




Memorandum

Date: April 12, 2019
To: Each Director
From: Paul D. Zillig, General Manager 
RE: Water Resources Subcommittee Meeting Minutes.

The Water Resources Subcommittee met in the NRD Office at 5:30 p.m. on Thursday, April 11, 2019. Subcommittee members present included Bob Andersen, Vern Barrett, Karen Amen, Greg Osborn, Chelsea Johnson, Mark Spangler, and David Landis. Others present included Larry Ruth, Mayor Rich Grauerholz & Jessica Quady of Ashland, Jonathan Mohr of JEO, Cody Gerdes of Great Plains Appraisal, Dan Schulz, David Potter, Nathan Kuhlman, Dick Ehrman, and myself.

Chair Andersen called the meeting to order and asked that we consider landrights acquisition for the Upper Salt 3-A Watershed Rehabilitation Project. Andersen introduced Cody Gerdes of Great Plains Appraisal and reported that the subcommittee will need to go into closed session to review appraisals and negotiations for the project. At 5:35 it was moved by Osborn, seconded by Landis, and unanimously approved by the Subcommittee to go into closed session to protect the public interest and to discuss the appraisals related to the acquisition of properties needed for the Upper Salt 3-A Rehabilitation Project. At 6:00pm it was moved by Landis, seconded by Osborn, and unanimously approved by the Subcommittee to return to open session.

Attached is a table listing the landowners, landrights needed for each use, and project landrights map. It was moved by Landis, seconded by Amen, to **accept the appraisals of the Lylester Ranch LLC, Donald E. Mitchell Trust, DSC Properties LLC, GANA Farms LLC, Daryl D. Mitchell Trust, Karl & Debra Zimmer, and Ramon & Gloria Godtel Properties and authorize staff to negotiate and acquire the interest in the properties in accordance with Landis' guidance. The motion was unanimously approved.**

The next item on the agenda was to consider a request from the City of Ashland for assistance to establish a Drinking Water Protection Management Plan thru the NRD's Community Assistance Program. Mayor Grauerholz, City Administrator Jessica Quady, and Jonathan Mohr of JEO explained the request (see attached letter & map). The cost of



the entire project was approximately \$67,000 and the City is providing \$15,000 and requesting \$52,000 from the State/Nebraska Department of Environmental Quality. Ashland is requesting the NRD provide 50% cost-share assistance on Ashland's share of \$15,000.

It was moved by Landis, seconded by C. Johnson, and unanimously approved by the Subcommittee to **recommend the Board of Directors approve the Community Assistance Program funding request from the City of Ashland to prepare the Ashland Drinking Water Protection Management Plan in the amount of 50% of \$15,000, not to exceed \$7,500 of NRD cost.**

The next item on the agenda was to consider amending the professional services contract with Phoenix WebGroup for additional services to improve the NRD's Groundwater Database. Kuhlman reviewed the attached memo explaining the additional services being requested and a copy of the Change Request in the amount of \$13,600. The Subcommittee discussed the services to be provided and Kuhlman answered questions concerning the project.

It was moved by Landis, seconded by Osborn, and unanimously approved by the Subcommittee to **recommend the Board of Directors approve the Change Request with the Phoenix WebGroup for additional services in the amount of \$13,600.**

The final item on the agenda was a report by Schulz on the Dwight-Valparaiso-Brainard Special Management Area Advisory Group meeting in Valparaiso. Schulz provided a copy of the minutes of that meeting (a copy is attached). The Subcommittee discussed the suggestions from the Advisory Group and the need to amend the GW DVB SMA rules and regulations later this year. It was moved by Osborn, seconded by Chelsea Johnson, and unanimously approved by the Subcommittee to **direct staff to prepare draft groundwater rules and regulation modifications based on the direction of the Water Resources Subcommittee and the DVB SMA Advisory Group.**









There being no additional business the meeting adjourned at 6:20 pm.

PDZ/pz

cc: Steve Seglin

UPPER SALT 3-A

LEGEND

TRACT NO.	OWNER OF RECORD PER LANCASTER COUNTY ASSESSOR'S WEBSITE JANUARY 19, 2019	ADDITIONAL EASEMENT AREA (ACRES±)								SEVERED AREA	TOTALS
											
		DAM & STRUCTURE PERM. EASE.	ADDITIONAL FLOOD POOL	TEMP. CONST. EASE.	BORROW STORAGE & STAGING	AUX. SPILLWAY FLOWAGE	COUNTY ROAD TEMP EASE.	COUNTY ROAD FEE TITLE			
1	LYLESTER RANCH LLC LEGAL: LOT 26 I.T. SEC. 3-T7N-R6E	0.1	--	0.2	--	--	--	--	--	0.3	
2	MITCHELL, DONALD E. TRUST LEGAL: NW4 SEC. 2-T7N-R6E	3.0	0.8	3.2	4.7	--	--	--	--	11.7	
3	MITCHELL, DONALD E. TRUST LEGAL: SW4 SEC. 35-T8N-R6E	8.7	--	0.2	6.6	0.6	0.8	5.4	5.5	27.8	
4	DSC PROPERTIES LLC LEGAL: SE4SE4 34-T8N-R6E	1.6	--	4.2	--	6.0	--	--	--	11.8	
5	LANCASTER COUNTY ROADS LEGAL: SE4SE4 SEC. 34-T8N-R6E & SW4 SEC. 35-T8N-R6E	--	--	--	--	--	--	--	--	0.0	
6	GANA FARMS LLC LEGAL: LOT 8 I.T. SW4 SEC. 2-T7N-R6E	--	1.2	--	--	--	--	--	--	1.2	
7	MITCHELL, DARYL D. TRUST LEGAL: LOT 13 I.T. SW4 SEC. 2-T7N-R6E	--	0.3	--	--	--	--	--	--	0.3	
8	MITCHELL, DARYL D. TRUST LEGAL: LOT 25 I.T. SE4 SEC. 3-T7N-R6E	--	0.1	--	--	--	--	--	--	0.1	
9	ZIMMER, KARL & DEBRA J LEGAL: LOT 34 I.T. SE4 SEC. 34-T8N-R6E	--	--	--	--	--	0.1	0.1	--	0.2	
10	GODEL, RAMON E & GLORIA A LEGAL: LOT 33 I.T. SE4 SEC. 34-T8N-R6E	--	--	--	--	--	0.1	--	--	0.1	
TOTALS		13.4	2.4	7.8	11.3	6.6	1.0	5.5	5.5	53.5	

