



2013 Annual Report of Integrated Water Management Activities in the Republican Basin Within Tri-Basin NRD



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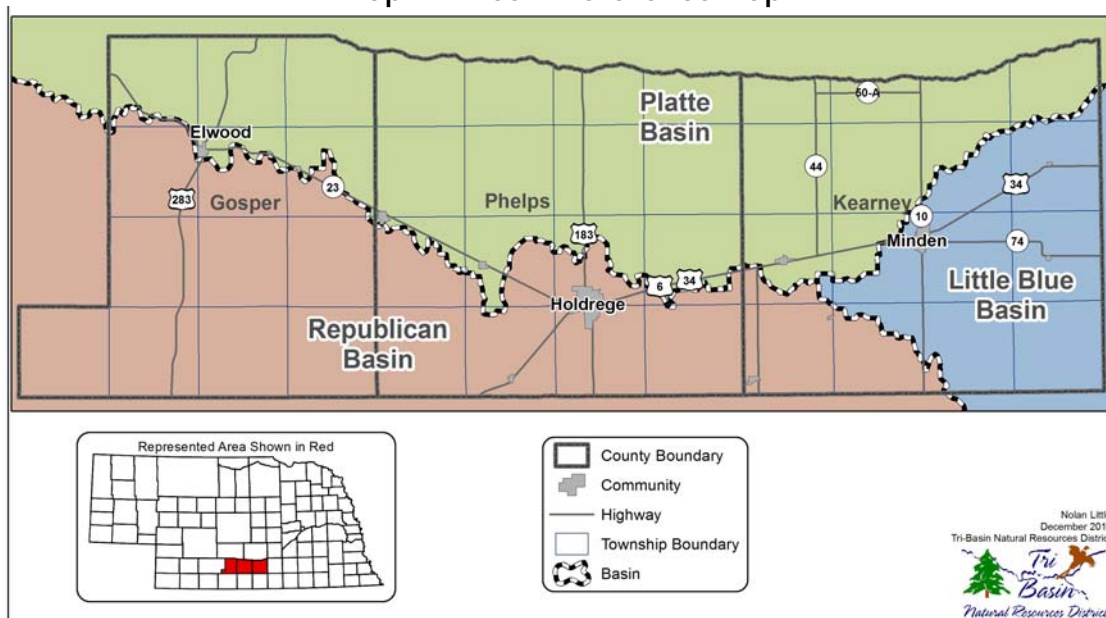
July 2014

**ANNUAL REPORT OF WATER USE ACTIVITIES
IN THE REPUBLICAN BASIN WITHIN TRI-BASIN NRD
TO MEET THE REQUIREMENTS OF THE JOINT INTEGRATED MANAGEMENT PLAN
FOR THE 2014 JOINT INTEGRATED MANAGEMENT PLAN PROGRESS REVIEW MEETING**

I. SUMMARY

The purpose of this report is to convey information that Tri-Basin Natural Resources District (TBNRD) agreed to supply to the State of Nebraska as part of a joint Integrated Management Plan for the Republican River Basin.

Map #1: Basin Reference Map



II. INTRODUCTION

TBNRD encompasses portions of the Republican, Platte and Little Blue River Basins (see map #1, above). The district also contains an area commonly referred to as the "Groundwater Mound," a large area spanning portions of all three basins that is characterized by groundwater levels that are higher than historic "pre-development" groundwater elevations.

More than 100,000 acres of cropland within the Platte Basin portion of TBNRD are irrigated with water diverted from the Platte River and distributed through the canals of the Central Nebraska Public Power and Irrigation District (CNPPID). Surface irrigation water and the canals that distribute it enhance recharge of groundwater supplies within the district. In addition to helping sustain groundwater supplies, this incidental recharge has increased streamflows in Platte and Republican tributaries.

III. CERTIFIED IRRIGATED ACRES

The district began certifying irrigated acres in the Republican Basin in 2004. The initial certification process in the Republican Basin ended on September 15,

2004. Since that time, corrections and revisions to the certified acre database have occurred with a net result that, as of February 7, 2014, of 189,447.16 certified irrigated acres. Commingled acres are acres that may be watered with groundwater or surface water, often times a combination of both. Data regarding certified irrigated acres can be found in **TABLE 1: Certified Acres**, below. Detailed information about locations and distribution of certified irrigated acres is available in the Tri-Basin NRD office.

