

Water Committee Meeting  
Wednesday, September 27, 2017 5:00 PM  
Lower Platte North NRD Office  
P.O. Box 126  
Wahoo, NE 68066

## 1. Water Committee

### 1.A. UNFINISHED BUSINESS

From the August 30 Water Committee and September 11 Board Meeting:

To table the variance request from Sandra Muhle for 115 acres until the 2016 AEM data can be analyzed. This motion, made by Larry Feala and seconded by Dave Saalfeld, Passed.

To table the variance request from Duane Ohlrich for 66 acres until the 2016 AEM data can be analyzed. This motion, made by Dave Saalfeld and seconded by Frank Pollard, Passed.

### 1.B. REGULATORY

#### 1.B.1. GROUND WATER MANAGEMENT AREA

##### 1.B.1.a. Lower Platte River Basin Water Management Plan Coalition (LPRBC)

As the IMP process keeps moving forward the management of water will be calculated by Acre Feet of Water Use. Table 4.1 on page 27 the Lower Platte Sub-Basins is allowed 4,138 AF allowable depletion for a 5-year increment during the peak season. This number will be used for the hydrologically connected areas and divided among the 3 NRDs in the Lower Platte Basin. Table 4.2 on page 29 will be discussed at a meeting with Papio, LPS and LPN on October 5 at Mahoney State Park starting at 6 pm.

30 percent of the water is above the North Bend Stream Gauge - 1241.4 AF, 70 percent is from North Bend to Louisville - 2896.6 AF.

Another thing to consider is the banking of water for future uses. If the NRD doesn't use all of its allotted of water in the first 5 years that could carry over to next 5 year allotment.

View this as the management of water not the management of acres. A 27 inch rolling allocation is 2.25 acre feet of water. So if the NRD gives 2.25 acre feet per well or irrigation system the amount of water used could be the same no matter how many acres is being irrigated, it would depend on the management of the producer how he would like

to distribute the water. This type of management can work as the NRD has completed certifying all of the irrigated acres.

1.B.1.b. Irrigated Acres for 2018 in the HCA and NHCA

1.B.1.c. Variance Request in the Hydrologically Connected Area (Limited Development Area)

The deadline for new applications was September 15th. Attached is the spreadsheet of applications, sorted by ranking score, and divided by the 2500 acre threshold. Included on the spreadsheet for this year is the stream depletion factor for each application as well as the estimated peak season acre-feet depletion. The Board may approve up to 2500 acres of new development each year per Section M, Rule 2, of the LPNNRD Groundwater Management Area Rules and Regulation.

Also, Larry Mohrman submitted two applications after the deadline. He would like to be considered for the 2018 acres. The two applications total 22 acres.

1.B.1.d. Variance Requests in the Non-Hydrologically Connected Area (Normal Development Area)

Last month the Board Approved two applications in the Non-Hydrologically Connected Area totaling 106 acres. There are 5 more applications up for review for this month totaling 400 acres. Attached is updated spreadsheet as well as a map showing the location of the applications.

1.B.1.e. Variance Requests in the Restricted Development Areas

Five RDA applications were removed from the HCA variance list. Staff is seeking direction on how to proceed with these applications. Attached is the list of those applications that were removed.

1.B.1.f. Well Permit Program

1.B.1.f.1. Well Permits Approved

Wells Permits Approved: 6

Landowner	Number of Wells	Number of New Irrigated Acres	Type of Well	County	Subarea
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Village of Mead	2	0	Public Water Supply	Saunders	Todd Valley
City of Fremont	4	0	Dewatering Well (Over 90 Days)	Dodge	Fremont

The total number of approved permits for 2017 is 22

Location of Approved Well Permits for 2017: Correct as of 9/27/2017

County	Irrigation - New	Irrigation - Replacement	Stock	Commercial	Municipal	Other	Total
Butler	1	3	0	0	0	0	4
Colfax	0	1	0	0	0	0	1
Dodge	0	0	0	0	0	5	5
Boone	0	0	0	0	0	0	0
Madison	0	0	0	0	0	0	0
Platte	2	0	0	0	1	0	3
Saunders	5	0	0	0	2	0	9
<b>Total</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>22</b>

#### 1.B.1.g. Irrigation Runoff Policy

Attached for Committee discussion is a draft policy on handling irrigation endguns.

