



2019 Annual Report



WATER USE ACTIVITIES IN THE TWIN PLATTE NRD

For the Platte Basin Meeting
July 15, 2020, Holdrege, NE @ 10:00 am

Annual Report of Water Use Activities in the Twin Platte NRD

I. SUMMARY

A. This report is to review activities within the TPNRD during calendar year 2019. This report has been compiled for the 2020 Basin-wide meeting.

II. DEFINITIONS

A. Offset - A reduction in irrigated acres, or consumptive use at one or more locations that serves to compensate for a transfer of water to a new location. There can be no new depletions to the river.

B. Variance - This would be an exception to the current adopted Rules and Regulations of the TPNRD. An example could be exceptions to the stay on new irrigated acres and new consumptive uses while providing for adequate offsets or transfers to assure there are no net increases in depletion to the river, impacts to the river, or impacts to existing (ground or surface) users.

C. Transfers - Allows for changes in consumptive use of water without causing an increase in depletions to the river or an impact to existing (ground or surface water) users. When determining depletions and accretion to the river, the TPNRD uses the agreed upon methodology of the Platte Basin NRD's which ensures that the timing, location, and amount of depletions to the river are being met.

III. CERTIFIED ACRES

A. The District began certifying ground water irrigated acres in December 2005. The initial certification process ended with the effective date of the amendments to the Rules and Regulations on December 16, 2010. A map showing the location and number of certified irrigated acres can be found in Appendix A. Annually the TPNRD had been tracking any new certifications and any acres that have permanently removed their irrigation rights through the modification of the certified irrigated acres process.

B. In order to be certified as irrigated, lands were required to be irrigated one time between 2000 and 2004. If this could not be determined by using infrared photography, then documentation is to be provided to the TPNRD and placed on file. Changes are not made without proper proof and approval from the TPNRD Board of Directors. Other possible changes in irrigated acres, also with Board approval, could be from acres being transferred from one county to another county. Those acres that are in the CRP program could certify their irrigated acres but could not be transferred until they come out of the program, unless

they paid any fees associated with leaving the CRP program early. Please refer to Table 1 below.

Table 1. Certified Irrigated Acres by County

<u>Certified Irrigated Acres by County</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Arthur	11,296	11,296	11,296	11,296	11,296
Keith	116,227	116,562	116,158	116,171	116,065
Lincoln	183,293	183,271	183,344	183,302	183,365
McPherson	10,331	10,113	10,100	10,100	10,100
Totals	321,147	321,242	320,898	320,869	320,826

IV. APPROVED TRANSFERS

A. The TPNRD allows for transfers of certified irrigated acres to occur if a transfer does not conflict with the TPNRD Rules and Regulations. Transfers are prohibited from crossing river basin boundaries. For example, a landowner may own land in both the North Platte and South Platte River Basins, but he cannot de-certify the acres from the South Platte River Basin and transfer those acres to a pivot that is in the North Platte River Basin. Transfers may take place from the North Platte River Basin into the Platte River Basin as long as the de-certified acres are being transferred downstream. The same is true with transferring certified irrigated acres from the South Platte River Basin into the Platte River Basin.

B. Transfers can occur within flow lines (see map in Appendix B). These flow lines limit the impact on existing (ground or surface water) users. These lines were developed using the major diversion points in the TPNRD, and the movement of ground water to the rivers. A transfer can cross these lines moving west to east but not move upstream or east to west, which would increase the chance of impacting an existing (ground or surface water) user. This transfer rule helps determine there will be no new depletions to the North, South, and Platte Rivers, and any required offsets will be located upstream of the new water use.

C. Transfers are not allowed off any land that is located within the one-mile boundary of villages, and the two-mile boundary of a city. Transfers are allowed into this area from outside this area on a permanent basis. Transfers are not allowed within this area unless it is in the same field, such as a producer de-certifying his corners to put under an existing $\frac{3}{4}$ pivot to fully go around.

D. Transfers can move from a higher Stream Depletion Factor (SDF) to a lower SDF at a one-to-one rate. If a transfer is requested to move from a lower SDF to a higher SDF, then the present and future conditions are entered into the agreed upon CIR calculator and the number of transferable acres are calculated by obtaining a zero (0.0) ac-ft depletion to the river. By reducing the acres eligible to be transferred to a new location, the impact to the river remains the same over a 50-year period.