TABLE 1: Certified Irrigated Acres					
	Year	Groundwater	CoMingled Acres	Surface Water	
Gosper County	2012	56,489.90	1057.16	173	
	2013	56,501.89	1,013.68	216.48	
Kearney County	2012	40,955.11	427.59		
	2013	40,938.11	427.59		
Phelps County	2012	85,504.59	4,532.56	236.51	
	2013	85,550.50	4,562.40	236.51	
Total	2012	182,949.60	6,017.31	409.51	189,376.42
	2013	182,990.50	6,003.67	452.99	189,447.16

IV. APPROVED CERTIFIED ACRE AND GROUNDWATER TRANSFERS

A. TBNRD allows certified irrigated acres to be transferred from one parcel to another within the Republican Basin portion of the district, with some limitations. Certified irrigated acres also cannot be transferred from parcels with surface water or commingled water resources to parcels that have groundwater wells as their only water source. The NRD also pro-rates certified acre transfers in which acres are transferred from low to high streamflow depletion zones. Between January 1, 2013 and December 31, 2013 the district approved 18 certified irrigated acre transfers in the Republican Basin. A total of 219.73 certified irrigated acres were involved in these transfers. Data regarding the location, amount and conditions associated with each transfer can be found in **TABLE 2A: Republican Basin Transfers-Acres Original Locations** (page 4) and **TABLE 2B: Republican Basin Transfers-Destinations for Transferred Acres** (page 5).

TABLE 2A: Republican Basin Transfers- Acres Original Locations		
NRD Permit Number	Legal Description	Acres Dried Up
TBAT-0156	Pt NW 1/4 Section 34-6-18	11.55
TBAT-0159	E 1/2 of SE 1/4 Section 1-5-18	10
TBAT-0160	SW 1/4 Section 6-5-22	36
TBAT-0165	Entire Section Section 23-6-23	11
TBAT-0166	East 1/2 of SE 1/4 Section 19-7-21	17.33
TBAT-0169	NE 1/4 Section 33-6-18	18.11
TBAT-0170	Section 14-6-19	7
TBAT-0179	West 1/2 Section 10-5-24	8.5
TBAT-0180	West 1/2 Section 10-5-24	4.5
TBAT-0181	West 1/2 Section 10-5-24	10.91
TBAT-0182	West 1/2 Section 10-5-24	4
TBAT-0183	West 1/2 Section 10-5-24	6
TBAT-0189	NE 1/4 Section 30-5-14	10
TBAT-0190	NE 1/4 Section 30-5-14	7
TBAT-0191	NE 1/4 Section 28-6-23	3
TBAT-0202	S 1/2 N 1/2, SW 1/4, SE 1/4 Section 18-5-20	29.83
TBAT-0203	SE 1/4 Section 33-6-21	16
TBAT-0204	SW 1/4 Section 7-6-21	9

TABLE 2B: Republican Basin Transfers - Destinations for Transferred acres		
NRD Permit Number	Section	New Irrigated
TBAT-0156	NW 1/4 Section 5-5-17	11.55
TBAT-0159	Pt NE 1/4 Section 12-5-18	10
TBAT-0160	Pt SE 1/4 Section 1-5-23	36
TBAT-0165	West 1/2 Section 24-6-23	11
TBAT-0166	NE 1/4; SW 1/4; West 1/2 of SE 1/4 Section 19-7-21	17.33
TBAT-0169	SE 1/4 Section 2-6-21	11.86
TBAT-0170	SW 1/4 Section 27-6-19	7
TBAT-0179	West 1/2 NE 1/4 Section 5-5-17	8.5
TBAT-0180	East 1/2 NE 1/4 Section 5-5-17	4.5
TBAT-0181	SE 1/4 Section 19-5-17	10.91
TBAT-0182	S 1/2 NE 1/4 Section 14-5-18	4
TBAT-0183	NE 1/4 Section 7-5-19	6
TBAT-0189	Lots 4-5 Section 19-5-17	10
TBAT-0190	West 1/2 NE 1/4 Section 19-5-17	7
TBAT-0191	SE 1/4 Section 28-6-23	3
TBAT-0202	All of Section Section 19-5-20	29.83
TBAT-0203	Middle of East 1/2 Section 25-5-21	16
TBAT-0204	NW 1/4 Section 7-6-21	9

B. TBNRD regulates groundwater pumping off of overlying land by requiring landowners to secure groundwater transfer permits before they can pump groundwater to properties that are not under the same ownership. Groundwater transfer permits can only be used to supply groundwater for irrigation of certified irrigated acres. Landowners are required to install flowmeters on wells that are permitted for transfers and to report pumping from these wells annually to the TBNRD. TBNRD issued 12 groundwater transfer permits in the Republican Basin between January 1, 2013 and December 31, 2013. Data regarding groundwater transfers can be found in **TABLE 3: Groundwater Transfers**, below.

