2010 Annual Report of Water Use Activities in the Twin Platte NRD

For the 2011 Platte Basin Meeting
July 21, 2011 – Grand Island, Nebraska

TWIN PLATTE
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2010

ANNUAL REPORT OF WATER USE ACTIVITIES IN THE TWIN PLATTE NRD
TO MEET THE REQUIREMENTS OF THE INTEGRATED MANAGEMENT PLAN
FOR 2011 BASIN-WIDE MEETING

I. SUMMARY

A. In summary this report is being prepared to review activities within the TPNRD. This report has been compiled for the 2011 Basin-wide meeting.

II. 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. On an annual basis the TPNRD tracks any new certifications, and any acres that have permanently removed their irrigation rights.

B. From year to year there could be a slight variation in the total number of certified irrigated acres due to additions and de-certifications to the certified irrigated database. 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 needed to be brought into our office and placed on file. For example, changes in irrigated acres could be from acres coming out of programs such as CRP, or for acres being transferred from one county to another county. For a break out of certified irrigated acres per counties through December 2010, please refer to Table 1 below.

Table 1. Certified Irrigated Acres by County

County	2009	2010	Change
Arthur	12,440.79	12,440.79	0
Keith	114,616.64	114,695.19	+78.55
Lincoln	180,886.03	180,930.44	+44.41
McPherson	9,416.57	9,416.57	0
Total	**317,360.03**	**317,482.99**	**+122.96**

C. Changes from one year to the next could be a result of transfers from one county to another, improper certification, or certifiable acres coming out of approved programs.

III. APPROVED TRANSFERS

A. The TPNRD allows for transfers of certified irrigated acres to occur as long as a transfer does not conflict with the TPNRD Rules and Regulations. Transfers are prohibited to cross 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 located in the North Platte River Basin. Transfers may also take place from the North Platte River Basin into the Platte River Basin as long as the transfer is moving down stream. The same is true with transferring certified irrigated acres from the South Platte River Basin and moving those acres into the Platte River Basin.

B. Transfers are allowed to occur within flow lines (see map in Appendix B). These flow lines limit the impact on existing (ground and/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 to impact 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.

D. Transfers are allowed to 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 amount of transferable acres are reduced by the difference of the two SDF percentages and may not be at a one-to-one rate. 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 2010, the District has approved 28 transfers. The total number of acres involved in these transfers considered to be new or moved to a new location is 763.47 acres. The total number of acres involved in these transfers considered for offset or de-certified acres is 764.60 acres. Each transfer resulted in no net increase in stream depletions. Detailed data regarding the location, timing, amount, and conditions associated with each transfer can be found in Appendix C.

IV. WELL CONSTRUCTION PERMITS

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

B. Supplemental Ground Water Wells

1. 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 2010 the TPNRD has issued zero Supplemental Ground Water Well Permits.

C. Supplemental Surface Water Wells

1. The TPNRD has issued Supplemental Surface Water Well Permits (coded SS). 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 2010 the TPNRD has issued no Supplemental Surface Water Well Permits.

D. Replacement Wells

1. 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 2010 the TPNRD issued 25 replacement well permits. For details of these permits refer to Table 3 below.

Table 3. Replacement Well Summary

Permit #	Legal	County	Registration #
TP-RP-10.01	17-T11N-R26W	Lincoln	G-010196
TP-RP-10.02	18-T14N-R36W	Keith	G-030101
TP-RP-10.03	31-T15N-R37W	Keith	G-094817
TP-RP-10.04	11-T13N-R35W	Keith	G-109318
TP-RP-10.05	1-T13N-R34W	Lincoln	G-056704
TP-RP-10.06	14-T13N-R40W	Keith	G-000462
TP-RP-10.07	23-T13N-R40W	Keith	G-014438
TP-RP-10.08	7-T13N-R31W	Lincoln	G-001984
TP-RP-10.09	21-T14N-R32W	Lincoln	G-021619
TP-RP-10.10	2-T11N-R27W	Lincoln	G-014718
TP-RP-10.11	22-T13N-R26W	Lincoln	G-024840
TP-RP-10.12	6-T13N-R36W	Keith	G-063174
TP-RP-10.13	7-T13N-R35W	Keith	G-092490
TP-RP-10.14	7-T13N-R35W	Keith	G-021282
TP-RP-10.15	36-T14N-R34W	Lincoln	G-033657
TP-RP-10.16	31-T14N-R33W	Lincoln	G-028460
TP-RP-10.17	31-T14N-R33W	Lincoln	G-028536
TP-RP-10.18	31-T14N-R31W	Lincoln	G-154671
TP-RP-10.19	31-T15N-R37W	Keith	G-087881
TP-RP-10.20	16-T15N-R39W	Keith	G-120845
TP-RP-10.21	29-T13N-R39W	Keith	A-006860
TP-RP-10.22	11-T13N-R37W	Keith	G-031433
TP-RP-10.23	31-T13N-R32W	Lincoln	G-019357
TP-RP-10.24	20-T14N-R36W	Keith	G-020902
TP-RP-10.25	33-T14N-R32W	Keith	G-048593