E. For calendar year 2019, the District approved five transfers. The total number of acres involved in these transfers considered to be new or moved to a new location was 175.93

acres. The total number of acres involved in these transfers considered for offset or de-certified acres was 253.70 acres. Each transfer resulted in no net increase in stream depletions. In 2019, 134.3 acres were transferred out of the water bank and relocated to a new location. Many of these transfers are at a one-to-one rate; sometimes transfers can be at a more-to-one ratio. For transfers that were not at a one-to-one ratio, an additional 24.0 acres were dried up (175.93 new acres + 24.0 additional acres dried up = 270.25 total de-certified acres). Producers are also allowed to de-certify acres at the current location and place those acres into the TPNRD water bank account which allows the producer unlimited time to re-locate those acres to a new location. In 2019 there were 29.82 additional acres temporarily placed into the TPNRD water bank account when they did not immediately have a location to transfer the acres. The only stipulations are that the TPNRD will get any credit for those acres being not irrigated in the short-term, and they must comply with the TPNRD Rules and Regulations when they are ready to be re-located. The average length of duration is less than one year. Late modification of certified irrigated acres in 2019 accounted for 21.38 newly certified acres. Permanently de-certified acres totaled 2.46 acres for 2019. Detailed data regarding the location, timing, and amount associated with each transfer can be found in Appendix C.

F. Definition - Transfers - Allows for changes in consumptive use of water without causing an increase in depletions to the river or an impact to existing (ground or surface water) users. When determining depletions and accretion to the river, the TPNRD uses the agreed upon methodology of the Platte Basin NRD's which ensures that the timing, location, and amount of depletions to the river are being met.

V. WELL CONSTRUCTION PERMITS

A. See Table 2 Summary Table for Well Permits at the end of this section.

B. Supplemental Ground Water Wells - The TPNRD has issued Supplemental Ground Water Wells (coded SG). These are ground water wells that supplement an already existing ground water well. There are no increased acres associated with these wells. For example, a well may irrigate two pivots; that producer could apply for a variance for another ground water well (supplemental well). For calendar year 2019, the TPNRD issued zero Supplemental Ground Water Well Permits with no new consumptive use.

C. Supplemental Surface Water Wells - The TPNRD has issued Supplemental Surface Water Well Permits (coded SS) in the past and is no longer permitting these wells. These are ground water wells that can be used only when their surface water needs are not being met. There is a legal binding contract between the producer and the NRD. These wells are only to be used when the surface water rights have been exhausted. If a producer is found abusing this contract, the ground water well will immediately be in violation, and a cease and desist order will be issued for that well. For calendar year 2019, the TPNRD issued zero Supplemental Surface Water Well Permits.

D. Replacement Wells - The TPNRD has issued Replacement Well Permits (coded RP). These are replacement wells for a well that has already been registered, and for one reason or another has failed or is no longer producing as originally intended. For calendar year

2019, the TPNRD issued eight replacement well permits. For details of these permits refer to Appendix D.

E. Temporary Wells - The TPNRD has issued Temporary Well Permits (coded TP). These are wells that are intended to serve for a limited time. For example, the TPNRD allowed a TP well to be used when a road project was underway north of Ogallala so there would be water to help compact the surface of the ground. For 2019, there were zero Temporary Water Well Permits issued.

F. De-Watering Wells - The TPNRD has issued De-Watering Well Permits (coded DW). These are wells that are intended to serve a limited time defined as less than 90 days. For example, the TPNRD allowed de-watering wells to be used in conjunction with the Village of Sutherland lowering ground water levels so they could lay new water pipes from their new well field. For calendar year 2019, the TPNRD issued one De-Watering Well Permit.

G. New Well Permits - The TPNRD has issued New Well Permits (coded NP). These are wells that are intended to be used to irrigate acres being transferred from the original location to a new location where there is not an existing irrigation well. For example, the TPNRD might allow flood irrigated acres to be de-certified at their original location and transferred to a new location (if there are no new depletions) where they could be placed under a pivot that does not have a well associated with it. For calendar year 2019, the TPNRD issued one New Well Permit. For details of this permit refer to Appendix D. For this new well permit there was no new consumptive use, and when possible, the Board required well decommissioning or modifying the existing wells to pump less than 50 gpm (use for the old wells could be converted into livestock wells).

H. Commercial/Industrial Wells - The TPNRD can issue Commercial/Industrial Well Permits (coded IN). These are wells where commercial or industrial users may need wells or need another source of water due to water quality issues. Another example is a livestock operation that needs a well to water livestock, and for the operation of a confined animal operation. For calendar year 2019, the TPNRD issued two Industrial Well Permits.

I. OTHER PERMITS - Currently there are no other permits to report.

Table 2. Summary Table for Well Permits

Well Permit Type	Total
Supplemental Ground Water Wells - SG	0
Supplemental Surface Water Wells - SS	0
Replacement Wells - RP	8
Temporary Wells - TP	0
De-Watering Wells - DW	1
New Well - NP	1

Commercial/Industrial - IN	2
Total	12

VI. VARIANCES

A. Variances can be pursued for a variety of reasons (i.e. a new ground water well permit for acres that have been historically irrigated using a different well; a transfer is a type of variance). The TPNRD Board reviews variances each month (except December) on a case-by-case basis. For a summary of variances pertaining to new wells, refer to Table 2 above. For a summary of variances pertaining to transfers of certified irrigated acres, refer to Appendix C.