TABLE 3: Groundwater Transfers			
NRD Permit Number	Legal Description	Well	Neighboring Certified Acres to be watered with well
GWT-0274	SE 1/4 Section 8-5-16	G-068708	7
GWT-0275	SE 1/4 Section 8-5-16	G-068708	7
GWT-0276	SE 1/4 Section 14-5-16	G-046755	7
GWT-0277	East 1/2 Section 6-5-17	G-010959	7
GWT-0278	SE 1/4 Section 29-7-21	G-032834	3
GWT-0279	NE 1/4 Section 23-5-16	G-068947	5
GWT-0280	SW 1/4 Section 23-5-16	G-013965	5
GWT-0282	NW 1/4 Section 10-5-17	A-006726	7
GWT-0286	NW 1/4 Section 4-5-17	G-021689-R1	6
GWT-0287	NW 1/4 Section 4-5-17	G-021689-R1	6
GWT-0288	NW 1/4 Section 4-5-17	G-021689-R1	6
GWT-0298	NE 1/4 Section 33-6-17	G-031546	7

V. WELL CONSTRUCTION PERMITS

A. Since 1989, TBNRD has required landowners to secure well construction permits before they drill wells capable of pumping more than 50 gallons per minute. The district issues three categories of well permits: new well permits, conditional replacement well permits, and replacement well permits.

TBNRD requires landowners to agree to several conditions on the operation of new wells and conditional replacement wells before permits are issued. These conditions are listed in an agreement that is signed by landowners when they apply for these types of well permits. A copy of that agreement is attached to this report as Appendix A.

B. **TABLE 4: TBNRD Well Permits** (below) is a breakdown of well permits that TBNRD issued in the Republican Basin between January 1, 2013 and December 31, 2013. A detailed listing of well permits issued by TBNRD in 2013 is found in **TABLE 5: Well Permit Summary** (below).

TABLE 4: TBNRD Well Permits	
Well Permit Type	Permits
New (variance) irrigation [Acre transfer involved]	0
Replacement irrigation	11
Conditional replacement irrigation - supplemental to groundwater	9
Dewatering	0
New commercial/industrial	

VI. VARIANCES

TBNRD issues new well permits to landowners of parcels that don't have a prior irrigation history only after they have transferred sufficient certified irrigated acres for the intended new use. The TBNRD Board must approve a variance to the rule prohibiting new well construction before new well permits can be issued. No new well construction permit variances were issued in the Republican Basin between January 1, 2013 and December 31, 2013 (see Table 5, below).

TABLE 5: Well Permit Summary			
Permit Number	Well Permit Type	Legal Description	NDNR Reg. Number
TBSG-1431	SG-Supplemental to Groundwater	Section 35-5-17W	G-170025
TBSG-1435	SG-Supplemental to Groundwater	Section 33-7-21W	G-167778
TBSG-1443	SG-Supplemental to Groundwater	Section 7-5-15W	G-167287
TBSG-1445	SG-Supplemental to Groundwater	Section 25-5-21W	NDY
TBSG-1449	SG-Supplemental to Groundwater	Section 12-5-19W	G-168201
TBSG-1452	SG-Supplemental to Groundwater	Section 28-5-21W	NDY
TBSG-1453	SG-Supplemental to Groundwater	Section 13-6-19W	NDY
TBSG-1456	SG-Supplemental to Groundwater	Section 20-5-21W	NDY
TBSG-1459	SG-Supplemental to Groundwater	Section 16-5-19W	NDY

Tri-Basin NRD corrected the district's certified acre database by certifying 147.4 acres in ten parcels that had a history of irrigation between 1997 and 2005. These acres weren't previously included in the district's database, because they hadn't been classified as irrigated cropland by county assessors. During the October, 2013 NRD Board meeting, the board of directors added a new pre-condition for con-

sideration of irrigated acre corrections. Since that meeting, landowners must prove not only that land was irrigated during the period 1997-2003, but that land was also irrigated during three of the past five years. Tri-Basin NRD's Republican Basin Corrections data is in **TABLE 6: Republican Basin Variances** (below).

