

**VIA ELECTRONIC MAIL ONLY**

**DATE: December 31, 2016**

**TO: Governance Committee (GC) of the Platte River Recovery Implementation Program (PRRIP)**

**FROM: Gordon W. "Jeff" Fassett, State of Nebraska's Representative to the GC Director, Nebraska Department of Natural Resources**

**SUBJECT: Nebraska's Annual Report under Section IV, Bullet 3 of the Platte River Recovery Implementation Program, Nebraska New Depletion Plan for January 1, 2015, to December 31, 2015**

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This report fulfills the annual reporting requirement for Nebraska for the period of January 1, 2015, to December 31, 2015, for the Platte River Recovery Implementation Program (PRRIP) Attachment 5, Section 8, Nebraska New Depletion Plan (NNDP), Section IV, Bullet 3.

Based upon the data contained in this report and the depletion analysis, the net effect on the Platte River from all 2015 permitted water related activities is slightly negative within the PRRIP Critical Habitat Reach (CHR), but positive overall. This means that within the entire 28/40 area of the NNDP, the mitigations have an accretive effect to the river that is greater than the depletive effect of the new permitted uses. In the CHR alone, the depletive effects of 2015 permitted activities are slightly greater than the accretive effects of the mitigations.

This report contains information on the following activities in Nebraska as required by Section IV, Bullet 3 of the NNDP:

- (1) Permitted new and expanded uses of surface water;
- (2) Permitted new and expanded uses of groundwater;
- (3) Collective depletion of these new and expanded permitted uses;
- (4) Collective mitigation of these new and expanded permitted uses; and
- (5) Additional measures to be implemented by Nebraska to satisfy all mitigation elements required because of new depletions to target flows.

Data in this report are from the Nebraska Department of Natural Resources (Department) and the five Natural Resources Districts (NRDs) with land in the 28/40 area: Central Platte NRD (CPNRD), North Platte NRD (NPNRD), South Platte NRD (SPNRD), Tri-Basin NRD (TBNRD), and Twin Platte NRD (TPNRD).

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All tables, maps, and definitions of terms can be found in Appendix 1 at the end of this document.

**Items (1) and (2) from Section IV, Bullet 3 of the NNDP:  
Permitted and Expanded Uses of Surface and Groundwater**

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In 2015, the NRDs and the Department issued the following permits:

- 66 groundwater transfer permits (Table 1);
- 79 groundwater well permits (Table 2);
- 6 groundwater variance permits (Table 3); and
- 9 new surface water permits (Table 4).

Tables 1–4 in Appendix 1 summarize the water use permits issued upstream of and within the PRRIP CHR in 2015, (Map 1 in Appendix 1). Tables 5–8 in Appendix 1 provide a detailed list of these permitted uses and any required mitigation of these uses.

**Items (3) and (4) from Section IV, Bullet 3 of the NNDP:  
Collective Depletion and Mitigation for New and Expanded Permitted Uses**

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Based upon the data contained in this report and the depletion analysis, the resulting net effect of all 2015 permitted activities located within the 28/40 area is positive. This means that the mitigations have an accretive effect to the river that is greater than the depletive effect of the new permitted uses.

Table 9 in Appendix 1 shows the total estimated stream depletions (new or expanded uses), total stream accretions (mitigations), and the net effect by stream reach through 2019 for all activities permitted in 2015. Values in Table 9 were derived from the information for the permits listed in Tables 5–8. Effects to the river were estimated for each permitted action representing a new consumptive use of water and its corresponding mitigation action.

Due to the nature of the permitted actions, only the groundwater transfers listed in Table 5 required further evaluation of the timing of impacts to streamflow.