VII. MUNICIPAL ACCOUNTING

A. Determining the baseline use - for all cities and villages located in the TPNRD - pumping and discharge rates were requested as far back as could be documented. For all the communities in the TPNRD, except the City of North Platte, discharge to a sewage pond or river was used; therefore, 100% consumption of pumped figures was used. For North Platte and Ogallala, the actual discharge figures were used. Discharge numbers were subtracted from pumping numbers to determine the annual amount of consumptive use per city or village. The Department of Economic Development estimated population figures were used in non-census years; if not available then the city and village provided population figures, and when census figures were available, those figures were used. Then the annual consumption was divided by population to determine the baseline per person per year. Then the baseline use per person was divided by 365.25 days to figure the baseline use per person per day. Please refer to Table 3 for the summary of each city and village water uses.

B. Reporting Data for Cities and Villages with a Municipal Transfer Permit - North Platte

1. The City of North Platte is the only community in the TPNRD that has a Municipal Transfer Permit from the state. They have submitted pumping and discharge records for activities through December 2014. See Table 3 below for a summary chart of the City of North Platte’s annual consumptive use compared to its permitted municipal transfer permit figures. The pumping records of the municipalities are reported in fiscal years (beginning August 1 and ending July 31); therefore FY18-19 is only half completed. Baseline amounts for cities with transfer permits are developed differently than cities without transfer permits. The amount of use described in the Municipal Transfer Permit amounts become the baseline per the TPNRD’s Rules and Regulations. Any deviation from that amount on an annual basis is represented in Table 3.

2. The specifics of the pumping and discharge rates for the City of North Platte can be seen in Table 3 below, the summary report is that the city pumps a considerable amount less than is allowed under its transfer permit, even in periods of record drought.

Table 3. Summary Table for Cities and Village Pumping and Discharge Rates

Platte Basin Municipal Water Usage Summary								
	<u>Brady</u>	<u>Maxwell</u>	<u>North Platte</u>	<u>Hershey</u>	<u>Sutherland</u>	<u>Paxton</u>	<u>Ogallala</u>	<u>Brule</u>
Years figured in Baseline	2003-2006	2001-2006	2001-2006	2001-2006	2001-2006	2001-2006	2001-2006	2001-2006
Baseline (Pump-Discharge)(ga)	64,937,333	22,256,400	4,000,000,000	79,392,560	108,548,020	58,623,800	206,294,400	26,740,000
Baseline Population	371	317	23,817	694	1,184	559	4,751	339
Baseline (gal/capita/day)	479	192	193	313	251	285	119	217
Discharge: Stream, Lagoon	Lagoon	Lagoon	Stream	Lagoon	Lagoon	Stream	Stream	Lagoon
FY 18-19 Use (Pump-Discharge)	42,968,267	16,218,000	601,093,500	91,422,081	65,985,247	28,990,000	103,959,000	20,064,499
2016 Population	428	312	24,000	665	1,238	583	4,391	326
2019 (gal/capita/day)	275	142	69	376	146	136	65	169
Transfer Permit	No	No	Yes	No	No	No	No	No
# of Wells	2	2	19	2	3	3	4	2
City of North Platte's consumptive use per capita is not figured using their transfer permit amount but their actual pumped amount								

C. Reporting Data for Cities and Villages without a Municipal Transfer Permit

1. Each City and Village of Brady, Maxwell, Hershey, Sutherland, Paxton, Ogallala, and Brule without a transfer permit has submitted their pumping and discharge records (where applicable) through December 2019, and those amounts have been entered into a database to determine the annual use and any deviation from the baseline amount on an annual basis. Refer to Table 3 above to see the summary of their 2019 pumping compared to the baseline pumping.

2. The specifics of the pumping and discharge rates for the Villages and Cities of Brady, Maxwell, Hershey, Sutherland, Paxton, Ogallala, and Brule can be seen in Table 3 above. The summary report shows the overall trend that the villages and cities pump a considerable amount less than their baseline use, even in periods of record droughts. Important to note that 2012 was the driest year on record, and a couple of the municipalities pumped more than their baseline for 2012, but they are still well below their overall pumping credit compared to their baseline.