TABLE 6: Republican Basin Certified Irrigated Variances		
Type of Variance	Legal Description	Affected Acres
Variance on transferring rules into Phase II area	SW of SW 1/4 Section 6-5-22	36
New Well Permit	SW 1/4 Section 22-5-22	
Certified Acre Correction Request	W 1/2 of NE 1/4; Lots 4 & 5 Section 31-6-17W	21.67
Certified Acre Correction Request	S 1/2 of SE 1/4 Section 19-5-14W	4.74
Certified Acre Correction Request	Pt NW 1/4 Section 18-6-21W	12.57
Certified Acre Correction Request	Lots 11-18 Section 6-5-17W	23.1
Certified Acre Correction Request	NE 1/4 Section 34-6-16W	5.68
Certified Acre Correction Request	SW 1/4 Section 29-5-15W	20.87
Variance on Well abandonment	SW 1/4 Section 22-5-22	
Variance on Well abandonment	SW 1/4 Section 22-5-22	
Variance on Well abandonment	NE 1/4 Section 27-5-22	
Variance on flow meter	SW of NW 1/4 Section 8-5-16	
Certified Acre Correction Request	SE 1/4 Section 13-5-17W	5.41
Certified Acre Correction Request	Pt NE 1/4; pt W 1/2 Section 2-5-18W	4.12
Certified Acre Correction Request	Whole Section Section 19-6-18W	42.35
Certified Acre Correction Request	Pt of NE 1/4 Section 36-6-18W	6.89

VII. MUNICIPAL AND INDUSTRIAL ACCOUNTING

TBNRD collects water use data annually from all municipalities and industries within the district. Municipal and industrial water use data for communities and industries located in the Republican Basin reported to TBNRD in 2013 are shown in the next two tables. A summary of Municipal Water Use may be found in **TABLE 7: Republican Basin Municipal Water Use Data** (below). **TABLE 8** (page 9) shows Industrial and Commercial Water Use Data.

TABLE 7: Republican Basin Municipal Water Use Data (in gallons)		
Municipality	2012	2013
Atlanta	33,219,000	23,124,400
Arapahoe	138,279,000	120,573,000
Holdrege	512,347,700	473,755,500
Wilcox	27,905,000	25,414,900

TABLE 8: Republican Basin Industrial and Commercial Water Use Data				
NDNR Reg. Number	Owner	Legal Description	Gallons Used	
G-070393	NE Game & Parks, Sac-Wilcox WMA	Section 27 - 5 - 17W	0	Well not used in 2013
G-030619	City of Holdrege	Section 9 - 5 - 18W	0	Well not used in 2013
G-025572	City of Holdrege	Section 9 - 5 - 18W	0	Well not used in 2013
G-079833	Cargill Ag Horizons Inc	Section 31 - 6 - 17W	132,500	
G-135221	Geer Utility	Section 27 - 6 - 18W	3,034,600	
G-135220-R1	Geer Utility	Section 27 - 6 - 18W		2 Wells & 1 Meter See G-135221
G-069908	Holdrege Country Club	Section 29 - 6 - 18W	28,140,000	
G-009687	Holdrege Country Club	Section 29 - 6 - 18W	28,351,300	
G-096786	City of Holdrege	Section 34 - 6 - 18W	374,100	
G-071934	Sargent Irrigation Company Inc	Section 34 - 6 - 18W	219,100	
G-070168	Holdrege Irrigation	Section 34 - 6 - 18W	386,690	

VIII. FLOWMETER DATA

TBNRD requires flowmeters to be installed and annual water use to be reported to TBNRD whenever landowners drill new wells, receive irrigation-related cost-share funds, or when groundwater is transferred from one property to another. In 2013 landowners reported data from 1,604 metered wells in the Republican Basin. The metered wells reported irrigating 177,989.52 certified irrigated acres. There are 34 wells in the Republican Basin that are exempted from having flowmeters. All District flowmeter data is reported annually to the Department of Natural Resources (DNR) for purposes of Republican River Basin Compact Administration accounting. A summary of Republican Basin water use data is included in this report as Appendix B. Detailed Republican Basin flowmeter data is available from the Tri-Basin NRD office.

IX. WATER BANKING ACTIVITIES

TBNRD is considering establishing a water bank of some sort, but no policy has yet been agreed upon by the TBNRD Board of Directors.