E. Temporary Wells

1. 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 2010 there has been no Temporary Water Well Permits issued.

F. De-Watering Wells

1. 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 2010 the TPNRD has issued two De-Watering Well Permits.

G. New Well Permits

1. 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 (as long as there is no new depletions) where they could be placed under a pivot that does not have a well associated with it. For calendar year 2010 the TPNRD has issued eight New Well Permits.

H. Industrial Wells

1. The TPNRD can issue industrial well permits (coded IN). These are wells where commercial or industries may have needed wells, or needed another source of water due to water quality issues. For calendar year 2010, the TPNRD has issued no Industrial Wells.

I. OTHER PERMITS

1. At this time there are no other permits to report on.

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	25
Temporary Wells - TP	0
De-Watering Wells - DW	2
New Well - NP	8
Industrial – IN	0
Total	35

V. VARIANCES

A. Variances can be pursued for a variety of reasons. The TPNRD Board reviews variances each month on a case-by-case basis. For a summary of these variances see Table 4A & 4B below. For details of these permits refer to Appendix C.

1. Definitions

a. Offset – A reduction in irrigated acres, or consumptive use at one 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. Transfers – Allows for the consumptive use of water to be changed 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 the timing, location, and amount of depletions to the river are being met.

c. Variance – Allows an exception 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, or impacts to the river, or impacts to existing (ground or surface) users.

Table 4A. Summary Table for Transfers "old" acres

NRD PERMIT NUMBER	OLD TOWNSHIP	OLD RANGE	OLD SECTION	OLD SUBSECTION	OLD EAST/WEST	ACRES
TP-TRANS-10.06	14	32	13	SENW	W	4.78
TP-TRANS-10.08	14	32	25	N	W	8.41
TP-TRANS-10.14	15	26	2	SW	W	18.63
TP-TRANS-10.15	13	38	9	SWNW	W	1.42
TP-TRANS-10.16	13	40	33	NE	W	26.81
TP-TRANS-10.16	12	39	1	NE	W	36.77
TP-TRANS-10.16	13	38	10	NE	W	29.91
TP-TRANS-10.16	13	40	29	N	W	25.19
TP-TRANS-10.20	14	38	20	SW	W	41.70
TP-TRANS-10.20	13	35	6	SE	W	19.22
TP-TRANS-10.20	13	36	6	SW	W	29.97
TP-TRANS-10.20	13	37	5	NE	W	29.02
TP-TRANS-10.22	14	31	7, 18	SWSW, NENW	W	11.30
TP-TRANS-10.23	13	40	26	NENW	W	2.82
TP-TRANS-10.11	12	39	5	NE, S	W	126.50
TP-TRANS-10.13	14	33	23	SNW	W	5.48
TP-TRANS-10.21	11	26	20	NNE	W	0.56
TP-TRANS-10.09	12	40	6, 7	SWSW, NW	W	14.99
TP-TRANS-10.16	12	38	6	SSW	W	14.40
TP-TRANS-10.20	12	38	6	SESW	W	11.27
TP-TRANS-10.19	12	26	26, 27	NWSW, ESE	W	1.20
TP-TRANS-10.19	12	26	35	W	W	8.79
TP-TRANS-10.26	13	39	03	SE	W	8.18
TP-TRANS-10.27	13	40	31	NWNE	W	4.99
TP-TRANS-10.25	11	26	15	SW	W	3.10
TP-TRANS-10.30	13	35	12	S	W	27.23
TP-TRANS-10.28	14	32	14	NE	W	6.01
TP-TRANS-10.33	13	33	6	NW	W	26.53
TP-TRANS-10.36	12	41	04	NW	W	32.52
TP-TRANS-10.35	13	35	34	N, SE	W	83.77
TP-TRANS-10.37	13	38	07	SW	W	8.06
TP-TRANS-10.41	14	33	30	SW	W	3.89
TP-TRANS-10.32	13	40	31	NW	W	6.31
TP-TRANS-10.42	13	36	4	NE	W	6.09
TP-TRANS-10.38	13	34	26	NW	W	2.49
TP-TRANS-10.39	16	29	11	NE	W	55.58
TP-TRANS-10.40	12	33	07	W	W	18.71
TOTAL						**762.60**

