.3 lbs of N

### 1.D. GROUND WATER PROGRAMS

#### 1.D.1. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

##### 1.D.1.a. Lower Platte River Consortium

An open house is scheduled for Wednesday, December 5 at Lower Platte South NRD from 5 to 7 to present and take comments on the Lower Platte Basin Drought Plan.

Attached is the working draft of the Drought Plan.

#### 1.D.2. NEW DAKOTA MONITORING WELLS

Water samples from these three wells have been collected this month. Tyler and Will retrieved the sample from the east well this afternoon. Sample results have not yet been received.

The Lower Platte North drilled some Dakota Wells during June and July in cropland fields. Some damage did occur in these fields with growing crops. Staff was very appreciative to the producers in allowing us to drill these wells. Pictures are attached showing the damage in which staff thanks John Hannah in providing these drone pictures and an estimated of dollar loss damage. Estimated yields were 220 bu/acre at \$3.58 corn price.

East Site: David Grotelueschen - owner, Tony Sayer - operator

Estimate Crop Damage - \$146.49  
 Seed Cost, labor and cooperation - \$225.00  
 Total - \$371.49 or round up to \$400

Middle Site: Tom Neemeyer - owner, Brad Loseke - operator  
 Estimate Crop Damage - \$212.62  
 Seed Cost, labor and cooperation - \$225.00  
 Total - \$437.62 or round up to \$450

### 1.D.3. GROUND WATER ENERGY LEVELS

#### Ground Water Level Summary Comparison of Fall 2017 to Fall 2018

Fall collection of ground water levels has been completed. Not surprisingly, and as anticipated, the numbers look good. Precipitation in July and August reduced irrigation pumping. Crops in a large area in central Platte County had significant hail damage and, as such, there was little to no irrigation in the area.

### Ground Water Level Summary Comparison of Fall 2017 to Fall 2018

Aquifer	Number of Wells Measured	Median Change (Feet)	Mean Change (Feet)	Number of Wells Increased	Number of Wells Unchanged (+ or - 0.3 Feet)
<b>Platte Valley</b>	<b>58</b>	<b>0.60</b>	<b>0.64</b>	<b>37</b>	<b>14</b>
Bellwood	5	0.09	0.28	2	2
Fremont	7	-0.10	-0.43	1	3
Fremont East	3	1.04	0.95	3	0
Leshara Platte Valley	1	0.04	0.04	0	1
North Bend	9	0.26	0.54	3	4
Octavia	5	0.39	0.94	4	1
Platte River Uplands	4	1.02	1.56	4	0
Schuyler	6	0.83	0.80	4	2
Wann	18	0.81	0.86	16	1
<b>Shell Creek</b>	<b>46</b>	<b>4.76</b>	<b>5.58</b>	<b>46</b>	<b>0</b>
Lower Newman Grove	2	[+4.72, +6.83]	5.78	2	0
Lower Shell Creek	6	2.03	1.66	6	0
Middle Shell Creek	17	6.42	6.88	17	0
Newman Grove	3	4.39	5.34	3	0
Platte Center	6	4.02	3.85	6	0
Shell Creek Uplands	2	[+1.24, +15.07]	8.16	2	0
Upper Newman Grove	9	6.15	5.91	6	0
Upper Shell Creek	1	9.29	9.29	1	0
<b>Todd Valley</b>	<b>19</b>	<b>0.10</b>	<b>0.40</b>	<b>9</b>	<b>6</b>

(north of Hwy 92)	8	0.96	0.96	7	1
(south of Hwy 92)	11	-0.08	-0.11	2	5
<b>Uplands</b>	<b>56</b>	<b>1.57</b>	<b>3.90</b>	<b>37</b>	<b>12</b>
David City	18	8.37	8.40	17	0
Leshara Uplands	4	0.62	0.65	2	2
Morse Bluff	3	2.26	4.11	3	0
Prague	6	2.28	5.82	5	1
Swedeburg	9	-0.08	-0.06	2	5
Weston	7	0.51	1.77	5	1
Yutan	5	-0.30	0.81	2	1
Yutan South	4	0.53	0.32	2	1
				72%	18%
				Last year's %	43%
					17%

## 1.E. OTHER

### 1.E.1. Phoenix Workgroup

Attached is an invoice from Phoenix which contract was signed July 2018.

### 1.E.2. COMMENTS FROM THE PUBLIC