X. RETIRED ACRES AND OTHER STREAMFLOW ACCRETION ACTIVITIES

Tri-Basin NRD paid CNPPID to divert 5400 acre-feet of water from the Platte River into Elwood Reservoir in Gosper County in 2008 and 2906 acre-feet in 2009. These diversions were made from the Platte when streamflows exceeded target flows, or when irrigation deliveries were suspended due to heavy rainfall in the CNP-PID irrigated area. They were above and beyond normal diversions into the reservoir

for irrigation deliveries. According to calculations by DNR staff (TBNRD_offset_summary_update_7_19_10.xls), these diversions should provide 1191 acre-feet of offset credit for the Republican Basin in 2012. TBNRD and DNR paid CNPPID to divert approximately 15,000 acre-feet into Elwood and the E-65 canal during the Fall of 2013. In both instances, these diversions were above and beyond normal diversions into the reservoir.

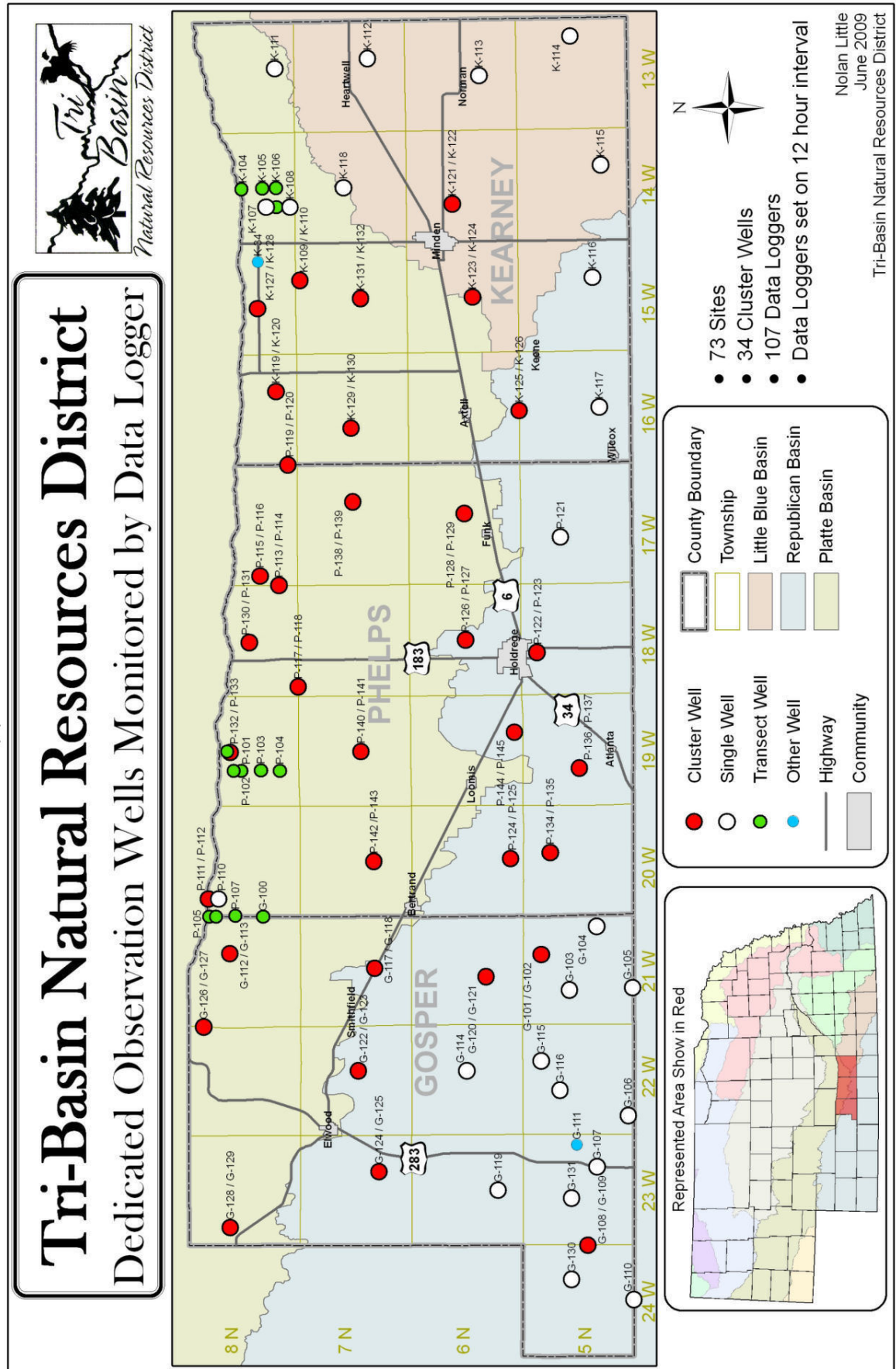
Irrigated land was temporarily retired in TBNRD during 2013 through 18 contracts totaling 241.6 irrigated acres were signed up for USDA-EQIP Dry Land Corners. Tri-Basin NRD records indicate that 1776.6 irrigated acres are enrolled in USDA Conservation Reserve Enhancement Program (CREP) in the Republican Basin portion of the district. Most of these contracts are set to expire by 2019.