Table 4B. Summary Table for Transfers "new" acres

PERMIT NUMBER	TWN	RNG	SEC	SUB-SECTION	EAST WEST	ACRES DRIED	ACRES AT NEW LOCATION
TP-TRANS-10.06	14	32	13	NW	W	4.79	4.79
TP-TRANS-10.08	14	32	25	NE	W	8.41	8.41
TP-TRANS-10.14	15	26	2	SW	W	18.63	18.63

TP-TRANS-10.15	13	38	9	SWNW	W	1.42	1.42
TP-TRANS-10.16	13	34	34	NW	W	132	132
TP-TRANS-10.19	12	26	26	SW	W	7.77	7.77
TP-TRANS-10.19	12	26	35	NWSW	W	2.23	2.23
TP-TRANS-10.20	13	34	34	NE	W	132	132
TP-TRANS-10.22	14	31	18	NW	W	11.30	11.30
TP-TRANS-10.23	13	40	26	NW	W	2.82	2.82
TP-TRANS-10.11	12	39	11	NW	W	126.5	126.5
TP-TRANS-10.13	14	33	23	SWNW	W	5.48	5.48
TP-TRANS-10.21	11	26	20	NENE	W	0.57	0.57
TP-TRANS-10.09	12	40	6, 7	SW, NW	W	15	15
TP-TRANS-10.25	11	26	15	SW	W	3.10	3.10
TP-TRANS-10.26	13	39	03	S	W	8.19	8.19
TP-TRANS-10.27	13	40	31	ENE	W	5	5
TP-TRANS-10.28	14	32	14	NE	W	7.01	7.01
TP-TRANS-10.30	13	35	12	E	W	27.24	27.24
TP-TRANS-10.32	13	40	31	NW	W	6.31	6.31
TP-TRANS-10.33	13	33	6	NW	W	26.54	26.54
TP-TRANS-10.36	12	41	04	NW	W	32.52	32.52
TP-TRANS-10.42	13	35	22	NW	W	6.1	6.10
TP-TRANS-10.35	13	35	34	NE, NW, SW, SE	W	83.78	83.78
TP-TRANS-10.37	13	38	07	SW	W	8.07	8.07
TP-TRANS-10.38	13	34	26	SE	W	2.50	2.50
TP-TRANS-10.39	16	29	11	NE	W	55.59	55.59
TP-TRANS-10.40	12	33	7	SW	W	18.71	18.71
TP-TRANS-10.41	14	33	30	SW	W	3.89	3.89
TOTAL							**763.47**

