



Annual Report of Water Use Activities in the South Platte Natural Resources District

For the 2019 Basin-Wide Meeting

Report Year: 2018
Meeting Date: July 17, 2019

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**ANNUAL REPORT OF WATER USE ACTIVITIES
IN THE SOUTH PLATTE NATURAL RESOURCES DISTRICT
TO MEET THE REQUIREMENTS OF THE INTEGRATED MANAGEMENT PLAN
FOR THE 2019 BASIN-WIDE MEETING**

I. GENERAL SUMMARY

- A. The following is a compilation of records, statistics and historic conditions of water use which have been tracked by the South Platte Natural Resources District (SPNRD) for 2018. Information in this report summarizes all irrigation related activities for calendar year 2018, and all municipal and industrial activities from August 1, 2017 through July 31, 2018. All information supplied for this summary is available within a GIS database, complete with the locations and attributes. This report has been compiled for the July 17, 2019 Basin-Wide meeting.

II. INTRODUCTION

- A. This report is intended to satisfy the SPNRD tracking and reporting requirements as described by the Monitoring and Studies section of the SPNRD Integrated Management Plan (IMP). The SPNRD will be responsible for tracking the following activities within the District on an annual basis: (1) certification of ground water uses and any changes to these certifications; (2) approved transfers, including all of the information provided with the application and used in the approval of the transfer; (3) any flow meter data collected; (4) any water well construction permits issued; (5) any other permits issued by the SPNRD; (6) any conditions associated with any permits issued; (7) information gathered through the municipal and non-municipal industrial accounting process; (8) any variances issued, including: the purpose, the location, any required offset, the length of time for which the variance is applicable and the reasoning behind approval of the variance; (9) any retirements of irrigated acres or other activities by the SPNRD for the purpose of returning to a fully appropriated condition; (10) information related to any water banking transactions; and (11) offsets provided for depletions resulting from increased consumptive use related to the above listed items.

The items tracked and reported will subsequently be used by the SPNRD and the Nebraska Department of Natural Resources (NeDNR) to measure the success of the controls, incentive measures and other action items contained in the IMP at meeting the goals and objectives of the IMP. Two evaluation processes for measuring success are described in the IMP. The first is an annual evaluation that will forecast the balance of depletions and accretions from the report year through 2048. The second evaluation occurs periodically and will be more robust, including updating and running ground water models. These evaluation processes will be carried out by the SPNRD and the NeDNR after the annual basin-wide meeting. The tracking, reporting, and evaluation processes are described in more detail in the Monitoring and Studies section of the IMP. In addition to the evaluation processes, the information that is tracked and reported will

also be used by the State to help meet requirements of the Platte River Recovery Implementation Program (Program).

III. CERTIFIED ACRES

- A. The SPNRD began certifying ground water irrigated acres in October 2002 and ended the certification process in the first half of 2006. The SPNRD certified irrigated acres are based on historically irrigated acres proven by Farm Service Agency (FSA) maps, tax records or other appropriate documentation.

The SPNRD has two types of certified acres; active and inactive. Inactive acres are any certified acres that belong to wells that are inactive and do not have a flow meter installed and do not receive an allocation. These unused wells are enrolled in a SPNRD program called Temporary Deferment. Active acres are all acres that are being irrigated or have a flow meter installed and therefore receive an allocation. Detailed data regarding the number of certified irrigated acres can be found in Appendix A. Map 1 provides a look at the state designated areas in the SPNRD.

IV. APPROVED TRANSFERS

- A. For 2018, the District approved ten (10) transfers. See Appendix B, Table 1 for a more detailed look at the transfers.
1. Two transfers that the SPNRD Board approved dealt with industrial transfers. The transfers were for irrigation allocation to be used as an offset for a new industrial use.
 2. Two transfers involved moving certified irrigated acres from one location to another as farm management decisions by the producers.
 3. One transfer involved moving irrigation allocation between separate certified irrigated acre tracts as a farm management decision by the producer.
 4. Five transfers involved moving around existing certified acres to allow for a new pivot to be installed. No expansion of acres occurred, just moving existing acres to new locations to make the operator more efficient.

V. WELL CONSTRUCTION PERMITS

A. Supplemental Ground Water Wells

1. The SPNRD issued no supplemental ground water wells.

B. Supplemental Surface Water Wells

1. The SPNRD issued no supplemental surface water well permits.

C. Replacement Wells

1. The SPNRD issued two (2) replacement well permits. One was for a municipal well which needed replaced. The other was for a well that needed to be moved do to

Interstate 80 construction and was approved through variance, VAR-IR-18-Harris, described later in this report.