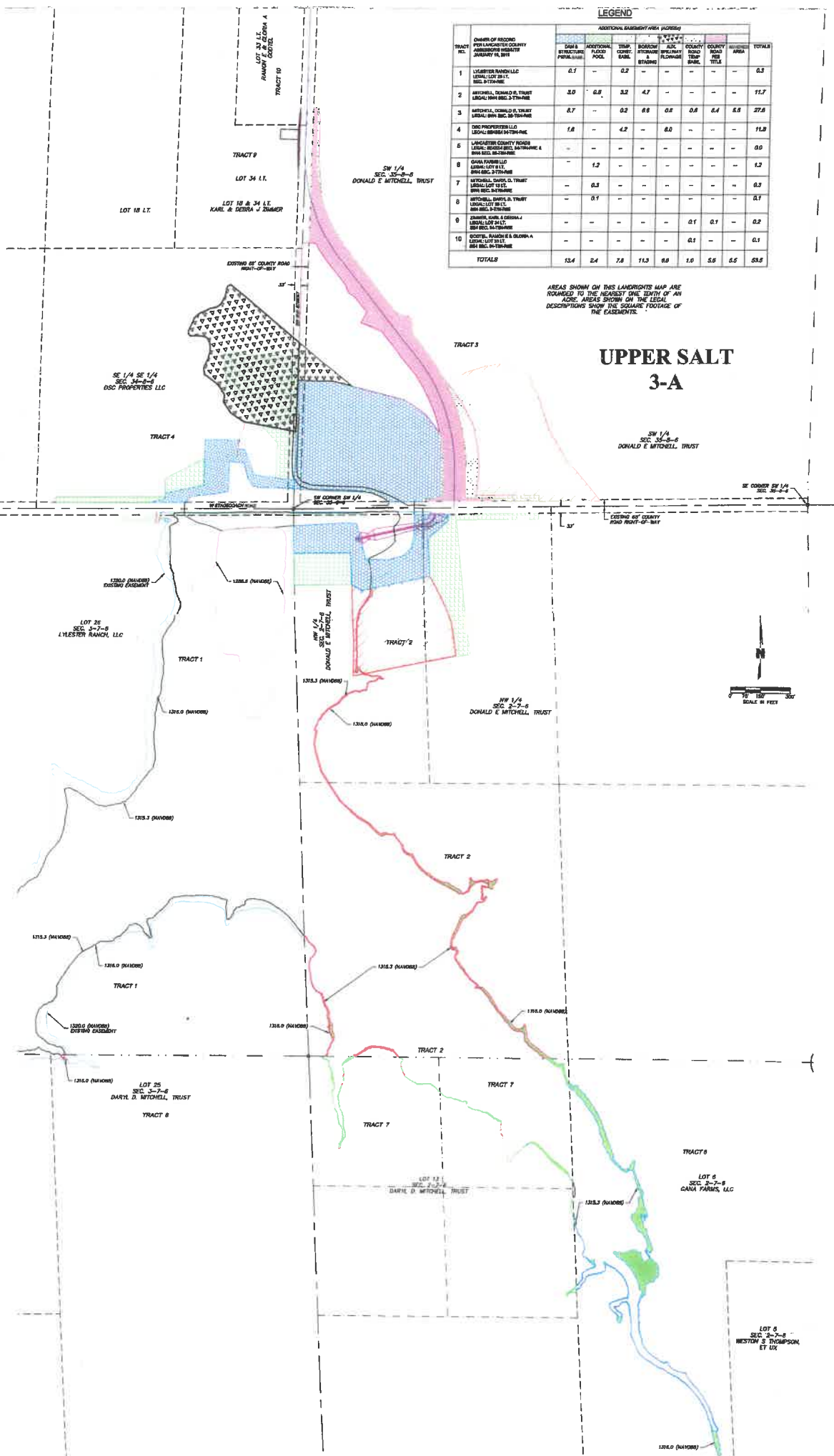
AREAS SHOWN ON THIS LANDRIGHTS MAP ARE
ROUNDED TO THE NEAREST ONE TENTH OF AN
ACRE. AREAS SHOWN ON THE LEGAL
DESCRIPTIONS SHOW THE SQUARE FOOTAGE OF
THE EASEMENTS.

LEGEND

TRACT NO.	OWNER OF RECORD FOR LANDOWNER COUNTY RECORDS REGISTERED JANUARY 16, 2015	ADDITIONAL EASEMENT AREA (ACRES)										TOTALS
		SW 1/4 SEC. 3-7-8	ADDITIONAL FLOOD POOL	TEMP. CONCRETE EMBL.	ROCKWELL STONE & SANDWICH	ALC. (SHELLS) (FLORIDA)	COUNTY ROAD TEMP. EMBL.	COUNTY ROAD TEMP. EMBL.	ADDITIONAL AREA	ADDITIONAL AREA	ADDITIONAL AREA	
1	LYLESTER RANCH LLC LEGAL LOT 25 LT. SEC. 3-7-8	0.7	-	0.2	-	-	-	-	-	-	-	0.9
2	MITCHELL, DONALD E. TRUST LEGAL SW 1/4 SEC. 3-7-8	3.0	0.8	3.2	4.7	-	-	-	-	-	-	11.7
3	MITCHELL, DONALD E. TRUST LEGAL SW 1/4 SEC. 3-7-8	0.7	-	0.2	0.8	0.8	0.8	0.4	0.8	-	-	27.8
4	DAC PROPERTIES LLC LEGAL SW 1/4 SEC. 3-7-8	1.8	-	4.2	-	0.0	-	-	-	-	-	11.8
5	LANCASTER COUNTY FISHES LEGAL SW 1/4 SEC. 3-7-8	-	-	-	-	-	-	-	-	-	-	0.0
6	GAFF FARMS LLC LEGAL LOT 6 LT. SEC. 3-7-8	-	1.2	-	-	-	-	-	-	-	-	1.2
7	MITCHELL, DONALD E. TRUST LEGAL SW 1/4 SEC. 3-7-8	-	0.3	-	-	-	-	-	-	-	-	0.3
8	MITCHELL, DONALD E. TRUST LEGAL LOT 25 LT. SEC. 3-7-8	-	0.1	-	-	-	-	-	-	-	-	0.1
9	JAMES EARL & GERRALD MITCHELL LLC LEGAL LOT 6 LT. SEC. 3-7-8	-	-	-	-	-	-	0.1	0.1	-	-	0.2
10	COOPER, BAIRD E. & GLOVER A LEGAL LOT 25 LT. SEC. 3-7-8	-	-	-	-	-	-	0.1	-	-	-	0.1
TOTALS		13.4	2.4	7.8	11.3	0.8	1.0	0.8	0.5	0.5	0.5	83.8

AREAS SHOWN ON THIS LANDRIGHTS MAP ARE ROUNDED TO THE NEAREST ONE TENTH OF AN ACRE. AREAS SHOWN ON THE LEGAL DESCRIPTIONS SHOW THE SQUARE FOOTAGE OF THE EASEMENTS.

UPPER SALT 3-A



LOT 6 SEC. 3-7-8 WESTON & THOMPSON, ET UX



2304 Silver Street
Ashland, NE 68003

Phone (402) 944-3387
Fax (402) 944-3386

www.ashland-ne.com

Mayor:

Richard Grauerholz

Council Members:

Jim Anderson
Paul Gossin
Matt Meyer
Bruce Wischmann

City Administrator:

Jessica Quady

City Clerk/Treasurer:

Kathleen Sliva

April 8, 2019

Paul Zillig
Lower Platte South NRD
3125 Portia Street
PO Box 83581
Lincoln, NE 68501-3581

RE: Ashland, NE - Community Assistance Request for Source Water Protection

Dear Mr. Zillig,

The City of Ashland (City) has decided to establish a Drinking Water Protection Management Plan (DWPMP), that will also include the elements necessary for a Nebraska Department of Environmental Quality (NDEQ) Wellhead Protection Plan. The City Council has an interest in locating a long-term water supply and protecting the quality of the current and future water supply sources. A grant application will be submitted to NDEQ's Source Water Protection Program on April 12th to fund a large portion of the project.

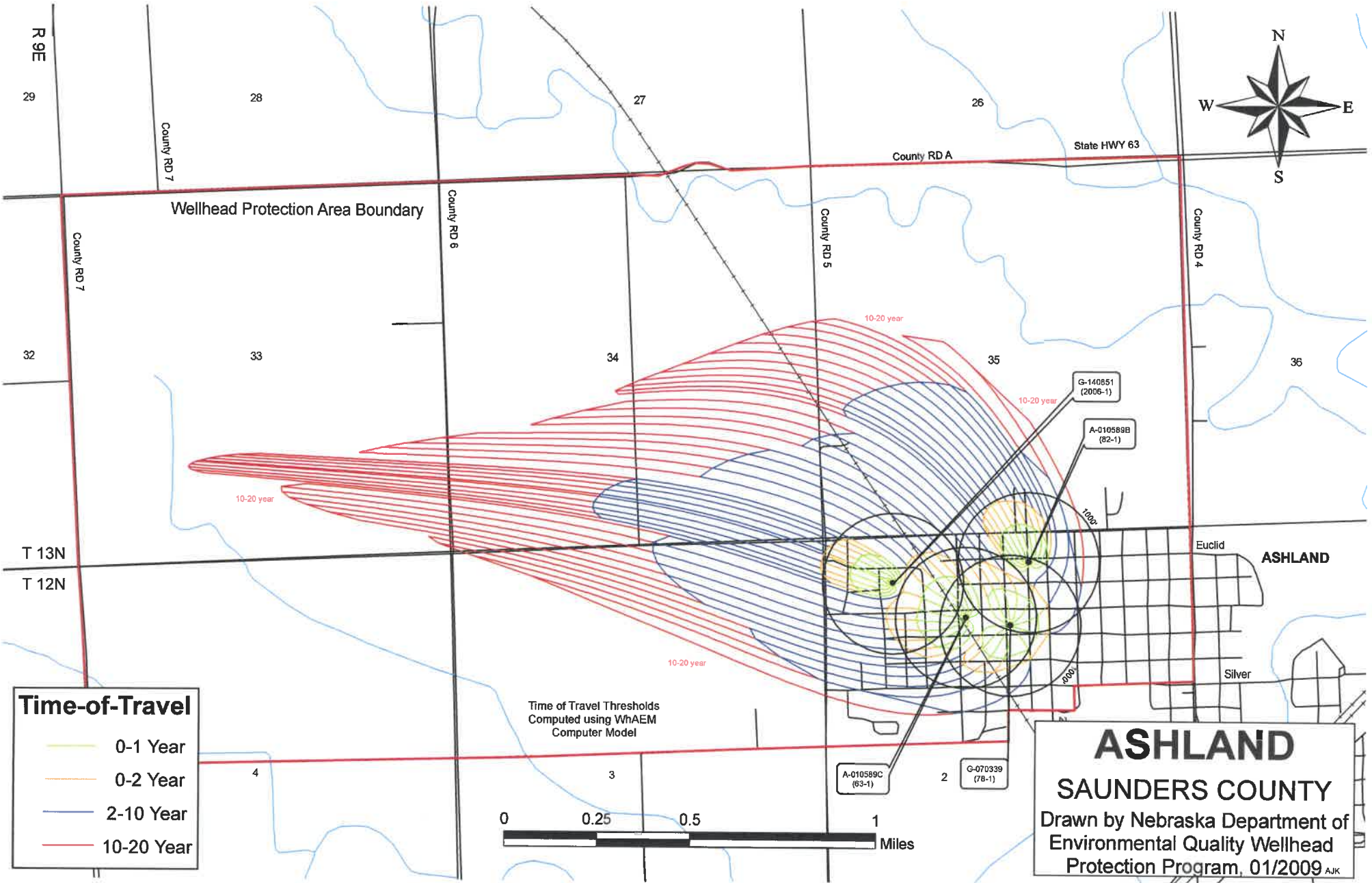
There are several key objectives of the project in addition to the planning effort:

- Objective #1 - Stakeholder and Public Involvement
- Objective #2 - Hydrogeologic Assessment of Aquifer
- Objective #3 - Delineate the 50-year WHP Area
- Objective #4 - Drinking Water Protection Management Plan
- Objective #5 - Well Abandonment
- Objective #6 - WHP Overlay Zone

The intent of this letter is to request on behalf of the City of Ashland that Lower Platte South NRD consider a match of the City's contribution of \$7,500 through the Community Assistance Program. Additionally, we would like to request technical assistance such as well sampling, sharing data, and attending meetings. If you have any questions, please feel free to call me at (402) 944-3387.

Sincerely,

Jessica Quady
City Administrator



Time-of-Travel

- 0-1 Year
- 0-2 Year
- 2-10 Year
- 10-20 Year

Time of Travel Thresholds
Computed using WhAEM
Computer Model

0 0.25 0.5 1 Miles

ASHLAND
SAUNDERS COUNTY
 Drawn by Nebraska Department of
 Environmental Quality Wellhead
 Protection Program, 01/2009 AJK

Memorandum

Date: April 5, 2019

To: Water Resources Subcommittee

From: Nathan Kuhlman, Information Systems Administrator

Subject: Continued Professional Services Contract for Groundwater Database

The LPSNRD Water Resources Department has contracted with Phoenix Web Group (PWG) to develop, maintain and update a new SQL database for the purpose of collecting and housing all historical groundwater information. LPSNRD has requested some modifications and additional work to improve the functionality of the database

Some of the modifications and new functionality would include but not be limited to:

- Addition of a well permits map and ability to print the map to improve the well permit process for staff
- Ability to determine spacing protection of potential new wells (600ft and 1000ft)
- Ability for landowner to determine if new well could be placed in specific location prior to submitting a permit request
- Improved communications for certified acre status and meter reporting for tenants
- Navigational improvements to the database to improve efficiency and function
- Ability to export water meter info into a csv (comma-separated values/Excel) File

Please see attached Change Request for a more detailed description.

District staff is requesting the Water Resources Subcommittee recommend to approve the proposed change request with Phoenix Web Group for the continued development of our database in the amount not to exceed of \$13,600.

Staff recommends that the LPSNRD Water Resources Subcommittee recommend Board approval for the continued development and support of the Water Resources database through Phoenix Web Group, in the amount not to exceed \$13,600.

Change Request

PROJECT (LPS190325)

LPS Management Site

PROJECT MANAGER

Julian Delley

DESCRIPTION

The LPSNRD would like to leverage the current management site's data to more efficiently compare potential well construction to existing wells. To achieve this, a new Well Permits Map interface will be added to the site. Additional changes have also been requested and are outlined below.

CHANGE REQUEST SPECS

The following changes are to be made to the Management Site:

- Construction Permits menu option to be changed to Well Permits
- Addition of a new Well Permits map
 - Ability to display wells with a 600ft radius as well as a 1000ft radius
 - Ability to enter coordinates and view entered location on map with a 600ft radius as well as a 1000ft radius
 - Display well permit information to the left of the map
- Ability to print Well Permits map
- Ability to select a well from Well Permits page and open the map on its location
- Addition of Certified Acres to the Group Mailing page
- Addition of Tenant Meter Usage Letters to the Group Mailing page
- Ability to view associated meter info on the Well Edit page
- Ability to assign a well or meter to a person from the Edit Person page, dependent on the person's Well Tenant value and Meter Tenant value
- Meters Index changes:
 - Removal of SMA column
 - Addition of Well Ref column
- Addition of the following information to Meter CSVs:
 - Reg CD
 - Location
 - Well Ref
 - Last Inspection Date
 - Legal Description
 - Whether or not a photo has been uploaded

ESTIMATED TIME

3 to 5 weeks depending on the time it takes for the client to give feedback.

Client feedback is required within 2 weeks of PWG posting to beta for review.

If no feedback is received by the end of that 2 weeks, further changes may trigger a new/additional change order.

Upon submission for final review, the LPSNRD will have 30 days to review the product and report any issues found.

ESTIMATED COST AND PAYMENT SCHEDULE

The estimated cost of adjustment is \$13,600.

An initial deposit of 50% will be due at signing. 50% will be invoiced once the changes are submitted for final review.

Beginning of Project - \$6,800

Final Payment - \$6,800

The customer is responsible for paying applicable taxes in addition to the prices above. It is recognized that LPSNRD is a tax exempt political subdivision.

CLIENT SIGNATURE: _____

DATE: _____

PWG SIGNATURE: _____

DATE: _____



LOWER PLATTE SOUTH
natural resources district

3125 Portia Street | P.O. Box 83581 • Lincoln, Nebraska 68501-3581 | P: 402.476.2729 • F: 402.476.6454 | www.lpsnrd.org

TO: Water Resource's Subcommittee

FROM: Dan Schulz, Resources Coordinator *Dan*

DATE: April 5, 2019

SUBJECT: Dwight-Valparaiso-Brainard Special Management Area Advisory Group Meeting

The advisory group met at 5:30PM in the Valparaiso fire hall. Advisory group members present were Leo Benes representing local business owners; Vaden Hellerich representing gravity irrigators; Jerome Kudlacek representing dryland farmers; Lawrence Stuchlik representing sprinkler irrigators; and Larry Urbanek representing the Village of Dwight, Nebraska. Others present were Robert C. Andersen – Chair, Water Resources Subcommittee; Dick Ehrman, Steve Herdzina and Dan Schulz.

Attached is the sign in sheet, agenda and the various reports covered during the meeting. Agenda item #6 was a discussion on four topics concerning the upcoming revisions to the District's rules and regulation for the special management area. The first topic discussed was the 3 year rolling allocation vs. the 3 year allocation which is currently in effect. (see attachment DVB SMA Allocation Scenarios). At last year's meeting, there was discussion on a 3-year rolling allocation and how that provides irrigators with more management flexibility. In the scenarios, it was pointed out that under the three year allocation a sprinkler irrigator could pump more water (27 inches) than in the rolling allocation (21 inches) during a three year period. The same is true for a gravity system were an irrigator can pump 36 inches over three years versus 30 inches in a rolling allocation.

The consensus of those advisory group members present was to recommend the Board of Directors change the three year allocation to a rolling three year allocation (the rolling three year allocation will be the same amount of water that can be pumped in the current three year allocation – 21 inches over any three year period with no more than 9 inches pumped in any one year).

The next topic was escalating penalties for exceeding the three year allocation. Points made by the members were:

- There's only been one violation since allocations were set.
- It appears the violation was not intentional.
- Violations should be on the person not the well
- A new operator (non-violator) is penalized if the landowner changed operators after the violation occurred. There are many absentee landowners in agriculture.
- One violator indicates there's been good cooperation by the irrigators following the rules.
- Why fix a problem that doesn't exist.
- The need for the education of the violator

The consensus of the members was escalating violations are not necessary.