VIII. INDUSTRIAL ACCOUNTING

A. Definitions

1. Industrial Water Well - Commercial Use - Golf Course Wells - The definitions under ground water Title 456 shall include, but not limited to, maintenance of golf course turf.

a. Baseline - There are seven golf courses using 14 of the 60 registered commercial and/or industrial wells in the TPNRD. Working with the representatives and understanding how they operate to determine the best way to report their baseline use has been a challenge, but a systematic approach has been developed. It has been determined that the total irrigated acres will be the baseline when working with the golf course wells in the TPNRD. Each golf course worked with NRD staff to delineate the acres that were historically irrigated between 2000 through 2006. The seven golf courses in the TPNRD have not expanded since prior to 2000; therefore, their baseline use of acres

irrigated has not changed. On an annual basis, the TPNRD staff works with the golf course staff to verify they have not increased consumptive use or depletions to the river. For details of these industrial (golf course) well baselines, refer to Table 4 below.

Table 4. Summary of the Golf Courses in the TPNRD (reported in acres)

Well ID	RegCD	S	T	R	Name	Base	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
120150	G-101808	22	15	40	Bayside Investments	63.3	63.3	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03
120801	G-102429	22	15	40		63.3	63.3	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03	63.03
105232	G-090154	9	13	38	West Wind Golf Co	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
37527	G-030632	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
213439	G-160987	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
213443	G-160986	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
213440	G-160985	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
19122	G-013763	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
213440	G-160985	9	13	38		122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
86288	G-077670	7	12	330		Lake Maloney Golf Assn	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11	81.11
172740	G-137635	18	13	35	Meadows Golf Course	27	27	27	27	27	27	27	27	27	27	27	27	27	27
86391	G-077773	10	13	30	Iron Eagle Golf Course	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93	50.93
77464	G-069317	28	14	30	River's Edge Golf Club	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78	99.78
86415	G-077797	5	13	33	Sutherland Golf Assn	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63	55.63

b. Industrial Water Well - The definitions under ground water Title 456 state a well that provides ground water for manufacturing, commercial, and power generation purposes is an industrial water well.

1. Baseline - There are 11 different owners of 44 industrial wells in the TPNRD left to establish baselines and annual uses. During January 2013, letters were sent to owners requiring flow meters to be installed on all their industrial wells so the industrial reporting requirements could be met. Reporting spreadsheets were developed for the industrial users so baseline uses and annual uses can be determined. For the most recent details for these industrial wells that provide ground water for manufacturing, commercial, and power generation purposes, refer to Table 5 below.

IX. FLOW METER DATA

A. Flow meters are not required in the TPNRD at this time.

Table 5. Summary of the Commercial/Industrial Wells in the TPNRD

Annual Report of Water Use Activities in the Twin Platte NRD

RegCD	Name	S	I	R	Base	2013	2014	2015	2016	2017	2018	2019
G-100408	Hi Line Cooperative Inc - Rosco	5	13	37	TBD	1,043,060	4,691,160	7,430,020	15,091,060	22,127,770	27,764,440	7,045,380
G-153331	Hi-Line Cooperative Inc - Brule	22	13	40	TBD	1,017,188	10,789,221	15,771,142	23,201,706	35,833,880	45,369,647	7,739,704
G-096420	Central Nebraska Packing Inc	35	14	30	TBD	32,007,000	9,840,000	0	0	CLOSED	CLOSED	CLOSED
G-084422	CNPPID	4	11	27	TBD	425,736,000	317,459,397	315,936,584	312,646,299	310,818,800	262,800,000	285,911,686
G-120299	Cody Go Kart Family Fun Park	9	13	30	TBD	66,035	56,000	68,320	73,080	74,744	78,750	77,790
G-160756	K-Lawn	1	13	39	TBD	77,900	84,400	77,000	64,500	82,500	102,900	77,420
G-102374	Midwest Renewable Energy LLC	27	14	33	TBD	70,838,819	117,427,481	124,182,289	109,824,456	101,299,292	111,136,557	111,158,490
G-102375	Midwest Renewable Energy LLC	27	14	33	TBD							
G-041198	Nebraska Public Power District	19	13	33	TBD	284,255,500	284,255,500	284,255,500	284,255,500	284,255,500	284,255,500	284,255,500
G-043107	Nebraska Public Power District	19	13	33	TBD							
G-043108	Nebraska Public Power District	19	13	33	TBD							
G-049632	Nebraska Public Power District	19	13	33	TBD							
G-064509	Nebraska Public Power District	21	13	33	TBD							
G-128029	Nebraska Public Power District	21	13	33	TBD							
G-128030	Nebraska Public Power District	21	13	33	TBD							
G-128033	Nebraska Public Power District	20	13	33	TBD							
G-128034	Nebraska Public Power District	16	13	33	TBD							
G-128035	Nebraska Public Power District	9	13	33	TBD							
G-128036	Nebraska Public Power District	9	13	33	TBD							
G-128037	Nebraska Public Power District	5	13	33	TBD							
G-128038	Nebraska Public Power District	18	13	33	TBD							
G-128039	Nebraska Public Power District	17	13	33	TBD							
G-128044	Nebraska Public Power District	13	13	34	TBD							
G-128046	Nebraska Public Power District	20	13	33	TBD							
G-128047	Nebraska Public Power District	16	13	33	TBD							
G-128048	Nebraska Public Power District	19	13	33	TBD							
G-128050	Nebraska Public Power District	29	13	33	TBD							
G-128051	Nebraska Public Power District	29	13	33	TBD							
G-128052	Nebraska Public Power District	21	13	33	TBD							
G-128053	Nebraska Public Power District	29	13	33	TBD							
G-128054	Nebraska Public Power District	29	13	33	TBD							
G-128055	Nebraska Public Power District	21	13	33	TBD							
G-128057	Nebraska Public Power District	21	13	33	TBD							
G-128059	Nebraska Public Power District	20	13	33	TBD							
G-128061	Nebraska Public Power District	21	13	33	TBD							
G-128062	Nebraska Public Power District	20	13	33	TBD							
G-128063	Nebraska Public Power District	16	13	33	TBD							
G-128064	Nebraska Public Power District	16	13	33	TBD							
G-128065	Nebraska Public Power District	16	13	33	TBD							
G-128066	Nebraska Public Power District	19	13	33	TBD							
G-162064	Paulsen Inc	1	14	38	TBD	1,500,000	1,953,600	1,200,000	1,421,800	1,859,500	1,100,400	1,088,200
G-102248	Sargent Pipe Company Inc	16	13	30	TBD	136,000	136,000	0	15,000	12,000	18,000	24,000
G-106443	Western Engineering Company	2	13	30	TBD	17,481,000	255,270	260,730	113,770	143,846	CLOSED	CLOSED
G-179459	Precision Pork	15	16	27	TBD				5,211,500	17,088,600	16,096,600	15,670,300