D. Temporary Wells

1. The SPNRD issued no temporary well permits.

E. De-Watering Wells

1. The SPNRD issued no de-watering well permits.

F. Other Permits

1. The SPNRD issued three new well registration permits. One of these permits was technically for a replacement irrigation well; however, the original well was not decommissioned in the proper time frame so the SPNRD had to issue a new well permit. The other two new permits were both for industrial wells which pump less than 50 gallons per minute.

VI. VARIANCES

A. The SPNRD considers any request that is contrary to existing rules or regulations of the SPNRD or DNR as a variance. The SPNRD has a Variance Advisory Group that reviews and makes recommendations to the SPNRD Board of Directors on all irrigation related variances requested. All industrial and municipal variance requests go directly to the SPNRD Board of Directors. The Board reviews variances on a case-by-case basis, and as the elected governing body; the Board makes the final determination.

The SPNRD approved one variance in 2018. The variance was to allow a replacement well to be drilled, which would not water the same irrigated acres as the original well. The original well was being decommissioned for the Interstate 80 construction project. See Appendix B, Table 2 for more information.

VII. MUNICIPAL AND INDUSTRIAL ACCOUNTING

A. The SPNRD began implementing the Industrial Accounting portion of the IMP in early 2010. Industrial wells were identified through the NeDNR registered well database and had to pump greater than 50 gallons per minute. The SPNRD decided that for an industrial user to obtain a baseline certification they must have pumping history for every year during the five-year period from August 1, 2001 through July 31, 2006. Unless a variance is granted, a user that has not met this five-year pumping history criterion will be given a non-baseline certification, and that user will be responsible for offsetting the water use. The SPNRD allows industrial users who have a non-baseline certification to offset new or expanded uses through transfers including irrigation allocation(s), certified irrigated acres or the District's water bank.

Currently, the SPNRD has twenty-seven (27) non-baseline certifications. Twelve of the twenty-seven had or could have had an active industrial use in 2018 and all water

pumped will be offset by an existing irrigation allocation as agreed upon by the user and the SPNRD Board of Directors. Non-baseline certifications can change annually as temporary transfers expire and get removed from the list, and new temporary transfers are approved by the Board and are added to the list. See Appendix C table for a breakdown of non-baseline industrial uses.

Nineteen industries now have established baselines. These industries either had records of water sales, tax receipts, flow meter readings, electrical power records, previous irrigation pumping history, etc., which could be documented back to August 1, 2001 and used to establish the approved baseline or have had baselines approved through a variance. The baselines were determined in one of three ways. First was by figuring the amount of water consumed by the industry between August 1, 2001 and July 31, 2006; second was by converting certified irrigated acres into an industrial baseline by board approval; and third was by board approval of a variance request. These industries now currently have flow meters installed which are read monthly. None of the previously mentioned industries discharge any water and all pumping is looked at as one hundred (100) percent consumptive use. The SPNRD tracks both industrial and municipal use on an August 1st to July 31st timeframe. See Appendix D for a list of existing industries and how their baselines compare with current pumping.

- B. The SPNRD has certified baselines for all ten municipal water systems in the District. Municipal baselines include information from all wells the municipality uses that pump over 50 gallons per minute. The Chappell, Potter, and Sidney golf courses are all figured into their municipal baselines. Baselines were figured with the best-known data at the time.

Sidney and Kimball discharge some of or all their treated waste water back into Lodgepole Creek. Chappell and Lodgepole previously had discharged waste water back into the creek but in 2015 and 2012, respectively, went to full retention lagoons. The rest of the remaining municipalities' waste water is held in full retention lagoons.

Like industrial baselines, municipal baselines were calculated by documenting usage between August 1, 2001 and July 31, 2006. The highest one year period (August 1st to July 31st) during this time was then used as that municipality's baseline. Appendix E shows the municipal baselines, per capita use, and current year usage.

VIII. IRRIGATION FLOW METER DATA

- A. The SPNRD Board in January 2004 required flow meters to be installed on all irrigation wells. Flow meters were then installed incrementally through March 2009. All certified irrigated acres located in the Lodgepole Creek Valley have had an allocation in place beginning in 2007. The remainder of the District (Tablelands and South Platte Valley) has had an allocation in place since 2009.

The SPNRD Board in October 2015 decided the irrigation allocations for all subareas within the district for the years 2016-2018. Map 2 has a breakdown of allocation amounts per subarea through the end of 2018. In May 2018 the board set the allocations

for the 2019-2021 allocation period. All allocations remained the same as the 2016-2018 allocation period. Map 3 has a breakdown of allocation amounts per subarea through the end of 2021. Appendix F summarizes the allocation history of the SPNRD. Appendix G provides a detailed look at irrigation water usage for the entire SPNRD from 2015 through 2018.