For each groundwater transfer, there was a new use initiated and an existing use retired. For transfers where the new and retired uses were a change in agricultural land use, the difference in consumptive use was estimated based on land use data provided with the permit information, or on land use conversions typical of the area (i.e. irrigated corn to dryland corn, or vice versa) if specific data were not available. The change in consumptive

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use for other types of uses, such as new industrial uses, was estimated based upon available data. The yearly effect to the river from each individual portion of a permitted groundwater transfer (new/expanded uses or mitigations) was estimated using an annual depletion percentage series developed using the analytical groundwater equations (Hunt, 1999)<sup>1</sup> and average hydraulic characteristics taken from the Cooperative Hydrologic Study (COHYST) data.

The groundwater well permits, listed in Table 6, did not require evaluation of impacts to streamflow because there is no resulting new use. The well permits were issued for: 1) replacement wells and the old wells decommissioned or modified to pump less than 50 gpm; 2) a new well with a corresponding transfer permit (Table 5) that included mitigating action; 3) supplemental wells to supplement existing groundwater irrigation with no associated increase in irrigated acres; 4) dewatering wells drilled for the purpose of lowering the water table or augmenting streamflows; or 5) industrial or commercial wells that will be evaluated as part of the five year review of all Nebraska activities.

The groundwater variance permits, described in Table 7, did not result in any new or expanded uses. The variances issued were for: 1) the purpose of correcting certified acres records (with proof of irrigation prior to 2004); 2) conversion to a livestock well associated with a transfer; or 3) a dewatering well drilled for the purpose of streamflow augmentation<sup>2</sup>.

The surface water permits issued, listed in Table 8, were: 1) temporary (one-year) permits for the diversion of unappropriated, excess streamflows for groundwater recharge; 2) permanent permits for the diversion of unappropriated, excess streamflows for groundwater recharge; or 3) temporary (one-year) permits for road construction. The groundwater recharge permits do not constitute a new use and therefore will not result in any depletion to streamflow. The construction permits are for temporary use of less than ten acre-feet for public road construction and do not require offset according to Nebraska's surface water rules.

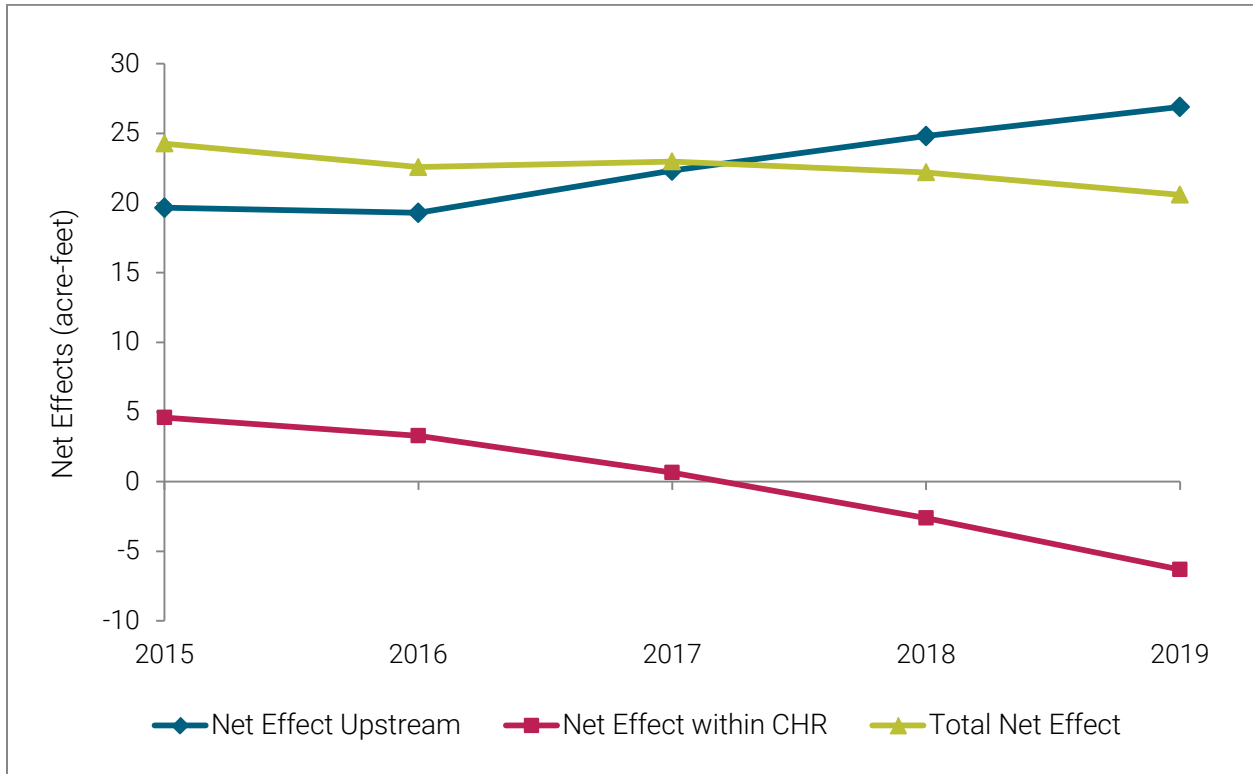
Figure 1 illustrates the net effect to streamflow upstream of and within the PRRIP CHR and the aggregate net effect to both reaches for all activities permitted in 2015. Nebraska's new permitted activities and associated mitigation efforts within the 28/40 area result in a net decrease in streamflow within the PRRIP CHR, but a net increase to streamflow overall.