Landowners reported to TBNRD on district water use reports that conservation tillage practices have been adopted or continue to be utilized on 114,477.16 certified irrigated acres in the Republican Basin portion of the district during 2013 (no-till data is available from the Tri-Basin NRD office). Recent university research (Klocke, et al, 2009) indicates that evapotranspiration (ET) is reduced by as much as 3 inches per acre on irrigated cropland, as compared to conventional tillage systems, so if the estimates of no-till acres are accurate, as much as 28,619 acre-feet of water was conserved in the Republican Basin in TBNRD in 2013 through this conservation practice.

XI. GROUNDWATER LEVELS

TBNRD has an extensive network of 109 dedicated groundwater observation wells (42 in the Republican Basin) and 90 irrigation wells (60 in the Republican Basin) that are used to measure groundwater levels (see Map #2, page 11). TBNRD also works cooperatively with CNPPID to gather groundwater level data. Data from 20 wells measured by CNPPID are included in TBNRD's groundwater observation well database. District water level data is reported bi-annually to U.S. Geological Survey and UNL-Conservation and Survey Division. Groundwater level data for the district is available from the Tri-Basin NRD office.

Map #2: Dedicated Groundwater Observation Wells



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Appendix A

Tri-Basin Natural Resources District
New Well and Conditional Replacement Well Permit
Applicant Certification and Agreement

Applicant Certification and Agreement to be bound by Conditions and Limitations on operation of a Well permitted as a New Well or as a Conditional Replacement Well pursuant to Rule 1.12, Tri-Basin Natural Resources District Rules and Regulations for Management of Land and Water Resources

NRD Permit # _____ Applicant _____

Applicant is the owner of the following- described real estate:

_____ $\frac{1}{4}$ Section T N - R W _____

Applicant accepts and agrees to be bound by the following conditions and limitations on the operation of a well that is constructed under the authority of a permit issued by the Tri-Basin Natural Resources District ("NRD"). The conditions and limitations are (check the box and initial those that apply):

- ☐ 1. Applicant agrees to offset any "new depletions" to streamflows of the Platte River, Little Blue River, Republican River, or their tributaries that may be determined to be associated with use of this well. Applicant agrees to use methods to offset those depletions that are deemed acceptable by the NRD and the State of Nebraska. Applicant understands and agrees that Applicant's failure to offset said new depletions may result in closure of this well or restrictions being imposed by the NRD on the number of acres of land that can be irrigated by this well.
- ☐ 2. Applicant agrees to abide by well spacing and pumping capacity limitations that apply to the well that is the subject of this permit, whether such limitations arise pursuant to federal or state law or by rule or regulation of the NRD. Applicant understands and agrees that Applicant's failure to comply with all rules and regulations of the NRD that pertain to this well may result in closure of this well and civil or criminal prosecution and other penalties.
- ☐ 3. Applicant agrees to comply with all current and future rules and regulations of the NRD that pertain to this well. Applicant understands and agrees that Applicant's failure to comply with all rules of regulations of the NRD that pertain to this well may result in closure of this well and civil or criminal prosecution and other penalties.
- ☐ 4. Applicant agrees to maintain any and all surface water rights associated with the land to be irrigated by this well for the lifespan of the permitted well. Applicant understands and agrees that Applicant's failure to comply with all rules and regulations of the NRD that pertain to this well may result in closure of this well and civil or criminal prosecution and other penalties (conditional replacement wells only).
- ☐ 5. Applicant agrees to irrigate only land that has been certified for irrigation by the NRD (no new irrigated acres will be allowed). Applicant understands and agrees that Applicant's failure to prevent irrigation of land not certified for irrigation by the NRD may result in closure of this well and prosecution by the State of Nebraska (conditional replacement wells only).

Applicant certifies that Applicant is familiar with the information contained in this instrument and that to the best of Applicant's knowledge and belief, such information is true, complete and accurate. Applicant further acknowledges and agrees that the NRD and/or the State of Nebraska may impose additional conditions, limitations and restrictions on operation of the well that is the subject of this permit. Applicant further acknowledges and agrees that the conditions and limitations agreed to herein shall also be binding upon Applicant's successors-in-interest to the well and/or the subject real estate.