IX. RETIRED ACRES AND OTHER STREAM FLOW ACCRETION ACTIVITIES

- A. The SPNRD will implement measures within the first ten (10) year increment of the IMP to offset an average annual depletion rate of one hundred fifty (150) acre-feet to the North Platte River, four hundred (400) acre-feet to the South Platte River, and one hundred fifty (150) acre-feet to Lodgepole Creek for the period 2043-2048. These rates are the current best estimates and are subject to change based upon new data and information.

Through 2018, the SPNRD retired or decertified 2,003 acres equating to an estimated 763 acre-feet of water benefitting the Lodgepole Creek. The acres retired include 1,700.2 acres located in the over appropriated Lodgepole Creek Valley and 302.8 acres located in the fully appropriated area. See Appendix H for a complete breakdown of all retirement activities.

X. OTHER ACTIVITIES

- A. The SPNRD and North Platte Natural Resources District (NPNRD) began work on a regional ground water model, Western Water Use Model (WWUM), for the two Districts in 2009. This regional model builds upon the modeling work that was completed during SPNRD and NPNRD's time spent participating in COHYST. The SPNRD and NPNRD share a ground water modeler, Thad Kuntz, P.G., with Adaptive Resources, Inc.
- B. In 2018 the SPNRD has been working to decertify irrigated acres in the overappropriated Lodgepole Creek Valley near Oliver Reservoir. Purchase agreements were secured with two landowners which will decertify a total of 109.57 irrigated acres. Conservation easements on these acres should be completed in 2019.
- C. The SPNRD also started work along Western Irrigation District's canal to expand the number of re-use pits which could be used for groundwater recharge during times of excess flow in the South Platte River. The project will expand the number of pits in the SPNRD from six to thirteen. Construction on the project will begin in 2019.

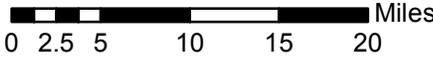
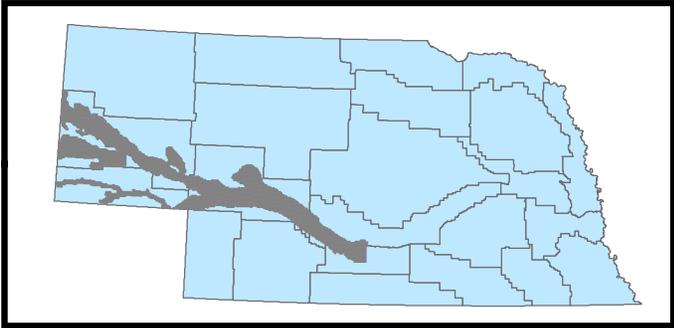
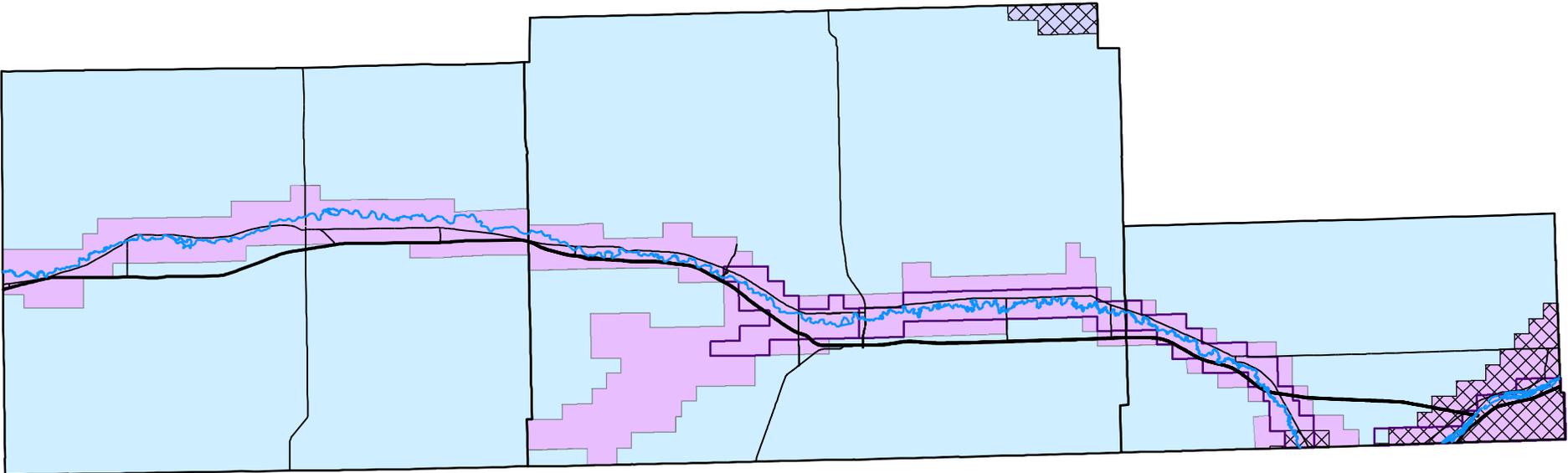
XI. GROUND WATER LEVELS

- A. Tracking and reporting of ground water levels is not required in the IMP. The SPNRD measures 204 observation wells in the spring and fall annually.

