

Water Committee Meeting  
Tuesday, October 30, 2018 5:00 PM  
Lower Platte North NRD Office  
P.O. Box 126  
Wahoo, NE 68066

## 1. Water Committee

### 1.A. UNFINISHED BUSINESS

A motion was made in the Water Committee to table putting the Sparling Bluewater Electromagnetic Flow Meter on the LPN approved meter list until more information can be obtained on the maintenance of electromagnetic flow meters.

Conversations with Tri-City Meters informed staff that maintenance on Mag meters is not as much of a issue than with the older versions of the meters. Knowing what the quality of water being pumped is critical in placement of certain meters. Groundwater high in iron may not be the best place for a mag meter or a well that pumps a lot of gravel might not be a good place for a propellor meter as rocks or pebbles can get caught in the prop.

Sparling commented that mag meters are used a lot with waste water treatment plants.

### 1.B. Lower Platte River Consortium

John Engel rom HDR made a presentation on the draft drought plan being developed for the Lower Platte Basin.

Attached is a DRAFT copy of the plan along with some itemized cost of projects that were reviewed in the process. The second public open house is planned for Wednesday, December 5th at LPS starting at 5 pm.

### 1.C. REGULATORY

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

##### 1.C.1.a. Excess Water Complaint

Norm Kavan Jr, Chad Wehrbein and Roger Koerfner addressed the Water Committee on excess water east of Fremont preventing them from harvesting. Tom Mountford discussed the history of the drainage systems east of Fremont and the proposal that was presented in the mid 1990s to the constituents. It was explained that this drainage issue should be begin with a discussion between Dodge County and the City of Fremont. If a proposal is designed by these entities, they could approach the NRD Board for potential assistance.

##### 1.C.1.b. Well Permit Program

###### 1.C.1.b.1. Well Permits Approved

Wells Permits Approved: #

Landowner	Number of Wells	Number of New Irrigated Acres	Type of Well	County	Subarea
Eldon Theilen	1	0	Irrigation (Replacement)	Colfax	Schuyler
City of North Bend	1	0	Public Water Supply	Dodge	North Bend

The total number of approved permits for 2018 is 20

Location of Approved Well Permits for 2017: Correct as of 10/30/2018

County	Irrigation - New	Irrigation - Replacement	Stock	Commercial	Municipal	Other	Total
<b>Butler</b>	1	0	1	0	0	0	2
<b>Colfax</b>	0	2	0	0	0	0	2
<b>Dodge</b>	1	1	0	0	1	0	3
<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>	2	3	0	0	0	1	6
<b>Total</b>	9	7	2	0	1	1	20

#### 1.C.1.b.2. Hynek Farms LLC Supplemental Well Application

The District has received a well permit application from Hynek Farms LLC, located in the SE 1/4 SW 1/4 S5-T16N-R6E Saunders County Morse Bluff Subarea. The new

well will irrigate 74 acres previously serviced by well G-053940 located in the SW 1/4 SE 1/4 of the same section. The current well services 4 small pivots and the new well will allow for better management decisions.

1.C.1.c. Cost Share Programs

1.C.1.c.1. Irrigation Well Sample Kits

313 irrigation kits have been mailed out this year. 281 samples have been received and the results for these have been mailed to producers.

1.C.1.c.2. Flow Meter Cost Share in SQS #2

The final reimbursement was sent to WSF for \$1,059 which leaves about \$120,000 of the original grant being unused. Is it OK for staff to send a email to DNR to release the remaining balance for other projects? The Committee did not see any issues on staff sending an email to DNR to release the funds.

At the June 28, 2017 Water Committee, motion (1) offer cost-share for flow meters to producers within 2 miles of the SQS #2 Boundary with-in LPNNRD and (2)to offer cost-share within the SQS #2 area to convert gallons reading registers to acre-inches. Cost-share for registers conversion will be \$225 with producer paying the labor cost. Deadline for invoices will be by March 1.