The third topic was to change the gravity allocation (30 inches over three years not to exceed 12 inches in any one year) to the sprinkler allocation (21 inches over three years not to exceed 9 inches in any one year). The members discussed there's not much gravity being used anymore which they pointed out shows up on the water use reports. Staff indicated some directors were wanting to promote less water use and it takes more water to cover a gravity field than a sprinkler system.

The consensus of the members was to recommend the Board of Directors change the gravity system allocation to the sprinkler system allocation (all systems allocation of 21 inches over three years not to exceed 9 inches in any one year).

The fourth topic was to discuss maintaining the three year allocation until Board action changes the allocation. At the end of each three year allocation, the District's regulations requires the District to review and evaluate the three year

allocation. The current three year period ends December 2019 District staff explained this would make it unnecessary to restate the rules & regulations to just reaffirm the allocation every three years. The three year allocation – 21 inches total water pumped with no more than 9 inches pumped in any one year.

Staff also asked about the need to continue holding yearly meetings. Members mentioned less than half of the 12 members came this year and indicated they wouldn't need to meet unless the Board takes action that would impact the special management area. They wanted to meet earlier next year to find out if the Board listened to their recommendations.

Sign In

Dwight-Valparaiso-Brainard Special Management Area Advisory Group Date: April 2 2019

Print Name	Address	Phone #	Email Address
1. LARRY W URBANEK	DWIGHT NE	402 310 1031	LURBANEK@HOTMAIL.COM
2. Jerome Kudlark	Brainard NE	402 641 6061	J.K.Farms@y.com
3. Robert C Andersen	Lincoln, NE	402-890-6403	rca1947@web.rr.com
4. Lawrence E. Stueblik	Lincoln, NE	402-641-1206	LStueblik@neb.rr.com
5. Leo Benes	Valparaiso	450-3583	leoalybenes@hotmail.com
6. Vaclav Hellerich	Valparaiso	549-4880	hellerich@neb.rr.com
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AGENDA
DWIGHT-VALPARAISO-BRAINARD
SPECIAL MANAGEMENT AREA ADVISORY GROUP MEETING
VALPARAISO FIRE HALL
APRIL 2, 2019 AT 5:30PM

- | | |
|--|---------------|
| 1. Introductions | Dan Schulz |
| 2. Ground Water Use Report Summer 2018 | Dan Schulz |
| 3. Ground Water Monitoring Report | Dick Ehrman |
| 4. Stream Gage Data Report | Dick Ehrman |
| 5. Weather Outlook Summer 2019 | Dick Ehrman |
| 6. Special Management Area Rules & Regulations | Ehrman/Schulz |
| a. 3 Year Rolling Allocation vs. 3 Year Allocation | |
| b. Escalating Penalties for Exceeding Allocation | |
| c. Change Gravity Allocation to Sprinkler Allocation | |
| d. Maintain Allocation Until Board Action | |
| 7. Other Items | |

WellID	OwnerID	RegCD	Type	2017 In./Acre	17 Crop	2018 In./Acre	18 Crop	Inches Remaining	# Acres
42609	5738	G-035514	Pivot	5.05	Corn	2.81	Beans	13.14	44.05
75968	10829	G-067893	Pivot	4.25	Corn	2.45	Beans	14.30	147
63095	10829	G-055487	Pivot	2.35	Corn	2.52	Beans	16.13	139.82
59165	11697	G-051628	Pivot	3.42	Beans	3.42	Corn	14.16	62
100479	12880	G-088469	Pivot	4.19	Corn/Beans	3.34	Corn/Beans	13.47	123.31
62180	14517	G-054590	Pivot	5.18	Corn	1.49	Beans	14.33	58
27658	23053	G-021357	Pivot	0.00	Corn	0.00	Beans	21.00	0
42762	23053	G-028454	Pivot	5.95	Corn	4.76	Beans	10.29	146.94
62178	30815	G-054588	Pivot	2.89	Corn/Beans	0.20	Corn/Beans	17.91	73.2
73244	47408	G-065265	Pivot	3.17	Corn/Beans	1.21	Corn/Beans	16.62	137
139478	55173	G-115762	Pivot	6.73	Corn/Beans	1.89	Corn/Beans	12.38	171.74
106129	57360	G-090758	Pivot	2.27	Corn	0.46	Beans	18.27	91
218913	71235	G-167593	Pivot	1.64	Beans	0.39	Corn	18.97	75
161032	78106	G-130072	Pivot	3.18	Corn/Beans	0.36	Corn/Beans	17.46	132
225574	81094	G-060001	Pivot	2.54	Beans	2.98	Corn	15.48	135
199974	81094	G-048413	Pivot	3.53	Beans	3.30	Corn	14.17	133.84
78048	81094	G-069885	Pivot	2.98	Corn	2.31	Beans	15.71	133.81
78049	81094	G-069886	Pivot	3.74	Beans	2.14	Corn	15.12	136.53
73486	81094	G-065496	Pivot	3.05	Beans	2.99	Corn	14.96	98.12
225573	81094	G-071040	Pivot	3.70	Corn	1.56	Beans	15.74	134.37
199848	84678	G-159534	Pivot	4.10	Corn	1.13	Beans	15.77	131.8
130521	84678	G-110061	Pivot	3.49	Beans	2.21	Corn	15.30	124.5
220808	104516	G-166091	Pivot	3.24	Beans	1.57	Corn	16.19	122.5
146555	106267	G-123074	Pivot	3.44	Corn	0.21	Beans	17.35	137
57630	114955	G-050130	Pivot	1.90	Beans	0.94	Corn	18.16	36.52
220089	115777	G-167675	Pivot	4.33	Beans	3.59	Corn	13.08	137.4
210156	116772	G-158805	Pivot	3.31	Corn/Beans	2.44	Corn/Beans	15.25	122.9
218911	120950	G-166999	Pivot	1.67	Corn	0.62	Beans	18.71	89
218382	120950	G-167390	Pivot	2.90	Corn	0.33	Beans	17.77	197
219463	121690	G-167391	Pivot	3.09	Corn/Beans	0.31	Corn/Beans	17.60	103.5
225147	121973	G-032248	Pivot	4.47	Corn/Beans	1.67	Corn/Beans	14.86	121.85
220087	123883	G-167966	Pivot	3.24	Corn	0.36	Beans	17.40	129.93
222540	122926	G-175088	Pivot	3.47	Corn	0.004	Beans	17.53	108.88

WellID	OwnerID	RegCD	Type	2017 in./Acre	17 Crop	2018 in./Acre	18 Crop	Inches Remaining	# Acres
11689	44105	G-007355	Sprinklers	4.85	Grass	5.54	Grass	10.61	4
113063	797	G-054996	Furrow	0.52	Corn/Beans	0.02	Corn/Beans	29.46	122
35098	5738	G-028359	Furrow	0.00	Corn	0.00	Beans	30.00	23.45
42818	8907	G-035717	Furrow	0.00	Alfalfa	0.00	Alfalfa	30.00	51.74
62179	30813	G-054589	Furrow	2.11	Corn/Beans	0.00	Corn/Beans	27.89	76
49333	84830	G-042048	Furrow	3.30	Corn	0.00	Beans	26.70	34.36
49334	84916	G-042049	Furrow	5.67	Corn	0.00	Beans	24.33	38.5
30845	84917	G-024364	Furrow	0.89	Beans	0.00	Corn	29.11	49
49332	84918	G-042047	Furrow	1.38	Corn/Beans	0.00	Corn/Beans	28.62	44.06
77857	95232	G-069699	Furrow	5.35	Corn	0.00	Beans	13.55	48.4
40554	95232	G-033528	Furrow	2.33	Beans	0.84	Corn	26.83	77.3
63015	97519	G-055407	Furrow	0.00	Corn	0.00	Beans	30.00	27.82
62177	37382	G-054587	Furrow	0.00	Corn/Beans	0.00	Corn/Beans	30.00	42

(18.9 in)