Overappropriated, Fully Appropriated and Nebraska New Depletion Plan Areas

Explanation

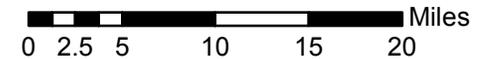
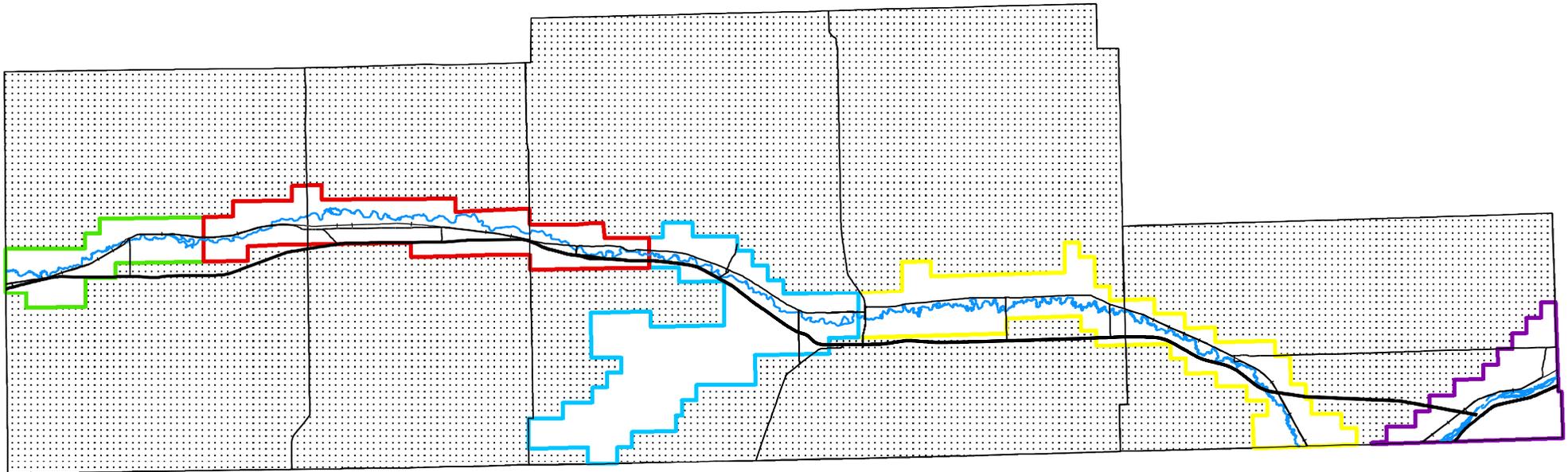
- GW Quality Subareas
- Nebraska New Depletion Plan 28%/40-year Area
- Fully Appropriated
- Over Appropriated