VI. MUNICIPAL ACCOUNTING

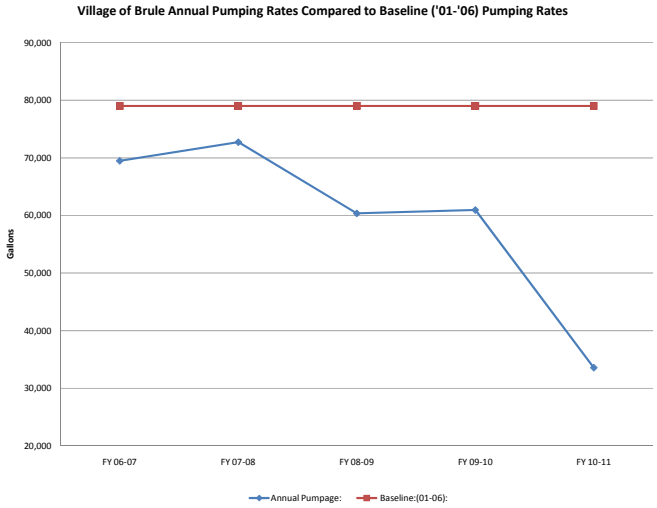
A. Contact

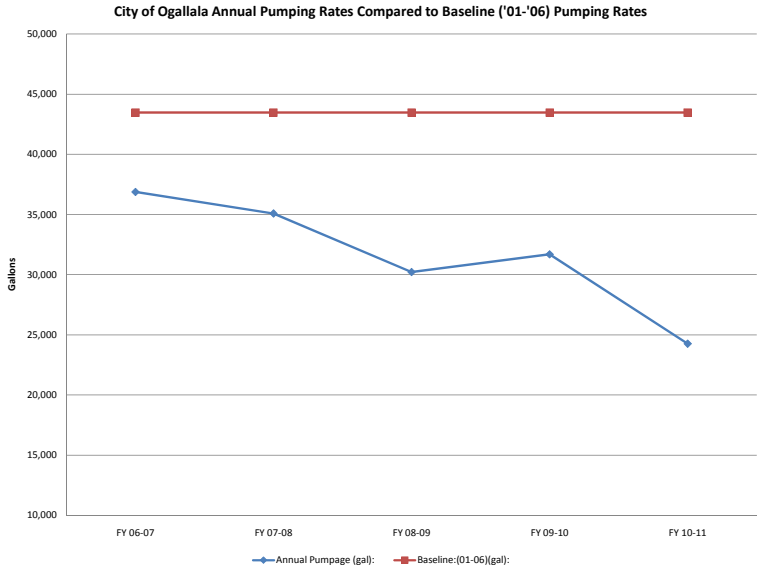
1. Each of the villages and two cities in the TPNRD have been contacted and have submitted pumping and discharge records for their respective communities through December 2010.

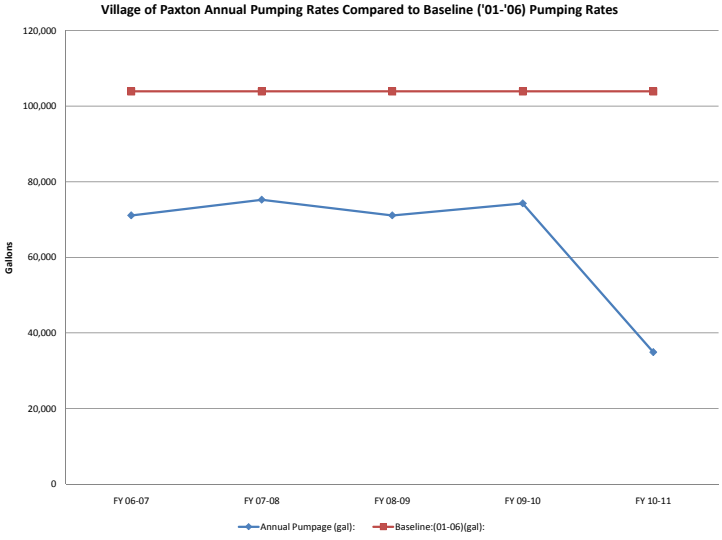
B. Reporting Data for Cities and Villages Without a Transfer Permit

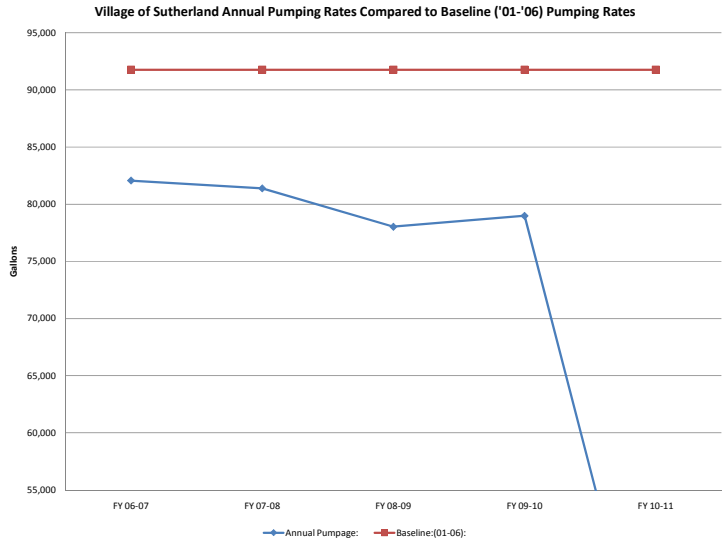
1. The information received from contact during the summer 2010 has been entered into a database to determine the baseline use, and any deviation from that baseline on an annual basis. Refer to Table 5 below to see the summary charts of each village and city without a transfer permit. These tables show the annual baseline use compared to their annual use for each city or village in our District without a transfer permit. Table 6 refers to the City of North Platte which has a transfer permit and therefore is treated slightly different. These tables are reported in fiscal years; therefore FY10-11 is only half completed and can be easily misinterpreted. For summary tables of these permits refer to Table 5 below.