Average = 3.02

Average = 1.36

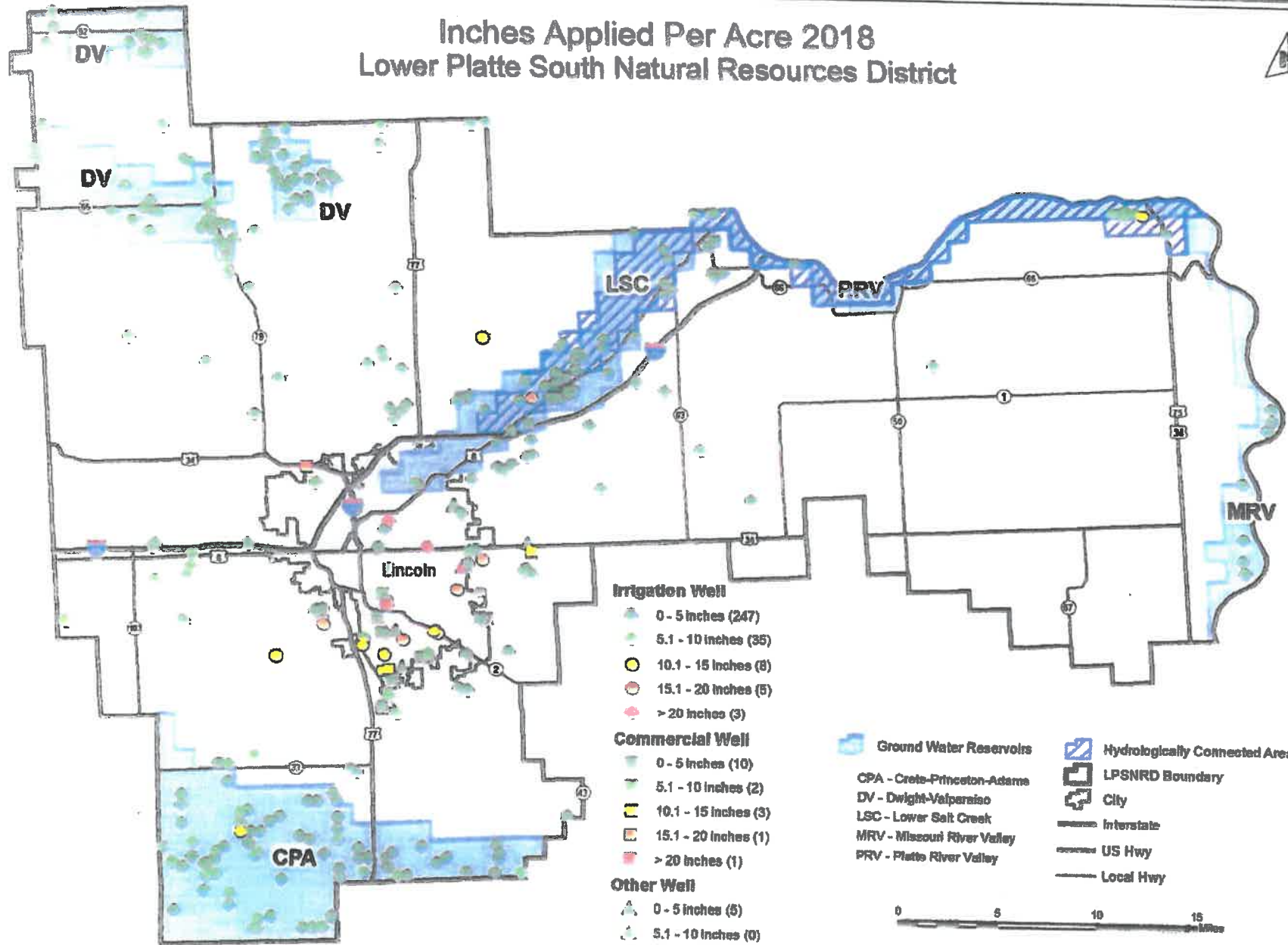
Total Pivot Acres 3739.51
Total Furrow Acres 634.63

WellID	OwnerID	RegCD	Type	2017 in./Acre	17 Crop	2018 in./Acre	18 Crop	# Acres
76321	12338	G-068240	Pivot	0.00	Beans	0.29	Corn	140
221014	43873	G-166327	Pivot	0.62	Beans	2.12	Corn	134.5
63287	11408	G-055678	Pivot	1.02	Corn/Beans	0.00	Corn/Beans	168.2
56044	43873	G-048577	Pivot	1.09	Corn	1.33	Beans	65
48988	13409	G-041721	Pivot	1.30	Corn	0.91	Beans	71
223782	123362	G-170027	Pivot	1.82	Corn	0.60	Beans	123.9
62181	99191	G-054591	Pivot	1.97	Corn/Beans	1.09	Corn/Beans	161.6
222541	122927	G-167617	Pivot	2.02	Corn	0.62	Beans	70
62648	33327	G-055048	Pivot	2.29	Corn/Beans	0.00	Corn/Beans	100
54498	46449	G-047069	Pivot	2.39	Corn/Beans	0.35	Corn/Beans	115
61753	33395	G-054174	Pivot	2.61	Corn/Beans	0.00	Corn/Beans	49.7
61752	33395	G-054173	Pivot	2.75	Corn/Beans	0.00	Corn/Beans	67
223781	123362	G-170067	Pivot	2.80	Corn/Beans	0.96	Corn/Beans	140
64577	40777	G-056921	Pivot	3.00	Corn/Beans	0.61	Corn/Beans	120
207184	115585	G-159454	Pivot	3.14	Beans	1.95	Corn	152.4
62726	26485	G-055125	Pivot	3.27	Corn	0.97	Beans	131.6
133462	46449	G-110785	Pivot	3.46	Corn/Beans	0.50	Corn/Beans	134
58085	26485	G-050570	Pivot	3.55	Beans	3.23	Corn	127.6
220809	122393	G-166326	Pivot	3.80	Corn	0.94	Beans	120
156315	64186	G-127247	Pivot	3.87	Corn/Beans	0.00	Corn/Beans	85.8
83310	81094	G-074837	Pivot	4.03	Corn	2.98	Beans	131.85
73487	26712	G-065497	Pivot	5.37	Corn	2.19	Beans	96.7
191121	97905	G-148626	Pivot	5.74	Corn	1.33	Beans	33.78
19119	35270	G-013761	Furrow	0.00	Beans	0.00	Corn	25
41842	115374	G-034779	Furrow	2.66	Beans	0.00	Corn	39.4

Average = 2.58

Average = 0.92

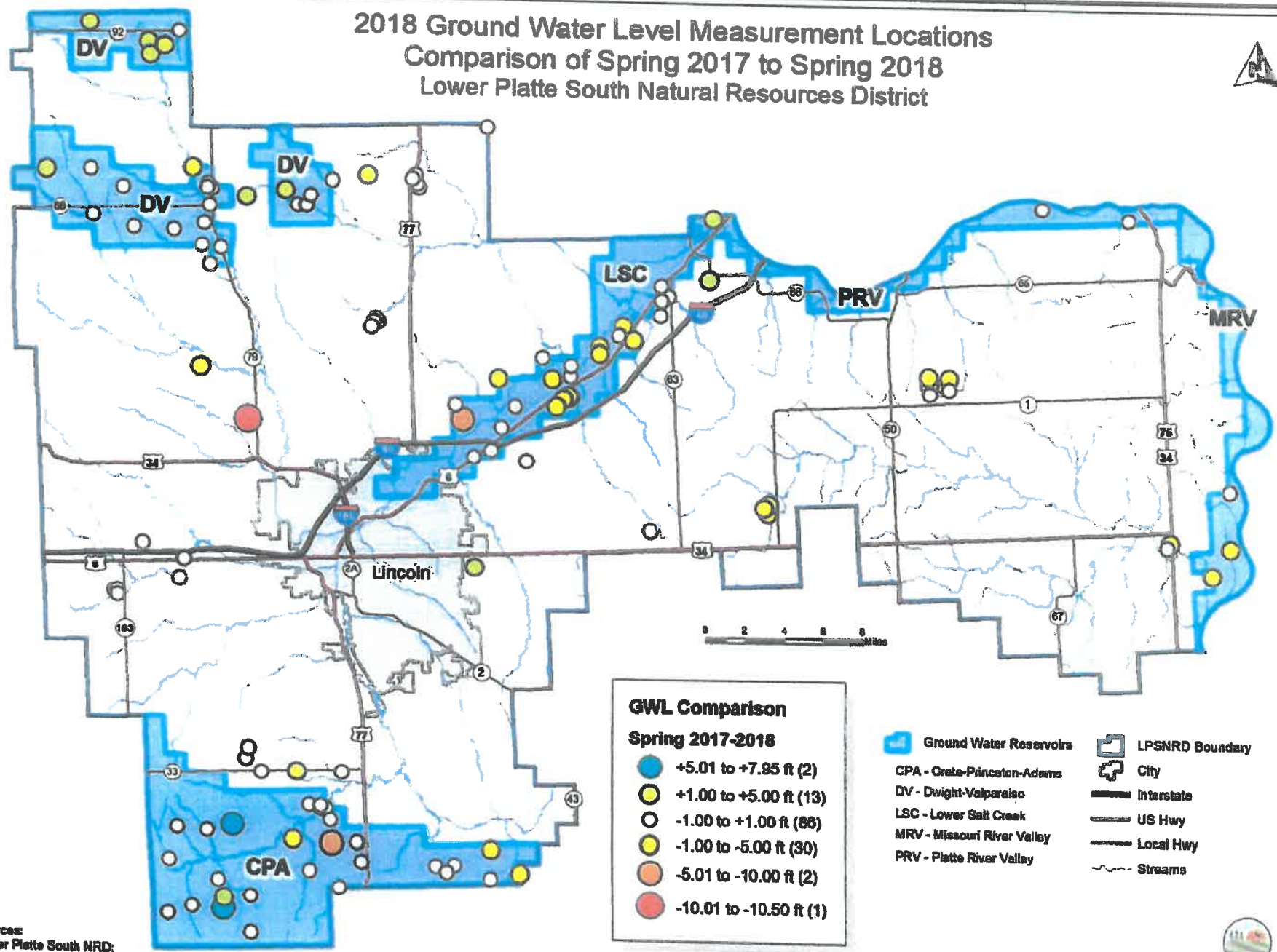
Inches Applied Per Acre 2018 Lower Platte South Natural Resources District