Allocation Subareas and Allocations for 2016 through 2018



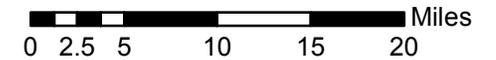
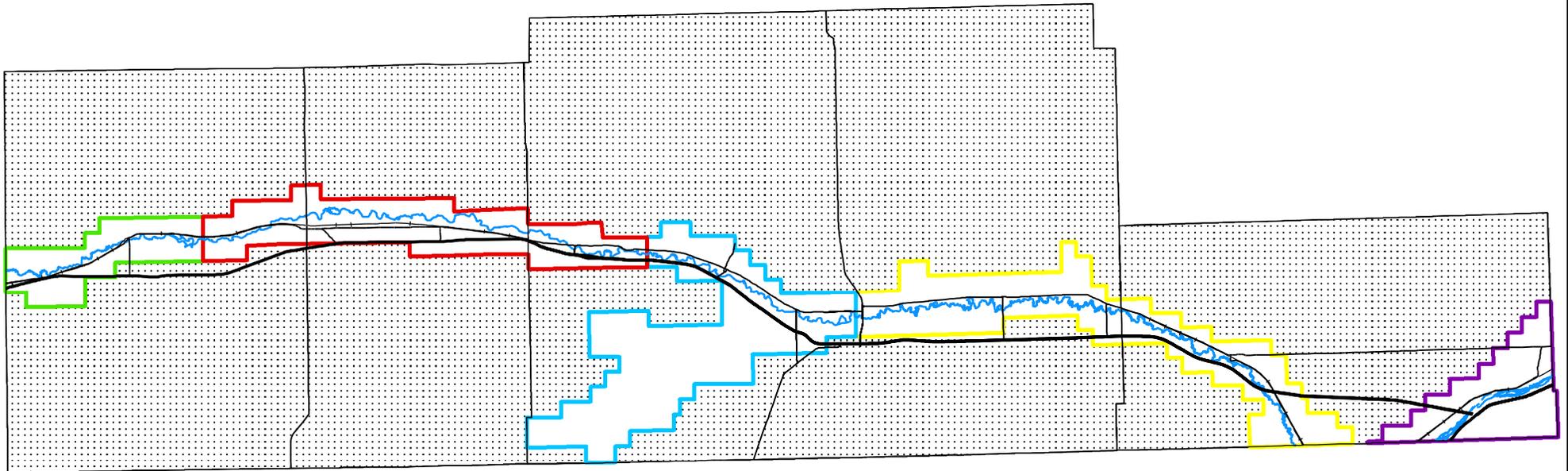
Explanation	
	Pine Bluffs to Oliver Reservoir; 14"/year or 42" for 2016 through 2018
	Oliver Reservoir to Buffalo Bend; 14"/year or 42" for 2016 through 2018
	Buffalo Bend to Sidney; 14"/year or 42" for 2016 through 2018
	Sidney to Colorado; 16"/year or 48" for 2016 through 2018
	South Platte Valley; 16"/year or 48" for 2016 through 2018
	Tablelands; 13"/year or 39" for 2016 through 2018



Allocation Subareas and Allocations for 2019 through 2021



Explanation	
	Pine Bluffs to Oliver Reservoir; 14"/year or 42"
	Oliver Reservoir to Buffalo Bend; 14"/year or 42"
	Buffalo Bend to Sidney; 14"/year or 42"
	Sidney to Colorado; 16"/year or 48"
	South Platte Valley; 16"/year or 48"
	Tablelands; 13"/year or 39"



Appendix A

SPNRD Certified Irrigated Acres

	Kimball	Cheyenne	Deuel	Total	Percentage
Active Overappropriated	16,367	18,881	14,742	49,990	38%
Inactive Overappropriated	510	734	351	1,595	1%
Active Fully-Appropriated	25,646	43,841	9,465	78,952	60%
Inactive Fully-Appropriated	54	993	458	1,505	1%
Total Certified	42,577	64,449	25,016	132,042	100%
Total Cert. Acres in Nebraska New Depletion Plan 28%/40- year Area	0	56	10,499	10,555	

Appendix B

**Table 1
2018 SPNRD Approved Transfers**

NRD PERMIT #	To/From	TOWNSHIP	RANGE	SECTION	ACRES
TR-IND-18 Shoemaker	To	15	57	24	0
	From	15	57	24	
TR-AC-18-Derry	To	13	42	10	21.25
	From	13	42	16	
TR-AI-18-Derry	To	13	42	10	
	From	13	42	16	
TR-IND-Halligan-18	To	14	58	2, 11	
	From	14	58	11	
TR-AC-18-Harris	To	12	42	18	34.7
	From	12	42	7	
PVT-18-Adamson	To	15	57	32, 33	32.6
	From	15	57	31, 32, 33	
PVT-18-Wilkie	To	15	56	5	15.2
	From	15	56	5	
PVT-18-Miller	To	15	54	23, 26	5.6
	From	15	54	23, 26	
PVT-18-Raffleson	To	14	50	36	1.22
	From	14	50	36	
PVT-18-Reich	To	15	56	23	2.22
	From	15	56	23	