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<sup>1</sup> Hunt, B. (1999), Unsteady Stream Depletion from Ground Water Pumping. *Ground Water*, 37: 98–102.

<sup>2</sup> Variance issued to drill the PRRIP Phelps Canal recharge recapture well.

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**Figure 1:** Aggregate net effect to streamflow resulting from all activities permitted in 2015, through the first 10-year increment, 2015-2019.

**Item (5) from Section IV, Bullet 3 of the NNDP: Implementation of additional measures to satisfy all mitigations required because of new depletions to target flows**

Based upon the analysis of all activities permitted in 2015, and their cumulative depletions and mitigation accretions, no additional mitigation measures for 2015 permitted activities are required at this time.

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Questions about information provided in this report should be directed to:

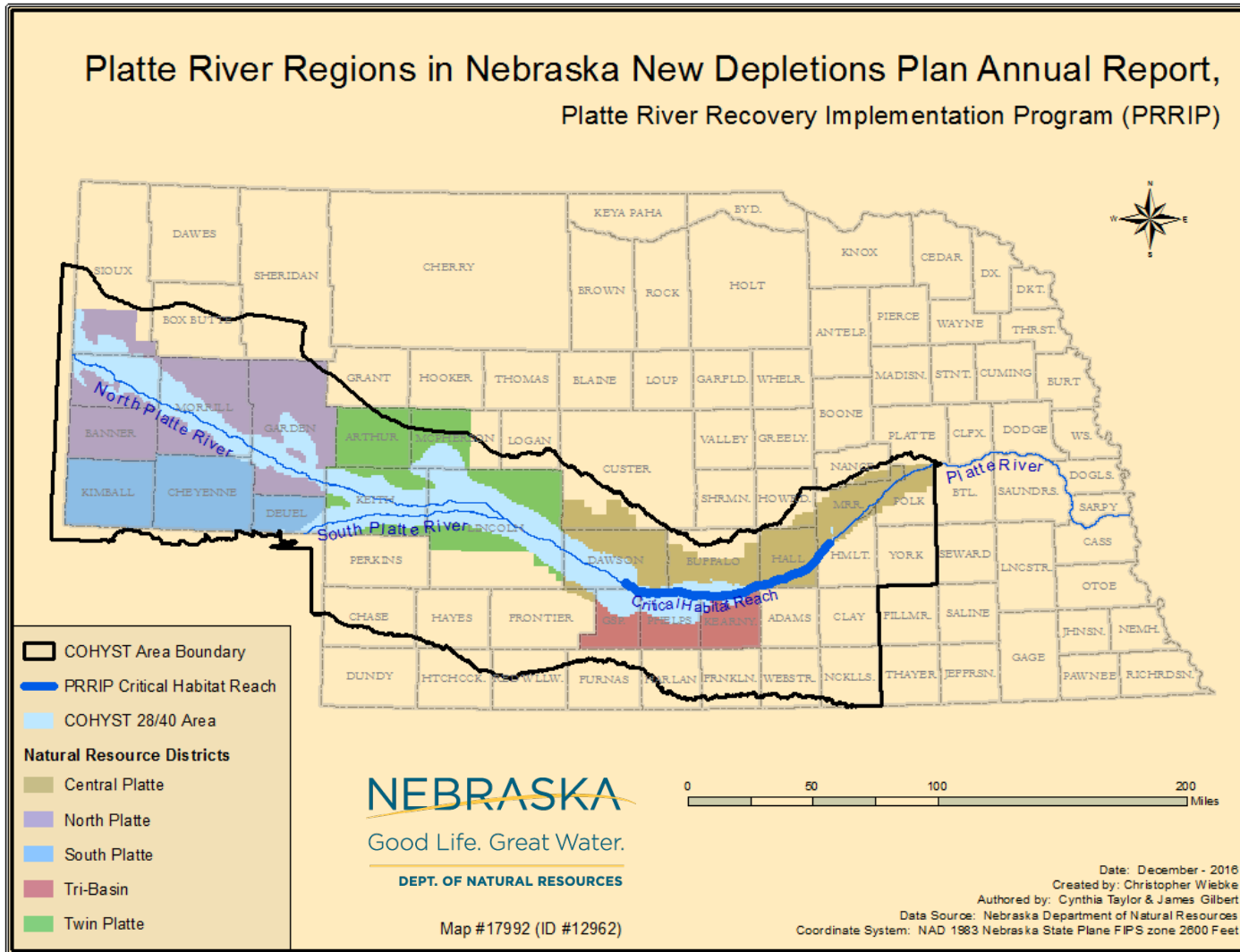
Central Platte NRD (CPNRD)	308-385-6282	Lyndon Vogt
North Platte NRD (NPNRD)	308-632-2749	John Berge
South Platte NRD (SPNRD)	308-254-2377	Rod Horn
Tri-Basin NRD (TBNRD)	308-995-6688	John Thorburn
Twin Platte NRD (TPNRD)	308-535-8080	Kent Miller
Department of Natural Resources (NeDNR)	402-471-2899	Jennifer Schellpeper