Sources:
Lower Platte South NRD;
Nebraska Dept. of Natural Resources;
Nebraska Dept. of Roads

Map Created By: LPSNRD, et al
Date Created: February 2019

2018 Ground Water Level Measurement Locations Comparison of Spring 2017 to Spring 2018 Lower Platte South Natural Resources District



GWL Comparison
Spring 2017-2018

	+5.01 to +7.95 ft (2)
	+1.00 to +5.00 ft (13)
	-1.00 to +1.00 ft (88)
	-1.00 to -5.00 ft (30)
	-5.01 to -10.00 ft (2)
	-10.01 to -10.50 ft (1)

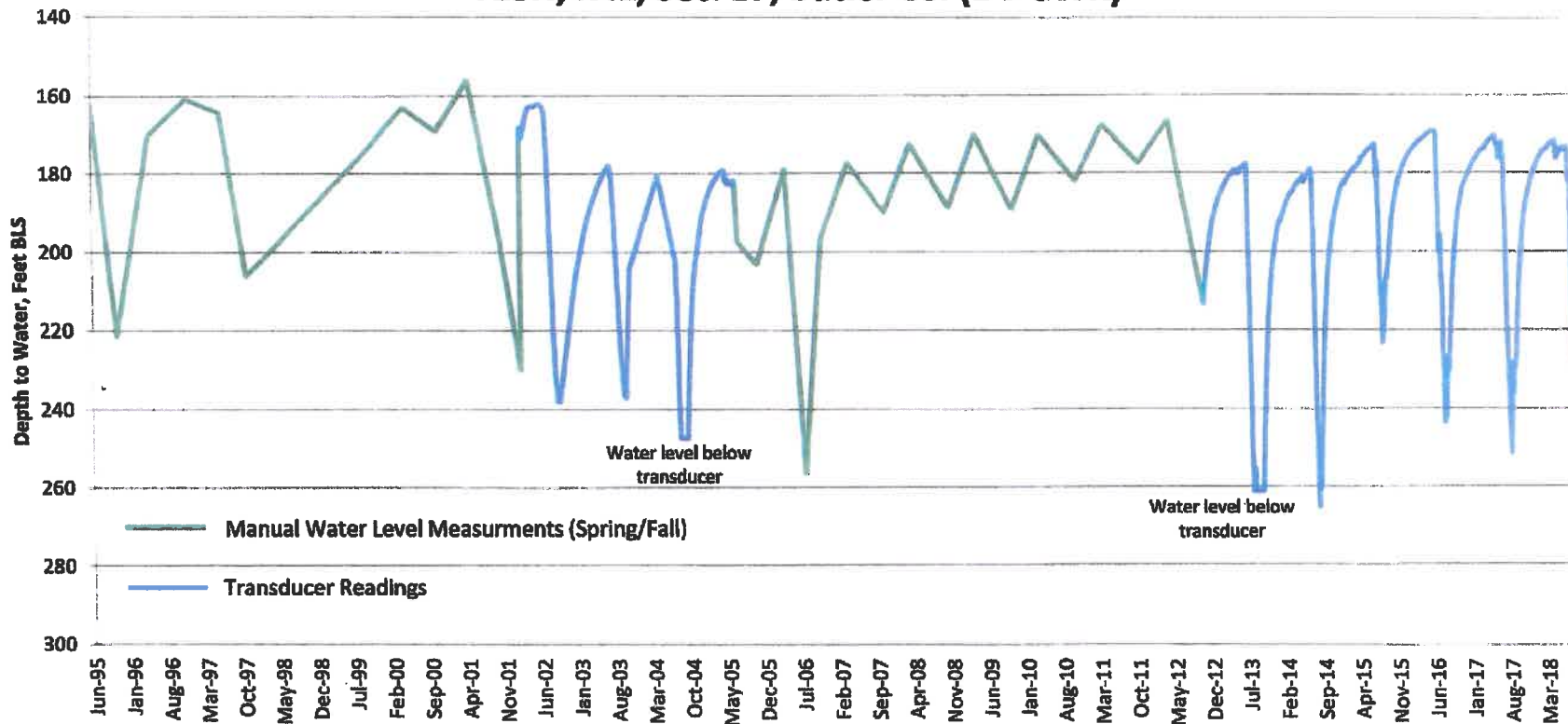
- Ground Water Reservoirs
- LPSNRD Boundary
- CPA - Crete-Princeton-Adams
- City
- DV - Dwight-Valparaiso
- Interstate
- LSC - Lower Salt Creek
- US Hwy
- MRV - Missouri River Valley
- Local Hwy
- PRV - Platte River Valley
- Streams

Sources:
Lower Platte South NRD;
Nebraska Dept. of Natural Resources;
Nebraska Dept. of Roads