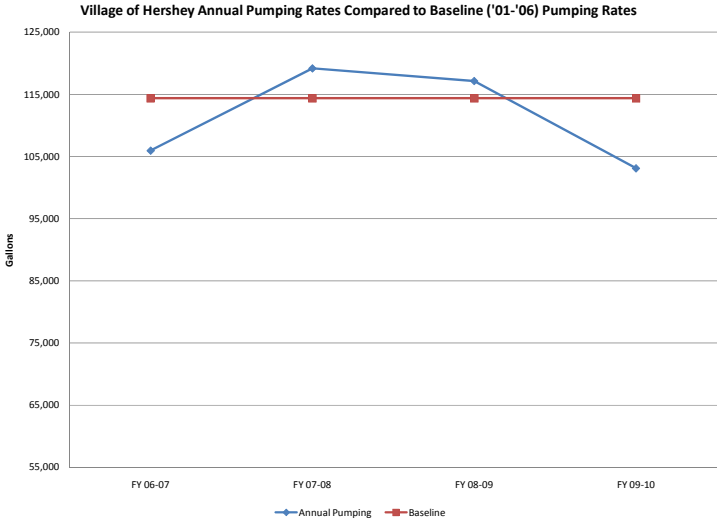
Table 5. Municipalities and Villages without a Transfer Permit Comparison of Baseline Use to Annual Use