**Table 2
2018 SPNRD Approved Variances**

NRD PERMIT #	TOWNSHIP	RANGE	SECTION	ACRES
VAR-IR-18-Harris	12	42	7	0

Appendix C

SPNRD Non-Baseline Industrial Certifications 2018

Well Reg. #	Legal	Industrial Use	Offset Provided By
G-021823	Sec. 12 T16N R57W	Oil Fields	To Be Determined (TBD)
G-022051	Sec. 24 T13N R56W	Oil Fields	TBD
G-014546	Sec. 34 T14N R53W	Oil Fields	TBD
G-022281	Sec. 11 T14N R53W	Oil Fields	TBD
G-134511	Sec. 22 T17N R52W	Oil Fields	TBD
A-002770	Sec. 28 T15N R54W	Oil Fields	TBD
G-022347	Sec. 23 T13N R57W	Oil Fields	TBD
G-022048	Sec. 34 T17N R51W	Oil Fields	TBD
G-023351	Sec. 27 T14N R50W	Oil Fields	TBD
A-004712	Sec. 11 T14N R59W	Oil Fields	Irrigation allocation on tract 14N59W110001*
G-022050	Sec. 19 T14N R55W	Oil Fields	TBD
G-022049	Sec. 19 T14N R55W		
G-074242	Sec. 1 T12N R44W	Sand & Gravel Mine	TBD
A-004408	Sec. 28 T15N R55W	Sand & Gravel Mine	Irrigation allocation on tract 15N55W280004*
G-054269	Sec. 12 T13N R56W	TBD	Irrigation allocation on tract 13N56W120001*
G-019421	Sec. 21 T14N R55W	Oil Fields	TBD
G-019973	Sec. 21 T14N R55W		
G-019423	Sec. 21 T14N R55W		
G-154988	Sec. 6 T12N R43W	Sand & Gravel Mine	Irrigation allocation on tract 12N43W210001*
G-154989	Sec. 6 T12N R43W		
G-154990	Sec. 6 T12N R43W		
G-039899	Sec. 5 T15N R52W	Oil Fields	TBD
G-021179	Sec. 23 T17N R52W	Oil Fields	TBD
G-021621	Sec. 23 T17N R52W		
G-146042	Sec. 13 T15N R56W	Sand & Gravel Mine	Irrigation allocation on tract 15N56W230005*
G-030434	Sec. 2 T12N R55W	Oil Fields	TBD
G-026066	Sec. 2 T12N R55W		
G-041796	Sec. 13 T14N R51W	Sand & Gravel Mine	Irrigation allocation on tract 14N51W130001*
G-003090	Sec. 5 T14N R52W	Interstate Construction	Irrigation allocation on tract 14N52W050002*
G-094357B	Sec. 15 T12N R49W	Wind turbines & Roads	Irrigation allocation on tract 12N49W150001*
G-108153	Sec. 11 T14N R58W	Interstate Construction	Irrigation allocation on tract 14N58W110001*
G-109142	Sec. 24 T15N R57W	Sand & Gravel Mine	Irrigation allocation on tract 15N57W240001*
G-067208	Sec. 7 T15N R54W	Road Construction	Irrigation allocation on tract 15N54W070001*
G-048485	Sec. 33 T15N R53W	Sand & Gravel Mine	Irrigation allocation on tract 15N53W330001*

* Total combined usage of both industrial and irrigation water is reported as totals in the SPNRD Irrigation Water Usage Report found in Appendix G.

Appendix D
2018 SPNRD Active Industries with Baselines

Well Reg. #	Legal	Use	Baseline Gallons	Baseline Year	2018 Gallons*
G-157945 G-157946 G-031351	Sec. 5 T13N R50W Sec. 5 T13N R50W Sec. 5 T13N R50W	Livestock	299,315,624	2005-2006	91,258,877
G-091299	Sec. 30 T16N R55W	Sand & gravel mine	22,154,542	2001-2002	0
G-013034	Sec. 19 T15N R55W	Oil fields	88,605	2004-2005	0
G-051806 G-058832*	Sec. 32 T14N R55W Sec. 6 T13N R55W	Oil fields, roads, wind turbines	2,203,750	2003-2004	513,759
G-117269	Sec. 5 T14N R52W	Water well drilling	655,763	2002-2003	114,048
G-059572 G-119599	Sec. 15 T13N R51W Sec. 11 T14N R51W	Oil fields	2,333,334	2005-2006	900
G-041367**	Sec. 23 T15N R56W	Sand & gravel mine	5,650,134	2005-2006	Broken
G-058331 G-064838	Sec. 34 T15N R55W	Golf Course	189,569,845	2001-2002	77,571,109
A-003167A	Sec. 29 T15N R55W	Oil fields	6,348,605	2013	517,500
G-059901	Sec. 3 T13N R49W	Sand & gravel mine	41,925,776	2014	250,363
G-116176	Sec. 32 T14N R49W	Ponds & landscape/ turf	55,000,000	2014	0
G-131190 G-083186	Sec. 14 T13N R45W	Livestock	26,952,200	2013-2014	15,489,700
G-123698	Sec. 4 T12N R45W	Livestock	3,940,100	2012-2013	700,900
G-077801	Sec. 29 T14N R55W	Hazardous Waste Incinerator	35,227,000	2009-2010	37,402,000
G-003169	Sec. 22 T13N R45W	Coop	884,822	2012-2013	1,161,362
G-002327	Sec. 2 T12N R42W	Aerial Spraying	581,102	2010-2011	709,500
G-164174 G-164175	Sec. 18 T12N R43W	Golf Course	9,437,798	2014	8,865,800
G-054018	Sec. 6 T15N R57W	Oil Fields	1,613,291	2016-2017	918,439
G-101853	Sec. 23 T16N R50W	Coop	968,600	2014-2015	646,200

* 2018 Gallons are calculated from the industrial water year of August 1, 2017 through July 31, 2018.