Supporting information can be found at:

<http://dnr.nebraska.gov/iwm/upper-platte>

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## **Appendix 1**



**Map 1:** COHYST 28/40 modeled area and PRRIP Critical Habitat Reach.<sup>3</sup>

<sup>3</sup> Map features the boundary of the original COHYST model

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**Table 1:** Groundwater (GW) Transfer Permits in the 28/40 area upstream of and within the PRRIP Critical Habitat Reach.

Use	# Upstream	# Within	Total
GW Transfers	31	34	65

**Table 2:** Groundwater Well Permits in the 28/40 area upstream of and within the PRRIP Critical Habitat Reach.

Use	# Upstream	# Within	Total
Industrial	2	2	4
Supplemental GW	3	4	7
Replacement	29	27	56
Transfer/New Well	7	2	9
Dewatering	2	1	3
Total	43	36	79

**Table 3:** Groundwater Variance Permits in the 28/40 area upstream of and within the PRRIP Critical Habitat Reach.

Use	# Upstream	# Within	Total
Acre Correction	0	4	4
Dewatering	0	1	1
Well Modification	0	1	1
Total	0	6	6

**Table 4:** Surface water permits in the surface water basin upstream of and within the PRRIP Critical Habitat Reach.

Use	# Upstream	# Within	Total
Recharge (Temporary)	4	0	4
Recharge (Permanent)	3	0	3
Construction (Temporary)	2	0	2
Total	9	0	9