#### 1.B.1.h. Chemigation Violation Policy

Attached for Committee discussion is a draft policy on handling Chemigation Violations.

1.B.1.i. Cost Share Programs

1.B.1.i.1. Flow Meter Cost Share in SQS #2

As of September 27, 2017 we have received a total of 187 applications. Three applications have been received since increasing the boundary 2 miles beyond the SQS #2 boundary.

Therefore, for the October 8, 2017 Board Meeting, we will have a total of 3 cost-share application to approve.

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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 cooperators 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	3 x 8" meters or 1 x \$770 = \$2310
6 inch meters	XX x 6" meters or XX x \$577 = \$0
WSF Total	\$1386
	So Remaining Total of Flow Meter Cost-Share (90,000 Budget) = \$87,690
	So Running Total WSF Grant = \$118,539 of \$200,000 grant

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 October 8, 2017 Board Meeting = \$2310.00

1.B.1.i.2. Irrigation Well Sample Kits

349 irrigation kits have been mailed out so far in 2017 (24 of these since Labor Day). 351 water samples have been returned. All results received so far have been sent to producers (22 of these were mailed today. Twenty-one kits requested by producers are still outstanding.

1.B.1.j. Bellwood Phase 2 Area

2017 is the fifteenth year for this Phase 2 Area. Phase 2 information packets with order were mailed to producers in June, before the start of irrigation.

This area was reduced from 32 sections to 21 sections in 2015.

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	37% (26 of 70)	14% (10 of 70)	49% (34 of 70)

### 1.B.1.k. Richland - Schuyler Phase 2 Area

2017 is the second year of this Phase 2 Area. There are 45 registered active irrigation wells in the ten sections of this new 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 23.6 ppm	20% (6 of 30)	(0 of 30)	80% (24 of 30)

### 1.B.1.l. Richland - Schuyler Phase 3 Area

2017 is the second 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.

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	24% (53 of 221)	6% (14 of 221)	70% (154 of 221)

### 1.B.1.m. LPNNRD Operator Certification

No online test requests have been received in September.

#### 1.B.1.m.1. 2018 LPNNRD Certification Classes for Nitrogen and Water Management (preliminary)

Class	Date & time	Location
# 1	Thursday, January 4th @ 3:30 p.m. (after Corn Expo)	Fremont - Extension Office
# 2	Pending	Schuyler or North Bend
# 3	Wednesday, January 17th @ 7:00 p.m. [Dryland focus/emphasis]	ENREC (formerly known as ARD)
# 4	Tuesday, January 30th @ 9:30 a.m. *Special class at 1:00 p.m. AEM	Columbus - Ag Park
# 5	Thursday, February 5th @ 1:00 p.m. [Dryland focus/emphasis]	Butler County Events Center
# 6	Thursday, February 8th @ 9:30 a.m.	Lindsay - Village Office
# 7	Pending	Schuyler

# 8	Tuesday, February 27th @ 9:30 p.m.	Columbus - Pinnacle Bank
# 9	Wednesday, March 7th @ 9:00 a.m.	Fremont - Extension Office
# 10	Tuesday, March 13th @ 9:30 a.m.	Butler County Events Center
# 11	Tuesday, March 20th @ 7:00 p.m.	ENREC (ARDC)
# 12	Thursday, March 22nd @ 7:00 p.m. *Special class afternoon. AEM	Columbus - Ag Park

\*AEM class for SQS producers pending AEM experts availability

## 1.C. GROUND WATER PROGRAMS

### 1.C.1. DECOMMISSIONED WELL PROGRAM

#### 1.C.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
Cara Ahrens- Emerson	Hand-dug	\$530.25	Colfax

#### 1.C.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
Westlake Inc.	Irrigation	\$720.47	Dodge

## 1.C.2. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

### 1.C.2.a. GW ELEVATION WANN BASIN

GW Elevation WANN Basin Study is a \$10,000 budget item for FY2018. The purpose of the study is to determine the scenario in which drawdown from area wells would effect the contaminant plume and move the Mead Cleanup towards MUD well fields or potentially lose containment. The plan is to develop a RFP to send out to firms in October, so proposals can be reviewed at the November Water Committee Meeting.