X. OTHER WATER BANKING ACTIVITIES

A. The TPNRD has water banking software that is used for variances, transfers, and any other water banking purchases. Currently, the TPNRD does not have a district-wide stand-alone water bank.

XI. RETIRED ACRES AND OTHER STREAM FLOW ACCRETION ACTIVITIES

A. Currently the TPNRD has signed five-year (2018-2022) memorandums of agreements with the Suburban, Platte Valley, Keith-Lincoln, Paxton-Hershey, and Western Irrigation Districts, so in times of excess flow, temporary recharge projects like the ones in 2011 could be replicated. In September 2013 flooding along the South Platte River allowed for another

temporary recharge project. In conjunction with the State of Nebraska, three irrigation ditches (Platte Valley, Paxton-Hershey, and Western), and the TPNRD were able to get the necessary paperwork completed to allow for these irrigation ditches to divert water for recharge purposes for 27-37 days. In 2015, excess flows in the North and South Platte Rivers allowed for recharge projects in the spring for Western Irrigation Canal and the Platte Valley Irrigation Canal, and Western again for a week in the fall. In 2016, excess flows in the North and South Platte Rivers again allowed for recharge projects for 23-42 days in the spring for Keith-Lincoln, Platte-Valley, Suburban, Paxton-Hershey, and Western Irrigation Districts. These temporary water rights were applied to be permanent water rights during 2015, and we are waiting to hear back from the DNR.

B. Nebraska Cooperative Republican Platte Enhancement Project (N-CORPE) - The TPNRD partnered with NRDs in the Republican River Basin in Nebraska to develop the largest stream flow enhancement project of its kind in the state. The landmark conjunctive management project is considered the most cost-effective way to aid and protect the Platte and Republican Rivers, the agricultural economy across one of Nebraska's most productive agricultural regions, and taxpayers statewide by ensuring long-term compliance with Integrated Management Plans (IMP) and Interstate Water Agreements. Work is done to the well field, and the pipeline moving south is completed. Construction to the north pipeline began in the spring 2017 and was completed fall 2017. Annually the TPNRD's 25% share of the water is 4,000 ac-ft. The TPNRD's 25% share of water the Republican basin pumped prior to limitations being placed on the N-CORPE wells in 2017, is an additional 1,597 ac-ft credit annually from 2020-2040.

C. The TPNRD has a signed agreement with DNR, Central Platte NRD (CPNRD), and Tri-Basin NRD to participate in funding the proposed J-2 Re-regulation Reservoir southwest of Overton. It is anticipated that this reservoir will store up to 8,000 acre-feet of water, and that it will fill as often as three times per year. Water will be released to the Platte River to benefit endangered Whooping Cranes, Least Terns, and Piping Plovers. TPNRD is accruing 5,000 acre-feet per year of depletion offset credit through 2019 from its participation in this project.