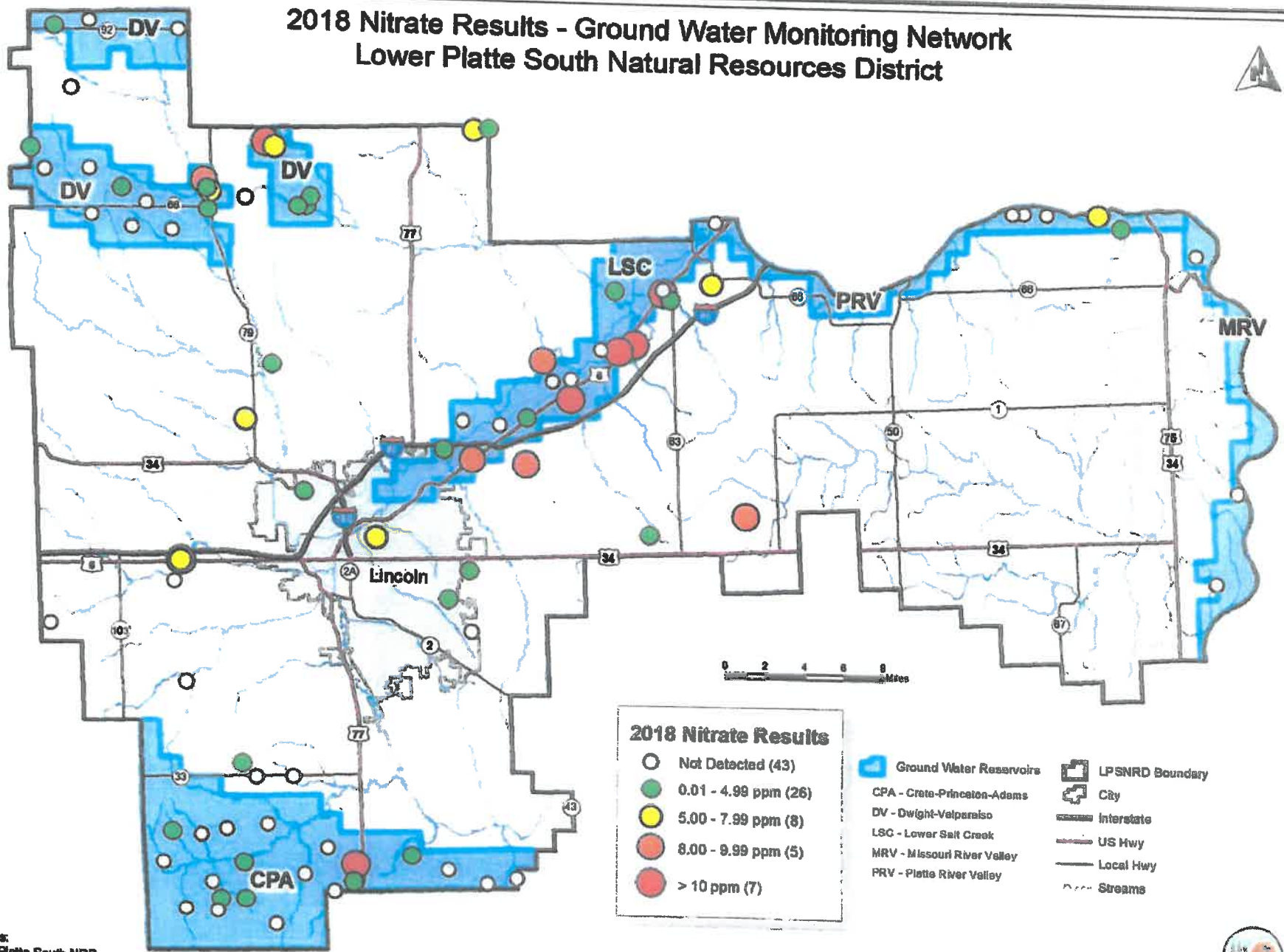


Map Created By: LPSNRD, sdr
Date Created: February 2019

Dwight Recorder T13N, R4E, Sec. 17, Butler Co. (DV GWR)



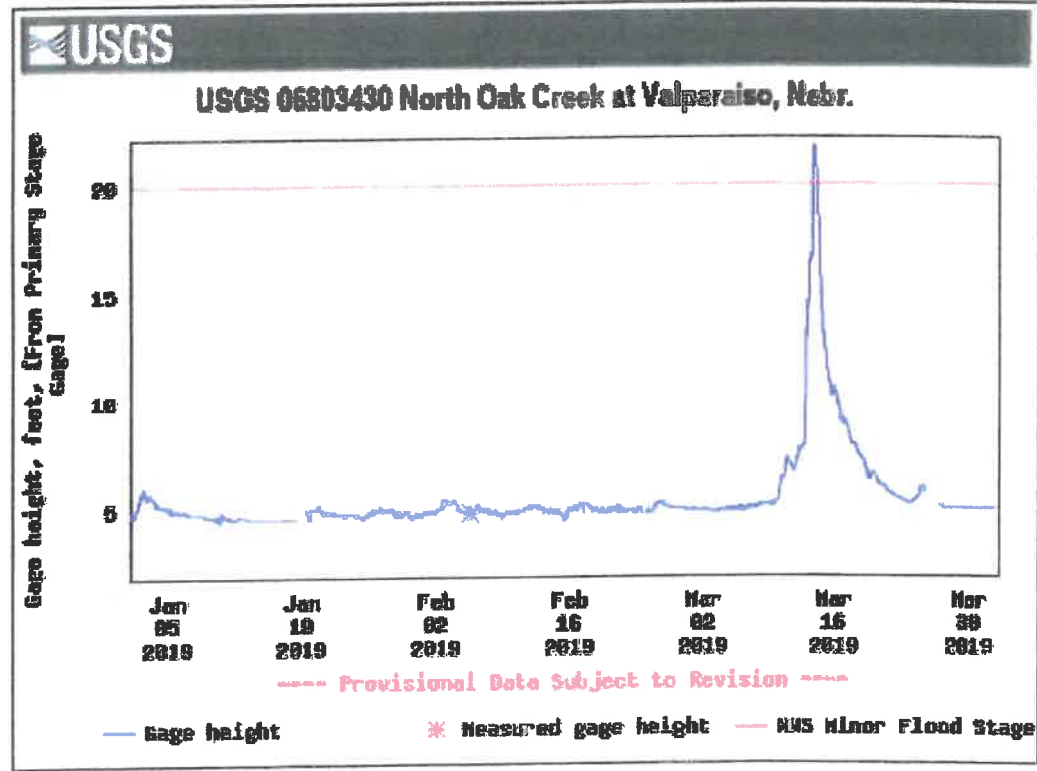
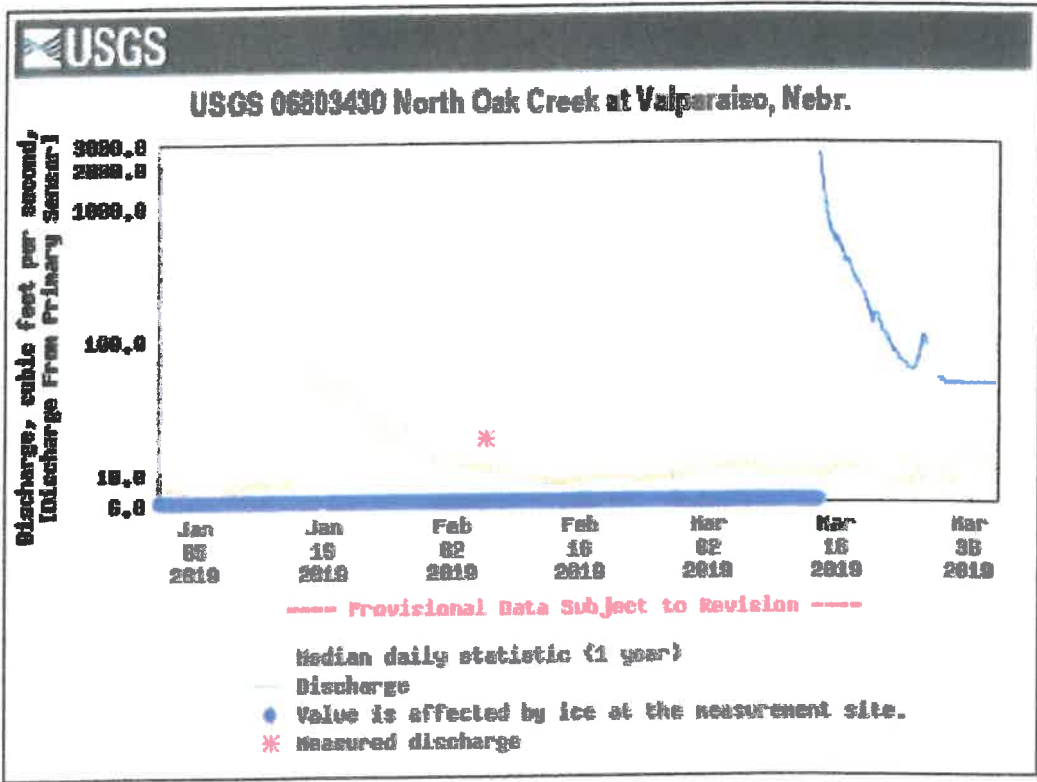
2018 Nitrate Results - Ground Water Monitoring Network Lower Platte South Natural Resources District



Sources:
Lower Platte South NRD;
Nebraska Dept. of Natural Resources;
Nebraska Dept. of Roads