**Table 5:** Groundwater Transfer Permits

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
CPNRD	Mitigation	1377	1/8/2015	2	9	21	W	2.39	N/A	2015
CPNRD	New Use	1377	1/8/2015	2	9	21	W	3.84	N/A	2015
CPNRD	Mitigation	1377	1/8/2015	2	9	21	W	1.45	N/A	2015
CPNRD	New Use	1379	1/12/2015	4	11	24	W	2.99	N/A	2015
CPNRD	Mitigation	1379	1/12/2015	4	11	24	W	2.99	N/A	2015
CPNRD	New Use	1385*	1/13/2015	5	11	12	W	58.19	N/A	2015
CPNRD	New Use	1385*	1/13/2015	5	11	12	W	0.45	N/A	2015
CPNRD	Mitigation	1385	1/13/2015	10	8	14	W	8.62	N/A	2015
CPNRD	New Use	1387*	1/13/2015	12	12	10	W	3.97	N/A	2015
CPNRD	New Use	1387*	1/13/2015	13	12	10	W	4.04	N/A	2015
CPNRD	New Use	1387*	1/13/2015	13	12	10	W	4.03	N/A	2015
CPNRD	Mitigation	1387	1/13/2015	11	8	14	W	0.27	N/A	2015
CPNRD	New Use	1387*	1/13/2015	3	10	13	W	2.55	N/A	2015
CPNRD	Mitigation	1387	1/13/2015	11	8	14	W	0.73	N/A	2015
CPNRD	New Use	1391*	1/22/2015	23	10	12	W	11.69	N/A	2015
CPNRD	Mitigation	1391	1/22/2015	11	8	14	W	0.96	N/A	2015
CPNRD	New Use	1392*	1/22/2015	26	10	12	W	0.15	N/A	2015
CPNRD	New Use	1392*	1/22/2015	23	10	12	W	1.34	N/A	2015
CPNRD	Mitigation	1392	1/22/2015	11	8	14	W	0.96	N/A	2015
CPNRD	New Use	1393	1/23/2015	2	8	18	W	4.65	N/A	2015
CPNRD	Mitigation	1393	1/23/2015	2	8	18	W	4.65	N/A	2015
CPNRD	New Use	1394*	1/23/2015	31	14	4	W	60.97	N/A	2015
CPNRD	Mitigation	1394	1/23/2015	2	8	18	W	9.64	N/A	2015
CPNRD	Mitigation	1398	1/23/2015	28	9	18	W	1.67	N/A	2015
CPNRD	New Use	1398*	1/23/2015	14	9	18	W	2.51	N/A	2015
CPNRD	New Use	1404*	4/27/2015	32	14	4	W	52.06	N/A	2015
CPNRD	New Use	1404*	4/27/2015	32	14	4	W	8.71	N/A	2015
CPNRD	Mitigation	1404*	4/27/2015	32	14	4	W	6.66	N/A	2015