** Well G-041367 received a variance to establish a partial baseline because pumping did not occur during all five baseline years. If the baseline amount of 5,650,134 gallons is exceeded, all offsets will be automatically deducted from certified irrigated tract #15N56W230005. See 2/5 variance request in the 2010 report.

Appendix E
SPNRD Municipal Baselines and 2018 Usage

Municipality	DNR Transfer Permit Gallons	Baseline Gallons	Baseline Year	Baseline Per Capita Use* gallons/ person/ day	2018 Gallons**	2018 Per Capita Use*** gallons/ person/day
Big Springs	164,574,899	154,986,748	2002-2003	1,016	44,376,000	304
Bushnell	N/A	13,092,375	2001-2002	221	6,718,757	148
Chappell	N/A	116,968,411	2001-2002	326	117,063,700	345
Dalton	N/A	70,382,300	2001-2002	580	20,720,200	180
Dix	N/A	72,023,100	2001-2002	739	23,792,650	252
Gurley	N/A	46,085,050	2001-2002	554	22,174,680	284
Kimball	N/A	243,050,000	2001-2002	260	99,012,000	109
Lodgepole	N/A	53,443,494	2001-2002	421	25,103,000	216
Potter	N/A	135,421,817	2001-2002	951	70,441,299	573
Sidney	1,300,000,000	633,042,003	2001-2002	276	477,159,000	194

* Based on 2000 census population numbers

** Based on August 1, 2017 through July 31, 2018 water year

*** Based on the 2010 census population numbers

Appendix F

SPNRD Irrigation Allocation History

Allocation Subarea	2007-2009	2009-2012	2010-2012	2013-2015	2016-2018	2019-2021
Pine Bluffs to Oliver Reservoir	48"/acre		42"/acre	42"/acre	42"/acre	42"/acre
Oliver Reservoir to Buffalo Bend	54"/acre		48"/acre	42"/acre	42"/acre	42"/acre
Buffalo Bend to Sidney	48"/acre		42"/acre	42"/acre	42"/acre	42"/acre
Sidney to Colorado	54"/acre		48"/acre	48"/acre	48"/acre	48"/acre
South Platte Valley		80"/acre		54"/acre	48"/acre	48"/acre
Tablelands		80"/acre		42"/acre	39"/acre	39"/acre

Appendix G

SPNRD Irrigation Water Usage Report

Districtwide Water Usage

Analysis Period: 2015 - 2018

	2015	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	8.07	9.28	10.44	7.68	35.47
High	43.76	45.81	31.86	26.11	
Median	7.47	8.90	10.19	7.20	
Total Acre-Feet Pumped	78,420.20	93,572.77	104,621.65	78,227.34	354,841.96
Total Acres-Inches Pumped	941,042.37	1,122,873.27	1,255,459.78	938,728.05	4,258,103.47
Total Acres-Inches Pumped ÷ By Total Acres	7.36	8.79	9.78	7.28	33.21
Total Number of Inactive Certified Irrigated Acres***	4,585.2	4,353.0	3675.1	3,046.8	
Total Number of Active Certified Irrigated Acres	127,906.3	127,689.0	128,366.9	128,995.2	
Total Number of Certified Irrigated Acres	132,491.5	132,042	132,042	132,042	

Range of Inches Used:

Scale	2015	2016	2017	2018
0 - 4	29%	21%	14%	26%
4.01 - 8	26%	23%	19%	31%
8.01 - 12	27%	30%	33%	30%
12.01 - 16	13%	19%	25%	12%
16.01 - 20	3%	6%	7%	1%
20+	1%	2%	2%	0%

Crop Water Usage**:

Crop	2015 Avg. In.	2015 Percent of Acres	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	7.6	8.7%	10.1	8.8%	11.8	8.7%	8.8	9.3%
Beans	7.1	9.1%	8.4	8.5%	8.9	14.1%	6.2	9.4%
Corn	10.6	37.7%	11.2	44.4%	11.3	46.4%	8.6	46.9%
Fallow	0.0	0.7%	0.0	0.4%	0	0.8%	0.0	0.4%
Hay	4.6	4.2%	6.5	4.8%	8.9	4.5%	6.2	6.6%
Other	5.7	0.3%	4.9	1.3%	5.0	0.6%	3.5	0.9%
Pasture	5.4	3.8%	6.3	3.3%	8.2	3.1%	7.2	3.6%
Potatoes	9.4	0.0%	12.2	0.1%	15.3	0.1%	0.0	0.0%
Small Grains	3.5	27.9%	4.2	22.5%	5.6	15.3%	3.3	17.8%
Sugar Beets	11.6	4.4%	13.9	4.3%	12.0	5.5%	12.3	4.0%
Sunflowers	5.0	3.0%	5.6	1.6%	6.0	1.0%	3.7	0.7%
All Crops	7.4	100%	8.8	100%	9.8	100%	7.3	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