D. The TPNRD estimates that 85% of the certified irrigated acres in the District are using conservation tillage. Recent university research (Klocke, et al, 2009) indicates that evapotranspiration (ET) is reduced by as much as three inches per acre on irrigated cropland, as compared to conventional tillage systems. If one inch of ET provides gains to the river, as much as 26,753 acre-feet of water would be conserved in the Platte Basin in the TPNRD annually through this conservation practice.

E. The TPNRD is working with the Cody-Dillon Ditch Company to work with their landowners and lease water rights from willing landowner's. Approximately 200 acres were leased in 2015; nearly 500 acres were leased in 2016; another 100 acres were leased in 2017; and 187 acres were leased in 2018; and zero acres leased in 2019.

F. The TPNRD began a temporary not irrigate program in 2017. Each year this program gains participants. In 2018 there were eight landowners participating in the short-term

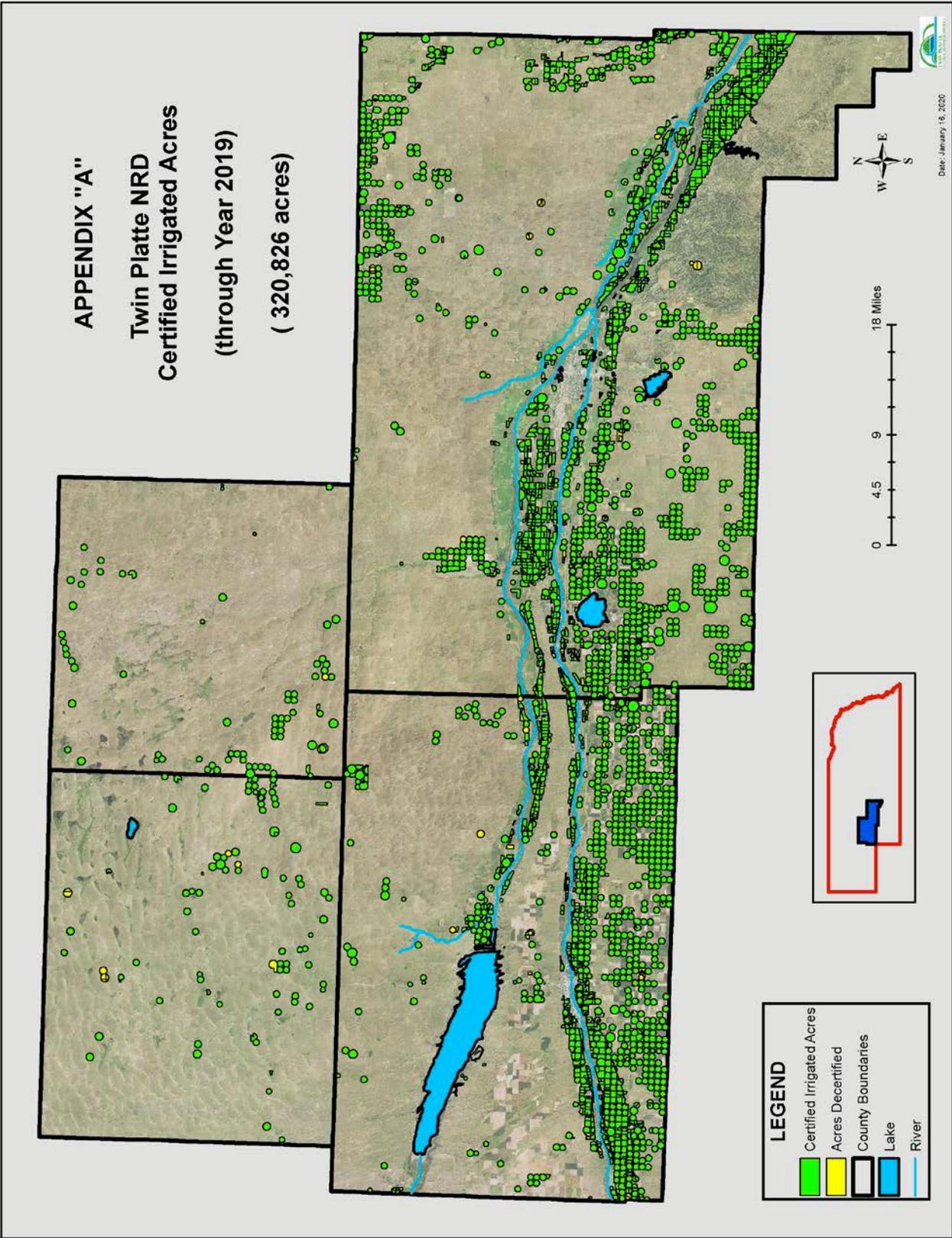
program with 594 acres, and seven landowners enroll 926 acres into the long-term program. In 2019 there were 17 landowners sign up 981.67 acres to temporarily not irrigate their acres for a one-year (short-term) lease, and 2 landowners sign up 61.94 acres to temporarily not irrigate their acres for a four-year (long-term) lease.