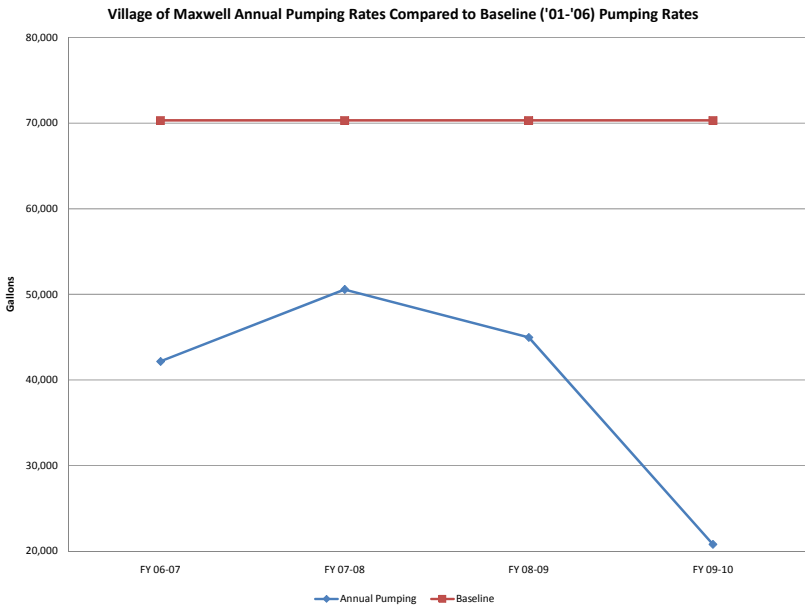


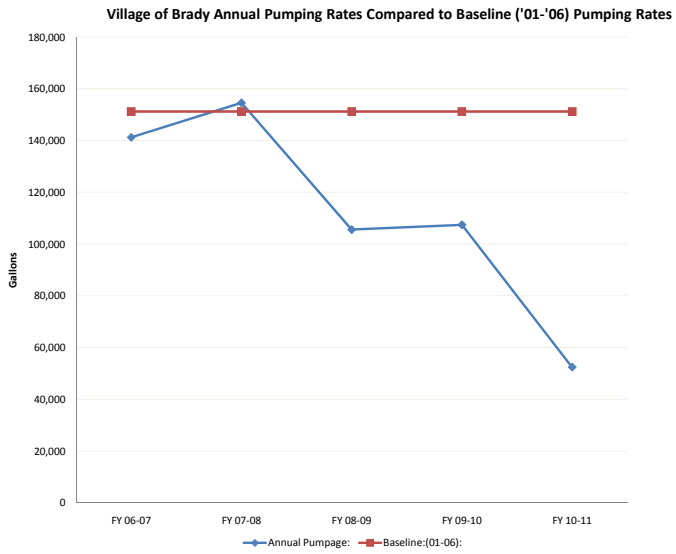





Village of Sutherland Annual Pumping Rates Compared to Baseline ('01-'06) Pumping Rates
95,000
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
Gallons
FY 06-07
FY 07-08
FY 08-09
FY 09-10
FY 10-11
Annual Pumpage:
Baseline:(01-06):


Village of Hershey Annual Pumping Rates Compared to Baseline ('01-'06) Pumping Rates
125,000
115,000
105,000
95,000
85,000
75,000
65,000
55,000
Gallons
FY 06-07
FY 07-08
FY 08-09
FY 09-10
Annual Pumping
Baseline

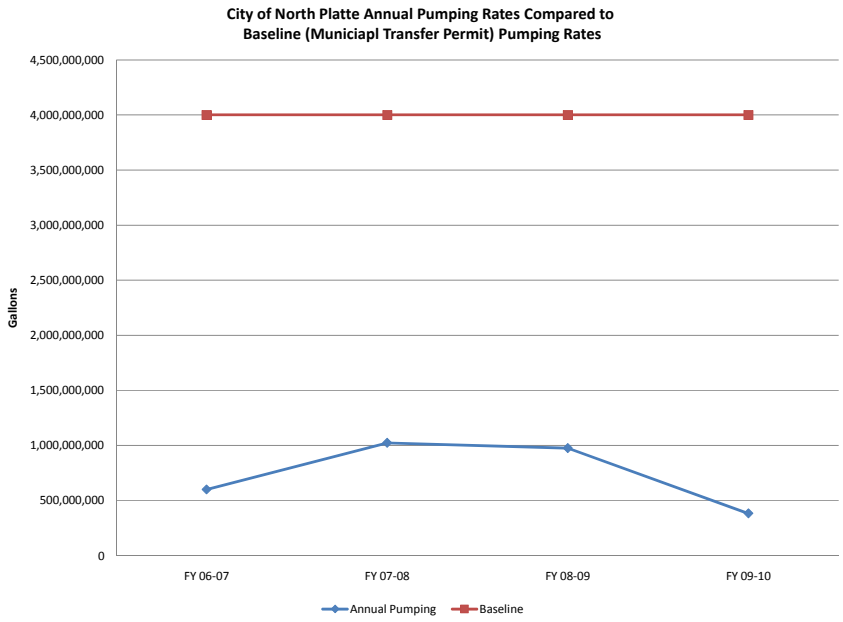

Village of Maxwell Annual Pumping Rates Compared to Baseline ('01-'06) Pumping Rates
80,000
70,000
60,000
50,000
40,000
30,000
20,000
Gallons
FY 06-07
FY 07-08
FY 08-09
FY 09-10
Annual Pumping
Baseline



C. Reporting Data for Cities With a Transfer Permit

1. The information received from contact during the summer 2010 has been entered into a database to determine the baseline use, and any deviation from that baseline on an annual basis. Table 6 refers to the City of North Platte which has a transfer permit and therefore is treated slightly different than those without a transfer permit. The City of North Platte's baseline is considered its transfer permit figure. These tables are also reported in fiscal years; therefore FY10-11 is only half completed and can be easily misinterpreted. For summary tables of these permits refer to Table 6 below.

Table 6. Municipalities with a Transfer Permit Comparison of Baseline Use to Annual Use



VII. INDUSTRIAL ACCOUNTING

A. Contact

1. Information has been gathered on all the commercial/industrial wells that pump greater than 50 gpm within the TPNRD. There are 87 wells that meet these criteria in the TPNRD. The TPNRD is initially working with one industry and its operation to determine the best way to report their pumping and discharge rates so that a baseline use can be developed. Upon completion of this sample company, then the others will be contacted and baselines developed.