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Appendix A

I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief such information is true, complete and accurate. I further acknowledge that Tri-Basin Natural Resources District or the State of Nebraska may impose additional conditions, limitations and restrictions on operation of the well that is the subject of this permit.

Date

Signature of Applicant

Date

Signature of Applicant

Date

Signature of Witness

Approval by Tri-Basin Natural Resources District

Date

Signature of Tri-Basin NRD Representative

Tri-Basin NRD – Republican Basin Annual Report
Appendix B

Tri-Basin NRD Republican Basin Water Use							
Updated February 7, 2014	2007	2008	2009	2010	2011	2012	2013
Kearney Co							
Certified Irrigated Acres	41,644.42	41,424.32	41,424.04	41,347.80	41,348.06	41,351.41	41,365.70
Pivots							
Actual Reported Acres	22,385.64	23,654.85	23,989.45	23,420.07	19,638.94	20,353.60	24,643.73
Gallons Used	3,541,381,170	3,818,925,847	4,076,847,096	2,488,373,015	3,068,789,295	6,888,349,787	7,063,988,419
Average acre Inches	5.83	5.95	6.26	3.91	5.75	12.46	10.56
Gravity							
Actual Reported Acres	8,713.63	7,884.45	6,782.76	6,336.83	6,379.60	6,331.91	4,280.08
Gallons Used	2,104,139,800	2,053,285,966	1,861,506,618	1,061,531,125	1,661,542,627	3,198,184,631	2,290,597,600
Average acre Inches	8.89	9.59	10.11	6.2	9.59	18.60	19.71
Combination							
Actual Reported Irrigated Acres	5,951.20	6,311.51	7,081.61	6,762.61	11,616.34	11,607.68	10,100.91
Gallons Used	1,045,863,800	1,029,295,800	1,216,909,854	738,619,900	2,194,067,314	4,146,802,562	3,338,885,321
Average acre Inches	6.47	6.01	6.33	4.0	6.96	13.16	11.98

Phelps Co							
Certified Irrigated Acres	90,034.35	90,056.49	90,074.28	90,122.96	90,327.49	90,253.97	90,349.41
Pivots							
Actual Reported Acres	43,456.40	44,661.74	47,177.54	47,644.47	47,521.53	47,981.03	51,634.20
Gallons Used	7,514,412,579	9,230,092,637	9,961,041,554	5,979,452,137	7,841,490,355	18,803,353,405	18,349,493,213
Average acre Inches	6.37	7.61	7.78	4.6	6.08	14.43	13.09
Gravity							
Actual Reported Acres	21,777.69	20,956.49	17,813.10	17,294.97	16,438.95	16,632.09	8,916.10
Gallons Used	5,988,777,976	7,023,928,292	6,659,829,299	3,811,778,121. 75	4,761,461,576	9,377,865,221	5,972,669,159
Average acre Inches	10.13	12.34	13.77	8.12	10.67	20.76	24.67
Combination							
Actual Reported Irrigated Acres	14,799.53	16,210.16	16,395.53	16,540.54	18,173.41	18,052.33	22,874.36
Gallons Used	2,797,496,400	3,884,727,743	3,834,900,501	2,340,349,155	3,563,491,797	7,338,795,255	8,950,299,149
Average acre Inches	6.96	8.83	8.61	5.2	7.22	14.97	14.41

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Updated February 7, 2014	Tri-Basin NRD Republican Basin Water Use						
	2007	2008	2009	2010	2011	2012	2013
Gosper Co							
Certified Irrigated Acres	57,746.74	57,765.72	57,809.41	57,896.60	57,760.72	57,742.11	57,732.05
Pivots							
Actual Reported Acres	29671.79	31756.88	32,729.99	33,488.46	34,753.39	36,082.66	34,348.63
Gallons Used	4,571,094,694	5,640,850,350	6,022,172,888	5,874,547,547	7,451,121,723	13,656,214,745	12,023,940,692
Average acre Inches	5.67	6.54	6.78	6.5	7.90	13.94	12.89
Gravity							
Actual Reported Acres	13368.98	12164.20	11,677.00	10,885.50	10,258.10	9,784.30	5,515.43
Gallons Used	3,292,907,800	4,052,542,200	3,708,816,337	3,203,004,797	3,327,536,001	6,393,890,714	3,343,182,638
Average acre Inches	9.07	12.27	11.70	10.8	11.95	24.07	22.32
Combination							
Actual Reported Irrigated Acres	8308.65	8434.50	8,456.40	8,294.00	8,603.37	8,571.25	14,310.51
Gallons Used	1,736,490,000	1,858,770,700	1,706,652,900	1,472,894,300	1,747,329,785	3,336,512,330	7,034,537,746
Average acre Inches	7.70	8.12	7.43	6.54	7.48	14.34	18.10