G. Additional projects are being looked at for the most efficient use of time and money to get water back to the river in the quickest time possible, i.e. converting CNPPID surface water users to ground water users and working with surface water irrigation districts on different projects.

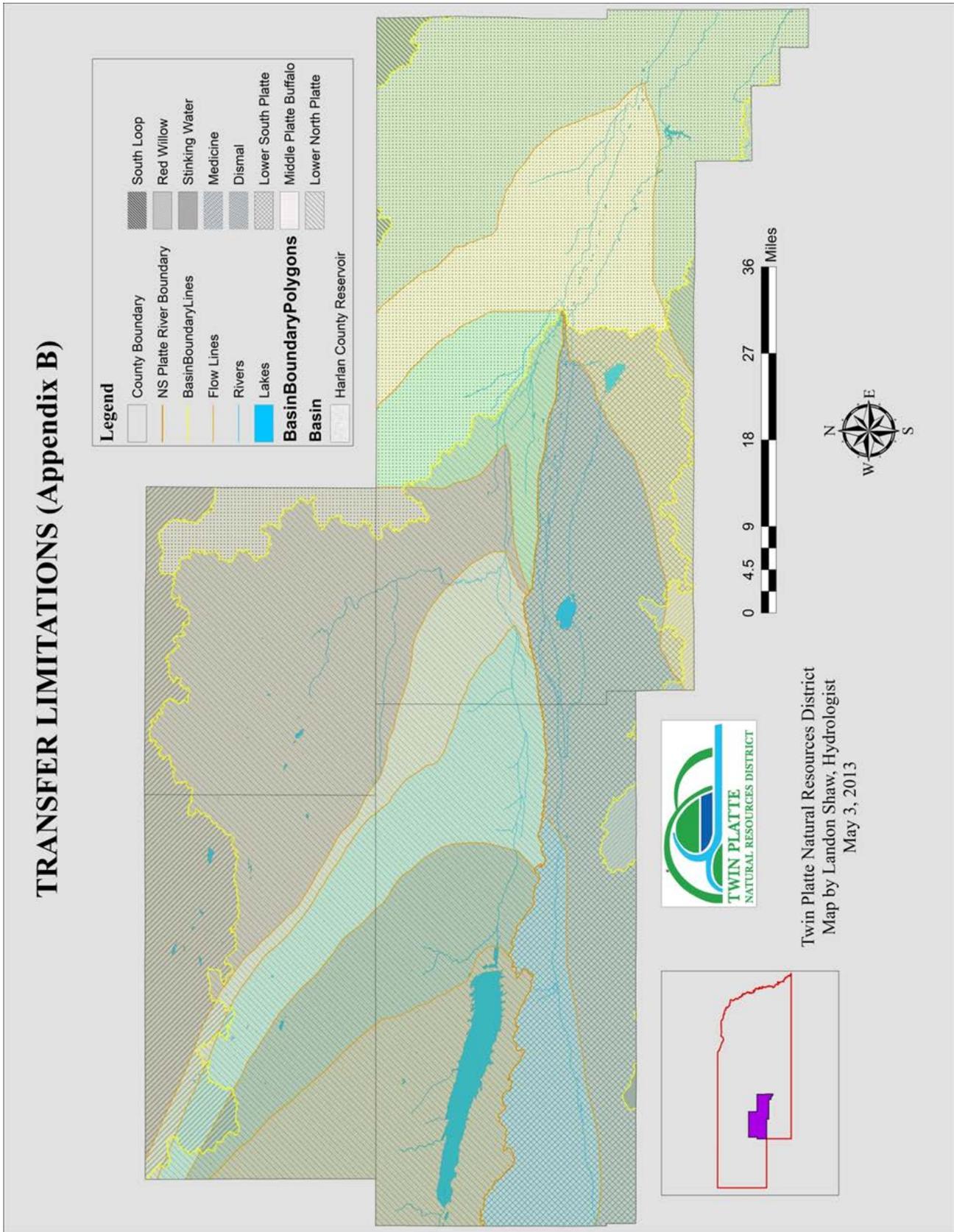
XII. GROUND WATER LEVELS

A. Tracking and reporting of ground water levels is not required in the IMP (Chapter 7.1.A.1 (a) and 7.1.A.2).

Appendix A. Certified Irrigated Acres through Year 2019



Appendix B. Transfer Limitations Map



Appendix C. Detailed Summary Tables for 2019 Transfers & Modification**New Acres in 2019**