VIII. FLOW METER DATA

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

IX. OTHER WATER BANKING ACTIVITIES

A. The TPNRD in conjunction with an Omaha company has developed water banking software that is used for variances, transfers, and any other water banking purchases. Currently, we do not have a District-wide stand alone water bank.

X. RETIRED ACRES AND OTHER STREAM FLOW ACCRETION ACTIVITIES

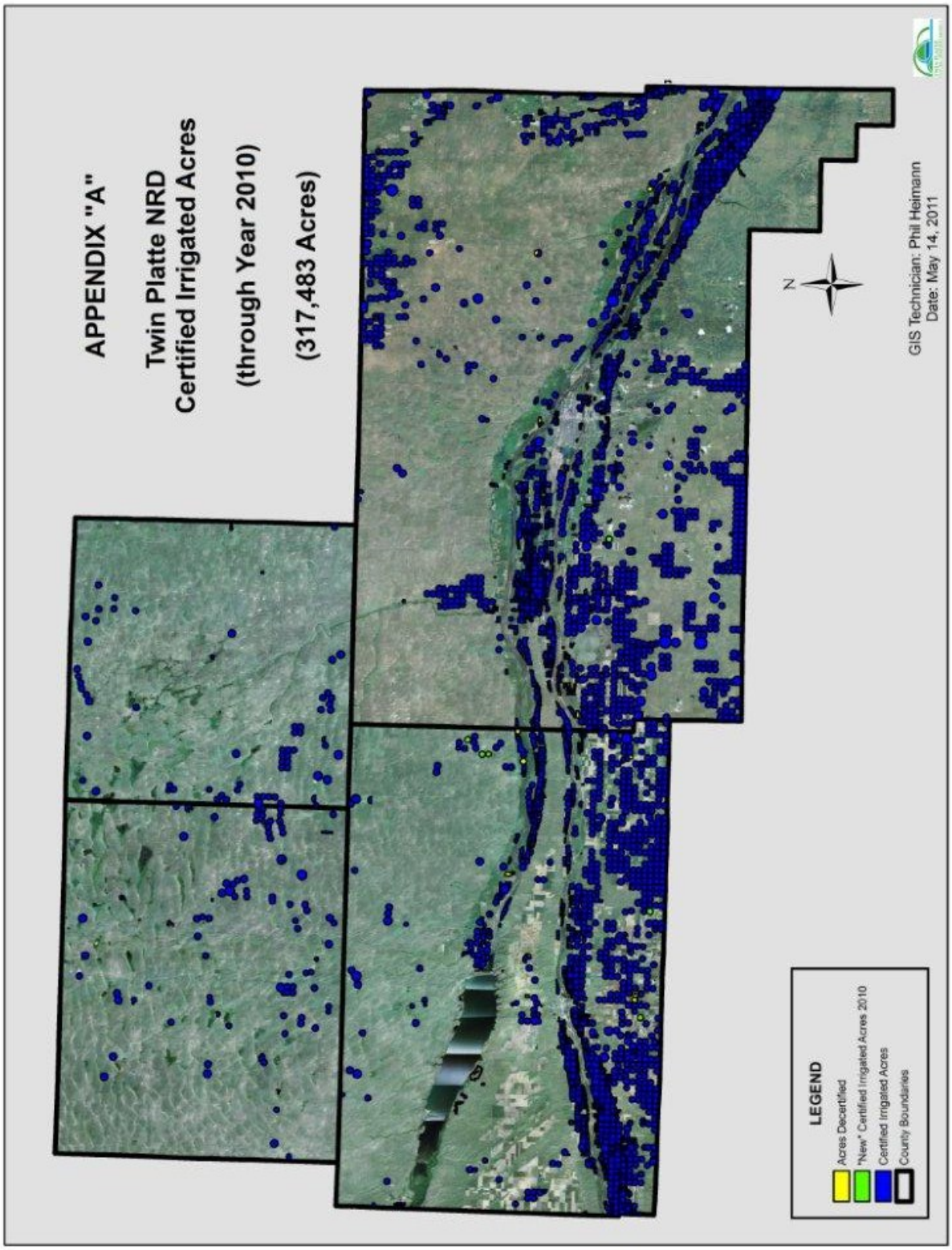
A. A re-timing project on the Western Irrigation District is being currently studied in conjunction with the State of Nebraska.

B Additional other 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.