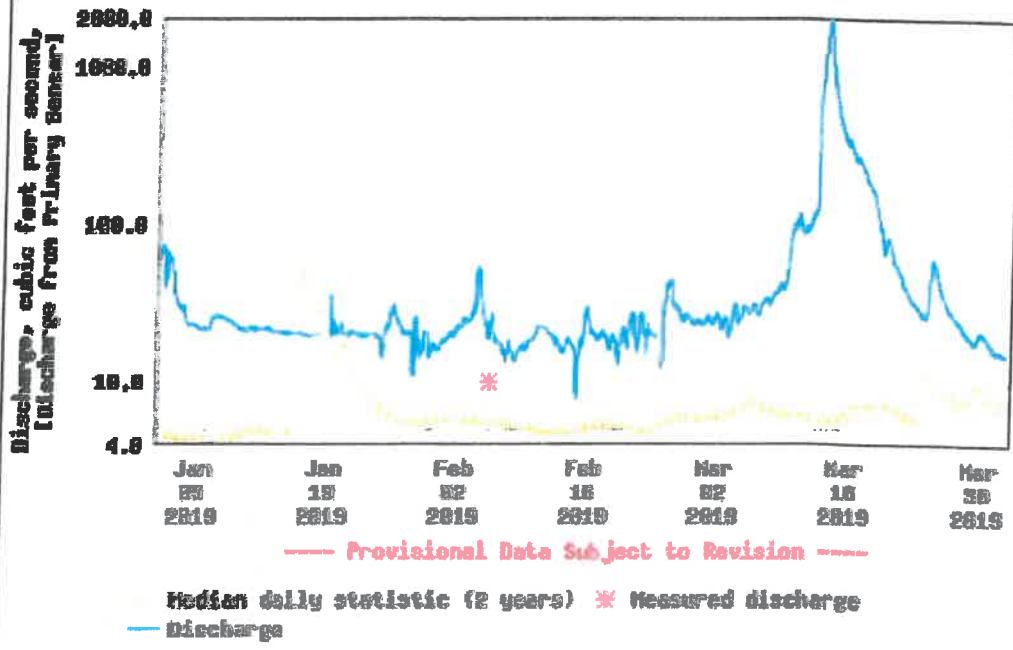


Map Created By: LPSNRD, et al
Data Created: February 2019

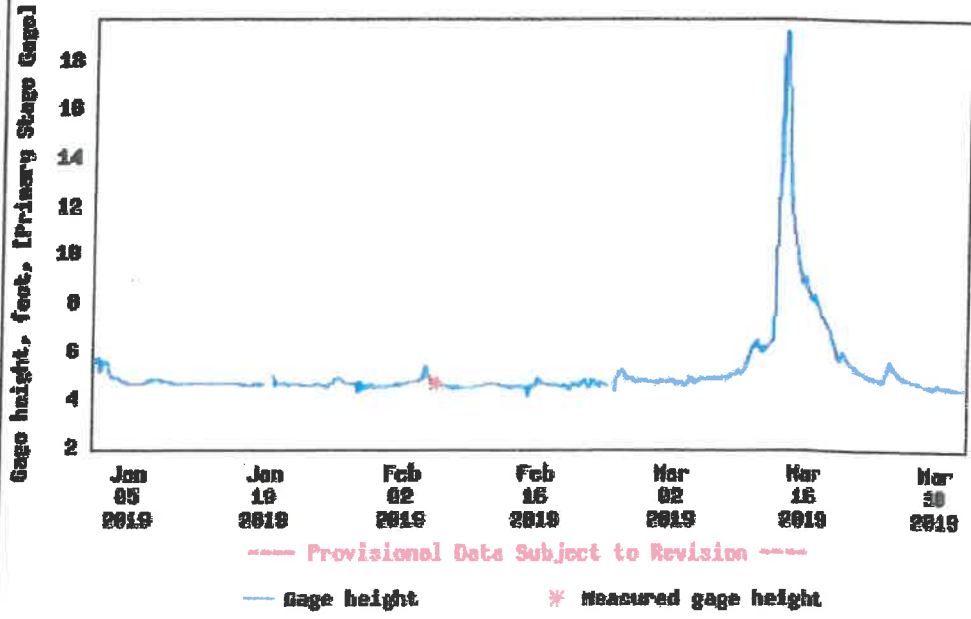




USGS 06803420 North Oak Creek near Touhy, Nebr.



USGS 06803420 North Oak Creek near Touhy, Nebr.



DVB SMA Allocation Scenarios

3-Year Allocation for Pivot (21 inches, Max = 9 Inches)

A pivot irrigator could start the first year of the 3-Year allocation by using 3.0 inches. This would leave that irrigator with 18.0 inches. In the second year, the irrigator uses 9.0 inches (max), which leaves them with 9.0 inches (max) for the final year of the 3-Year allocation period.

In the preceding 3-Year allocation, same pivot irrigator could start the first year of the 3-Year allocation by using 9.0 inches (max). This would leave the irrigator with 12.0 inches. In the second year of the allocation, the irrigator uses 9.0 inches (max) and would allow the irrigator to use 3.0 inches in the final year of the 3-Year allocation.

This scenario of two consecutive 3-Year Allocation periods would allow a pivot irrigator to use 9.0 inches (max) in four consecutive years.

Type	First 3-Year Allocation			Second 3-Year Allocation			3 Yr Totals
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	
Pivot	3.00	9.00	9.00	9.00	9.00	3.00	21.00

A pivot irrigator could start the first year of the 3-Year allocation by using 5.0 inches. This would leave that irrigator with 16.0 inches. In the second year, the irrigator uses 7.0 inches, which leaves them with 9.0 inches (max) for the final year of the 3-Year allocation period.

In the preceding 3-Year allocation, same pivot irrigator could start the first year of the 3-Year allocation by using 9.0 inches (max). This would leave the irrigator with 12.0 inches. In the second year of the allocation, the irrigator uses 9.0 inches (max) and would allow the irrigator to use 3.0 inches in the final year of the 3-Year allocation.

This scenario of two consecutive 3-Year Allocation periods would allow a pivot irrigator to use 9.0 inches (max) in three consecutive years.

Type	First 3-Year Allocation			Second 3-Year Allocation			3 Yr Totals
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	
Pivot	5.00	7.00	9.00	9.00	9.00	3.00	21.00

3-Year Allocation for Gravity (30 inches, Max = 12 Inches)

A gravity irrigator could start the first year of the 3-Year allocation by using 6.0 inches. This would leave that irrigator with 24.0 inches. In the second year, the irrigator uses 12.0 inches (max), which leaves them with 12.0 inches (max) for the final year of the 3-Year allocation period.

In the preceding 3-Year allocation, same gravity irrigator could start the first year of the 3-Year allocation by using 12.0 inches (max). This would leave the irrigator with 18.0 inches. In the second year of the allocation, the irrigator uses 12.0 inches (max) and would allow the irrigator to use 6.0 inches in the final year of the 3-Year allocation.

This scenario of two consecutive 3-Year Allocation periods would allow a gravity irrigator to use 12.0 inches (max) in four consecutive years.

Type	First 3-Year Allocation			Second 3-Year Allocation			3 Yr Totals
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	
Furrow	6.00	12.00	12.00	12.00	12.00	6.00	30.00

3-Year Rolling Allocation (21 inches, max = 9 inches)

A pivot irrigator could start the first year of the rolling allocation by using 9.0 inches. This would leave that irrigator with 12.0 inches remaining for the next two years. In the second year, the irrigator uses 9.0 inches (max), which leaves them with 3.0 inches to use in the third year of the rolling allocation.

Since this is a 3-Year rolling allocation, the pivot irrigator would take the previous two years and total those to get the remaining allocation. Since the irrigator previously used 9.0 inches and 3.0 inches, they would have 9.0 inches (max) remaining. The next year, the irrigator would again take the previous two years, 3.0 inches and 9.0 inches, leaving the irrigator with 3.0 inches remaining.

This scenario of a rolling allocation over six years would allow a pivot irrigator to use 9.0 inches (max) in four out of the six years. However, the irrigator would not be able to use 9.0 inches (max) in more than two consecutive years.

Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				21 Total		
			21 Total			
		21 Total				
	21 Total					
Pivot	9.00	9.00	3.00	9.00	9.00	3.00

3-Year Rolling Allocation (21 inches, max = 9 inches)

A pivot irrigator could start the first year of the rolling allocation by using 5.0 inches. This would leave that irrigator with 16.0 inches remaining for the next two years. In the second year, the irrigator uses 7.0 inches, which leaves them with 9.0 inches (max) to use in the third year of the rolling allocation.

Since this is a 3-Year rolling allocation, the pivot irrigator would take the previous two years and total those to get the remaining allocation. Since the irrigator used 7.0 inches and 9.0 inches in the previous two years, they would have 5.0 inches remaining. The next year, the irrigator would again take the previous two years, 9.0 inches and 5.0 inches, leaving the irrigator with 7.0 inches remaining.

Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				21 Total		
			21 Total			
		21 Total				
	21 Total					
Pivot	5.00	7.00	9.00	5.00	7.00	9.00

3-Year Rolling Allocation for Gravity (30 inches, max = 12 inches)

A gravity irrigator could start the first year of the rolling allocation by using 6.0 inches. This would leave that irrigator with 24.0 inches remaining for the next two years. In the second year, the irrigator uses 12.0 inches (max), which leaves them with 12.0 inches (max) to use in the third year of the rolling allocation.

Since this is a 3-Year rolling allocation, the gravity irrigator would take the previous two years and total those to get the remaining allocation. Since the irrigator used 12.0 inches (max) and 12.0 inches (max) in the previous two years, they would have 6.0 inches remaining. The next year, the irrigator would again take the previous two years, 12.0 inches and 6.0 inches, leaving the irrigator with 12.0 inches remaining.

Type	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				30 Total		
			30 Total			
		30 Total				
	30 Total					
Gravity	6.00	12.00	12.00	6.00	12.00	12.00