NRD PERMIT	Permit Code	T	R	S	SUBSEC	ACRES
TP-TRANS-19.01	Acre Transfer	12	27	28	S	12.85
TP-TRANS-19.02	Acre Transfer	11	26	14	NSE	16.10
TP-TRANS-19.02	Acre Transfer	11	26	14	SESE	1.10
TP-TRANS-19.03	Acre Transfer	13	36	24	NE	6.00
TP-TRANS-19.03	Acre Transfer	13	36	24	NE	28.35
TP-TRANS-19.04	Acre Transfer	13	38	12	NW	134.30
TP-TRANS-19.06	Acre Transfer	14	36	07	SW	31.50
TP-TRANS-19.06	Acre Transfer	14	36	07	SW	23.50
						253.70

De-certified Acres 2019

NRD PERMIT	PERMIT CODE	OLD TOWNSH	OLD RANGE	OLD SECTIO	OLD SUBSEC	ACRES
TP-TRANS-19.01	Acre Transfer	12	28	15	SE	12.85
TP-TRANS-19.01	Acre Transfer	12	28	15	NW	1.72
TP-TRANS-19.01	Acre Transfer	12	28	14	NW	7.93
TP-TRANS-19.02	Acre Transfer	11	26	14	SE	7.87
TP-TRANS-19.02	Acre Transfer	11	26	14	ESE	9.33
TP-TRANS-19.03	Acre Transfer	13	39	18	SE	22.17
TP-TRANS-19.03	Acre Transfer	13	39	19	WNE	1.80
TP-TRANS-19.03	Acre Transfer	13	39	19	NWNE	1.28
TP-TRANS-19.03	Acre Transfer	13	39	19	NENE	2.40
TP-TRANS-19.03	Acre Transfer	13	39	19	SENE	0.70
TP-TRANS-19.03	Acre Transfer	13	39	31	SE	8.50
TP-TRANS-19.05*	Acre Transfer	13	37	03		17.06
TP-TRANS-19.05*	Acre Transfer	13	37	03		3.11
TP-TRANS-19.06	Acre Transfer	15	38	23	SE	45.30
TP-TRANS-19.06	Acre Transfer	14	37	08	NW	33.92
TP-TRANS-19.03	Acre Transfer	13	39	18	SE	22.17
TP-TRANS-19.03	Acre Transfer	13	39	19	WNE	1.80
TP-TRANS-19.03	Acre Transfer	13	39	19	NWNE	1.28
TP-TRANS-19.03	Acre Transfer	13	39	19	NENE	2.40
TP-TRANS-19.03	Acre Transfer	13	39	19	SENE	0.70
TP-TRANS-19.03	Acre Transfer	13	39	31	SE	8.50
TP-TRANS-19.05*	Acre Transfer	13	37	03		17.06
TP-TRANS-19.05*	Acre Transfer	13	37	03		3.11
TP-TRANS-19.06	Acre Transfer	15	38	23	SE	45.30
TP-TRANS-19.06	Acre Transfer	14	37	08	NW	33.92
						312.17

Modified Acres in 2019

<u>NRD PERMIT</u>	<u>T</u>	<u>R</u>	<u>S</u>	<u>SUBSEC</u>	<u>ACRES</u>
TP-MODIFY-19.01	14	33	31	N	21.38

Appendix D. Detailed Tables for 2019 New & Replacement Well Permits**New Well Permit in 2019**

<u>NRD PERMIT</u>	<u>PERMIT CODE</u>	<u>NEW REGISTRATION NUMBER</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>SECTION</u>
TP-DW-19.01	Dewatering Well	G-188178	14	30	32
TP-NP-19.01	New Well	G-188777	13	38	12
TP-IN-19.01	Industrial Well	Not Registered as of 3/20/2020	13	39	10
TP-IN-19.02	Industrial Well	Not Registered as of 3/20/2020	13	39	10

Replacement Well Permits in 2019

<u>CONTRACT</u>	<u>S-T-R</u>	<u>REGISTRATION #</u>	<u>TOTAL IRRIGATED</u>
TP-RP-19.01	02-13-35	G-020029	163.74
TP-RP-19.02	28-14-38	G-091559	128.88
TP-RP-19.03	01-13-35	G-061185	67.52
TP-RP-19.04	10-13-37	G-012011	51.19
TP-RP-19.05	01-13-39	G-018753	13.78
TP-RP-19.06	35-13-33	G-013810	141.35
TP-RP-19.07	02-18-36	G-034555	161.08
TP-RP-19.08	17-13-30	A-10510F	0.00