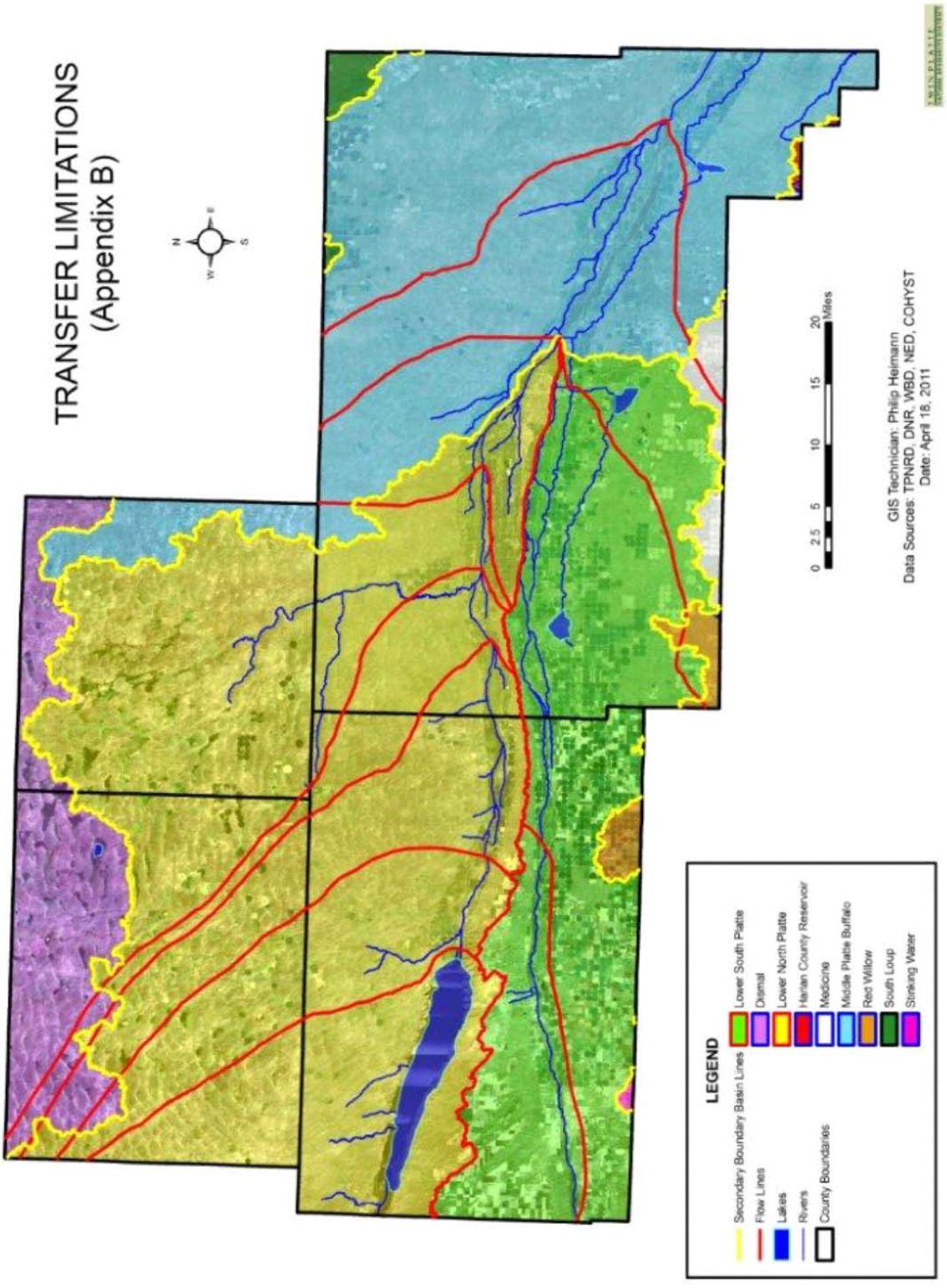
XI. GROUND WATER LEVELS

A. Tracking and reporting of ground water levels is not required in the IMP (Chapter 7.I.A.1 (a) and 7.I.A.2).

Appendix A. Certified Irrigated Acres through Year 2010



Appendix B. Transfer Limitations Map



Appendix C. Detailed Tables for 2010 Transfers

Due to the size of the tables for the 2010 transfers these tables will only be included with the electronic version of this report. For the summary tables of the transfers refer to Tables 4A and 4B.