Appendix H
SPNRD Water Acquisitions and Water Banking Activities Through 2018
Retired Acres and Other Stream Flow Accretion Activities

Landowner	Decertified Acres	Stream Depletion (%)	Acre Feet Accrued	Township	Range	Section	Date Retired	County	Subarea	Appropriation
Terrell Wiekhorst	43.1	18	4.6	14	52	5	9/6/2007	Cheyenne	ORBB	OA
Cliff Farms Inc.	50	32	12.2	14	52	3	9/17/2007	Cheyenne	ORBB	OA
Robert & Connie Runge	75.2	7	2.7	13	51	10	9/27/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	237.8	57	118.9	13	50	4	10/22/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	23.8	71	26.7	14	50	33	10/22/2007	Cheyenne	BBSID	OA
Fornstrom Farms LLC	109.9	23	14.1	14	59	12	11/1/2007	Kimball	PBOR	OA
Dale Dedic	29.8	25	6.2	14	52	4	12/4/2007	Cheyenne	ORBB	OA
Elizabeth Burbach	18.3	25	3.8	15	55	20	12/5/2007	Kimball	ORBB	OA
Peetz Land & Cattle Co	22.9	31	4.7	14	49	35	3/14/2008	Cheyenne	SIDCO	OA
B5 Farms LLC	10.1	78	4.9	12	45	13	4/9/2008	Deuel	SIDCO	OA
Paul & Frances Fornander	13.3	72	14.5	13	45	22	7/1/2008	Deuel	SIDCO	OA
Harvey Jung	8.7	7	1	14	53	2	7/10/2008	Cheyenne	ORBB	OA
Robert Kurz	271.5	57	88.3	13	50	4	10/23/2008	Cheyenne	SIDCO	OA
Venture Development Group Inc.	66	66	32.4	14	49	32	7/14/2009	Cheyenne	BBSID	OA
Alan Adamson	62.6	70	63	15	57	31	9/22/2009	Kimball	PBOR	OA
Sharon A, James C. & Donna Johnson	5.6	10	0.44	15	53	34	7/1/2010	Kimball	ORBB	OA
Raymond Kuehn	83.2	73.5	49.2	14	51	12	7/1/2010	Cheyenne	BBSID	OA
Raymond Kuehn	42.3	68	23.1	14	51	13	7/1/2010	Cheyenne	BBSID	OA
Scott & Susan Lockwood	43.9	92.5	32	15	57	36	9/1/2010	Kimball	PBOR	OA
Don & Janelle Frerichs	59.6	75	30.8	14	48	27	9/22/2011	Cheyenne	SIDCO	OA
Barton Terman	99	10	14.5	14	52	34	12/28/2011	Cheyenne	BBSID	OA

Appendix H (continued)
SPNRD Water Acquisitions and Water Banking Activities Through 2018
Retired Acres and Other Stream Flow Accretion Activities

Landowner	Decertified Acres	Stream Depletion (%)	Acre Feet Accrued	Township	Range	Section	Date Retired	County	Subarea	Appropriation
The Ranch at Sidney LLC	35.1	74	28.5	14	49	33	4/8/2014	Cheyenne	SIDCO	OA
City of Chappell	37.5	45.7	36.6	13	45	23	1/1/2015	Deuel	SIDCO	OA
City of Sidney	87.4	53	92.6	14	49	33	5/12/2015	Cheyenne	SIDCO	OA
Castronics	114.4	28.4	8.7	15	55	27	12/9/2015	Kimball	ORBB	OA
SRMC	21	57	9	14	49	33	4/8/2016	Cheyenne	SIDCO	OA
The Ranch at Sidney LLC	28.2	66	15	14	49	32	5/11/2016	Cheyenne	BBSID	OA
JR Norberg Farms	302.8	8	25	14	56	19	12/14/2016	Cheyenne	FA-K	Tablelands

Total Acre Feet Accrued = 763

Total Number of Acres Decertified = 2,003

Average Stream Depletion = 46%

Average \$/AF Accrued (Federal dollars plus SPNRD dollars): \$2,301

Average \$/Acre Retired (Federal dollars plus SPNRD dollars): \$456