This study will also be beneficial for the NRD in showing how water movement can change in a extreme drought situation.

### 1.C.3. NEW MONITORING WELLS

Attached is a draft Amendment #2 from UNL to the original agreement dated June 24, 2015 (scope and purpose is the same and original Section 9 allows for amendments). This amendment is a 3 year time frame, but specified only year one budget and FY18 costs, Katie Cameron says this is a huge help in not starting a new agreement with UNL and just continuing amendments just in case plans change, so we have flexibility in the future.

Part of discussion with UNL was a crop payout in which UNL cannot do, the NRD will need to pay for the potential reseeding, so \$3,300 came off the bid amount (\$131,030) with a new total of \$136,700. Through the bid process we will find out how the contractor plans to deal with pits/space but most likely if we are drilling in ROW we will need more space and affect crops in some way. However, it would be nice to be able to use all the money on the test-hole/well effort if it is available and we don't end up needing to pay out for crops. Katie commented that this could easily be a "re-budget" with UNL later to add all or part of the \$3,300 back by an email, like Larry did on the Malmo and Fremont amendment 1 increase.

### 1.C.4. GROUND WATER QUALITY SAMPLING

### 1.C.5. Conversion of Irrigation Well to Livestock Well

A producer irrigates a 80 acre tract, then transfers the water and irrigates an additional 80 acres across the road and another 40 acres south of the 80 acres from the same irrigation well. All the acres have been certified as irrigated acres and the well is located in LPN white area (non-hydrologically connected area). He would like to drill an irrigation well across the road on the other 80 acres and then convert the original irrigation well to a stock

well. The stock well will then be used to supply water to chicken broilers. He is planning on reducing the amount of irrigated land. This is only preliminary and was just asking if the NRD would approve a new irrigation well.

#### 1.D. SURFACE WATER PROGRAMS

No Lakes are on the list for Lower Platte North.

#### **Week of Sept. 18<sup>th</sup>, 2017**

This week's beach Bacteria and Harmful Algal Bloom results are now posted on the NDEQ web page (<http://deq.ne.gov>).

Kirkman's Cove Lake is below the established limit of 20ppb but will need one more sample less than 20ppb before it is removed from the Health Alert List.

The weather is hot again... of course it's Nebraska... Get out and enjoy the lakes before the snow flies in October.... because of course it's Nebraska.

#### **Harmful Algal Blooms**

**ONE Lake will be on "Health Alert"** this week. NDEQ 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 20 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 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.

Lake Name	County	Current algae
<a href="#">Kirkman's Cove Lake</a>	Richardson	2.35

#### **Bacteria**

**Lakes that tested high for *E. coli* bacteria** this week are listed below. *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.

#### **Lakes with High *E. coli* Bacteria Levels**

Lake Name	County	E.coli Bacteria
<a href="#">Carter Lake (Omaha)</a>	Douglas	>2420

Lake Name	County	E.coli Bacteria
<a href="#">Holmes Lake</a>	Lancaster	387
<a href="#">Maple Creek Recreation Area Lake</a>	Colfax	1986

This information is updated weekly on our web site, <http://deq.ne.gov/NDEQProg.nsf/Beaches2017.xsp> . We hope you find this interesting and useful.

#### 1.E. OTHER

Jim Cannia from Aqua Geo Frameworks will be at the October 9 Board Meeting to present on the information obtained from the AEM flights conducted in 2016. The final report is attached for your review.

The staff of the Water Department attended the NARD Fall Conference in Kearney.

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

The Annual Conference will be at the Hilton Capitol Center in downtown Baton Rouge, Louisiana, January 16-19, 2018.

The Conference will begin the morning of the 16<sup>th</sup> with a few presentations then a field trip to view the Old River Control Structure, arriving back in time for the welcoming reception. There will have technical sessions on Thursday with our board meeting Thursday afternoon. There will be a spouses tour on Thursday to Magnolia Mound Plantation and the Louisiana Rural Life Museum with a stop for lunch.

Any Board Member wishing to go, please let staff know.

##### 1.E.2. Phoenix Webgroup

An invoice for \$18,000 for final payment to Phoenix Webgroup for Field Apps as per contract approved at August Board Meeting.

##### 1.E.3. COMMENTS FROM THE PUBLIC