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2013 Meter Data Results					
Tri-Basin NRD - February 7, 2014					
County	System	Certified Irrigated Acres	Actual Reported Irrigated Acres	Gallons Used	Average Acre Inches
		Republican Basin			
Kearney Co	Pivots		24,643.73	7,063,988,419	10.56
	Gravity		4,280.08	2,290,597,600	19.71
	Combination		10,100.91	3,338,885,321	12.17
Totals		41,365.70	39,024.72	12,693,471,340	11.98
Phelps Co	Pivots		51,634.20	18,349,493,213	13.09
	Gravity		8,916.10	5,972,669,159	24.67
	Combination		22,874.36	8,950,299,149	14.41
Totals		90,349.41	83,424.66	33,272,461,521	14.69
Gosper Co	Pivots		34,348.63	12,023,940,692	12.89
	Gravity		5,515.43	3,343,182,638	22.32
	Combination		14,310.51	7,034,537,746	18.10
Totals		57,732.05	54,174.57	22,401,661,076	15.23
Republican Basin Totals					
	Pivots		110,626.56	37,437,422,324	12.46
	Gravity		18,711.61	11,606,449,397	22.84
	Combination		47,285.78	19,323,722,216	15.05
	Totals	189,447.16	176,623.95	68,367,593,937	14.25
Republican Basin Notes - Gosper County has 149 certified acres watered by wells in Furnas County. Phelps County has 250 acres watered with a combination of 3 wells in Phelps & 1 well in Harlan county; these same 4 wells water <u>117</u> acres in Harlan County.					

Tri-Basin NRD – Republican Basin Annual Report

Appendix B

Tri-Basin NRD - 2013 Water Use [general statistics] - February 3, 2014

	Rep. Basin	Platte Basin	Little Blue Basin	Total
Kearney				
Total Irr. wells	364	929	826	2,119
metered wells	348	126	143	617
Exemptions	15			15
Estimate Required		3	2	
Meter Required for 2014	1	3		
Reported Actual Irrigated Acres	39,024.72	14,621.23	17,681.20	71,327.15
Certified Acres	41,365.70	95,778.33	91,435.75	228,579.78
Phelps				
Total Irr. wells	758	1,410		2,168
metered wells	738	201		939
Exemptions	13			13
Estimate Required		4		
Meter Required for 2014	8	4		
Reported Actual Irrigated Acres	83,278.66	25,164.41		108,443.07
Certified Acres	90,349.41	167,501.73		257,851.14
Gosper				
Total Irr. wells	484	262		746
metered wells	478	40		518
Exemptions	6			6
Estimate Required		1		
Meter Required for 2014				
Reported Actual Irrigated Acres	54,484.57	4,798.19		59,282.76
Certified Acres	57,732.05	35,696.95		93,429
Basin Totals				
Total Irr. wells	1,606	2,601	826	5,033
metered wells	1,564	367	143	2,074
Exemptions	34	0	0	34
Estimate Required	0	8	2	
Meter Required for 2014	9	8	0	
Reported Actual Irrigated Acres	176,787.95	44,583.83	17,681.20	239,052.98
Certified Acres	189,447.16	298,977.01	91,435.75	579,859.92

Notes: Of the 34 meter exemptions 22 of those wells were not used - 12 Wells reported an estimated use.

Series Wells - We have a total of 123 series wells [where 2 or more wells work together to water the same acres] Several wells in a series do not have a meter as the wells are tied together and the water goes through the same meter. In the Republican basin we have 119 series wells and 2 in each of the Platte and Little Blue basins.

We have 26 contracts, approx 1806.55 acres in the CREP program.

Supplemental Wells - The table on Supplemental wells was produced from well permits that have been permitted for supplemental use. In 2013 many supplemental wells were used as the only water source on a field so that surface water could be transferred.

Staff has completed 518 meter inspections for 2013. Inspections for 2013 will continue into the spring of 2014 for wells where meters had been removed and also meters that had been reported to be not working correctly.

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