At the November 30, 2016 Water Committee, motion was made to fund GWEL cooperator wells at \$1,000 per 8 inch meters (\$770 from WSF and \$230 from LPNNRD = \$1,000) and at \$749 per 6 inch meters (\$577 from WSF and \$172 from LPNNRD = \$749)

Water Sustainability Fund (WSF)	
8 inch meters	XX x 8" meters or XX x \$770 = \$0
6 inch meters	XX x 6" meters or XX x \$577 = \$0
WSF Total	\$0
	So Running Total WSF Grant = \$79,459 of \$200,000 grant
	So Remaining Total of WSF Grant = \$120,541

LPNNRD For GWEL Cooperators	
8 inch meter	0 x 8" meters or 1 x \$230 = \$0

6 inch meter	0 x 6" meters or 0 x \$172 = \$0
Carry over (8 inch meter)	0 x 8" meter or 0 x \$230= \$0
LPNNRD Total	\$0

Total For Flow Meter Cost Share Program	
WSF & LPNNRD	For approval at September 9, 2017 Board Meeting = \$0

#### 1.C.1.d. Bellwood Phase 2 Area

2018 is the sixteenth year for this Phase 2 Area. Ten water samples were received in October.

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.e. 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. No change from last month.

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.f. 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. No changes from last month.

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	25% (46 of 182)	7% (12 of 182)	68% (124 of 182)

1.C.1.g. LPNNRD Operator Certification

No online test requests have been received in October. Oaklund is coordinating with Melissa Bartels, the new Extension Educator for Butler (and Polk) county, and Mandi Topil for use of the Butler County Events Center for two classes. The 2019 classes will start with a test allowing any attendee who passes the test to leave and be certified.

1.D. GROUND WATER PROGRAMS

1.D.1. DECOMMISSIONED WELL PROGRAM

1.D.1.a. 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

1.D.1.b. Plugged Wells

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

Well Owner	Type of Well	Cost Share Estimate	County

1.D.2. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

1.D.2.a. Soil Moisture Cost-Share Policy

The Committee agreed to offer cost-share for capacitance soil moisture probes and remote sensing. An initial draft cost-share policy is attached for Committee Review.

1.D.2.b. Remote Sensing Equipment

Staff has set up a demonstration site north of Columbus with equipment to get water

levels and rainfall amounts directly into the NRD office. The equipment from ADCON was put in one of the NRD dedicated monitoring wells.

#### 1.D.2.c. SQS#2 - UNL and DNR collaboration

Last Friday, Oaklund and Jackie Polacek (UNL) began installing cables and loggers in remaining UNL priority sites. The remaining cables and loggers will be installed later this week.

#### 1.D.3. DAKOTA MONITORING WELLS

Water samples from these three wells to be collected in November.

#### 1.D.4. FALL GROUND WATER ENERGY LEVELS

To take advantage of the favorable weather staff began collection of the Fall water levels in mid-October. With the wet ground conditions and delayed harvest some of the sites aren't yet accessible. Staff has measured in the Uplands and Todd Valley with Platte Valley, including the Wann Basin Day multi-agency collections, to be later this week. Shell Creek water level measurements will then follow in November.

#### 1.D.5. USGS STREAM FLOW GAUGING SITES

The Papio NRD is looking to continue operation of the continuous groundwater level recorders operated by USGS from Leshara to Waterloo. Papio NRD is asking if LPNNRD would be able to reimburse Papio NRD the \$2,450 for the LPNNRD-80 groundwater transducer on west side of the river? If the Board decided this is something that they are willing to do, it will require an amendment to the existing agreement. This item was not included in this year's budget but could be put into next fiscal year.

USGS will be at the November 28 Water Committee to address this monitoring well along with showing the results from the the Platte/Elkhorn water study.

#### 1.E. OTHER

##### 1.E.1. GMDA ANNUAL CONFERENCE

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