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
CPNRD	Mitigation	1404	4/27/2015	2	8	18	W	8.94	N/A	2015
CPNRD	Mitigation	1406	4/27/2015	10	8	18	W	1.61	N/A	2015
CPNRD	New Use	1406*	4/27/2015	21	9	18	W	9.60	N/A	2015
CPNRD	Mitigation	1414	4/30/2015	2	9	21	W	2.81	N/A	2015
CPNRD	New Use	1414	4/30/2015	34	10	21	W	2.91	N/A	2015
CPNRD	Mitigation	1418	5/5/2015	9	10	21	W	1.53	N/A	2015
CPNRD	Mitigation	1418	5/5/2015	9	10	21	W	0.83	N/A	2015
CPNRD	New Use	1418	5/5/2015	9	10	21	W	2.95	N/A	2015
CPNRD	Mitigation	1418	5/5/2015	9	10	21	W	0.61	N/A	2015
CPNRD	Mitigation	1420	5/5/2015	10	10	23	W	0.49	N/A	2015
CPNRD	New Use	1420	5/5/2015	10	10	23	W	1.67	N/A	2015
CPNRD	Mitigation	1420	5/5/2015	10	10	23	W	0.61	N/A	2015
CPNRD	Mitigation	1420	5/5/2015	10	10	23	W	0.60	N/A	2015
CPNRD	Mitigation	1422	5/5/2015	17	11	24	W	0.47	N/A	2015
CPNRD	New Use	1422	5/5/2015	17	11	24	W	0.47	N/A	2015
CPNRD	Mitigation	1426	5/6/2015	29	10	21	W	3.15	N/A	2015
CPNRD	New Use	1426	5/6/2015	29	10	21	W	3.15	N/A	2015
CPNRD	New Use	1438	6/2/2015	27	9	14	W	0.39	N/A	2015
CPNRD	Mitigation	1438	6/2/2015	27	9	14	W	0.62	N/A	2015
CPNRD	New Use	1438	6/2/2015	27	9	14	W	4.27	N/A	2015
CPNRD	Mitigation	1438	6/2/2015	27	9	14	W	0.35	N/A	2015
CPNRD	Mitigation	1438	6/2/2015	34	9	14	W	3.67	N/A	2015
CPNRD	New Use	1457*	6/16/2015	13	10	11	W	1.90	N/A	2015
CPNRD	New Use	1457*	6/16/2015	22	10	11	W	6.89	N/A	2015
CPNRD	Mitigation	1457	6/16/2015	2	8	18	W	0.25	N/A	2015
CPNRD	Mitigation	1465	7/21/2015	20	11	25	W	1.13	N/A	2015
CPNRD	New Use	1465	7/21/2015	20	11	25	W	1.13	N/A	2015
CPNRD	New Use	1466	7/21/2015	36	11	24	W	2.04	N/A	2015
CPNRD	Mitigation	1466	7/21/2015	36	11	24	W	2.04	N/A	2015
CPNRD	New Use	1471*	7/24/2015	21	9	9	W	79.37	N/A	2015

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
CPNRD	Mitigation	1471	7/24/2015	10	8	14	W	1.28	N/A	2015
CPNRD	New Use	1475	7/24/2015	32	9	23	W	2.45	N/A	2015
CPNRD	Mitigation	1475	7/24/2015	32	9	23	W	2.45	N/A	2015
CPNRD	Mitigation	1478	7/24/2015	29	10	22	W	2.73	N/A	2015
CPNRD	Mitigation	1478	7/24/2015	29	10	22	W	1.59	N/A	2015
CPNRD	Mitigation	1478	7/24/2015	29	10	22	W	0.51	N/A	2015
CPNRD	New Use	1478	7/24/2015	29	10	22	W	4.83	N/A	2015
CPNRD	New Use	1479	7/24/2015	28	10	21	W	3.31	N/A	2015
CPNRD	Mitigation	1479	7/24/2015	36	10	23	W	1.46	N/A	2015
CPNRD	New Use	1480	7/24/2015	26	9	24	W	2.26	N/A	2015
CPNRD	Mitigation	1480	7/24/2015	26	9	24	W	2.27	N/A	2015
CPNRD	Mitigation	1481	7/24/2015	31	9	17	W	0.49	N/A	2015
CPNRD	New Use	1481	7/24/2015	31	9	17	W	2.49	N/A	2015
CPNRD	Mitigation	1481	7/24/2015	31	9	17	W	1.37	N/A	2015
CPNRD	Mitigation	1481	7/24/2015	31	9	17	W	0.64	N/A	2015
CPNRD	New Use	1485	7/24/2015	30	11	22	W	3.43	N/A	2015
CPNRD	Mitigation	1485	7/24/2015	30	11	22	W	3.43	N/A	2015
CPNRD	New Use	1486	7/24/2015	30	11	22	W	0.98	N/A	2015
CPNRD	New Use	1486	7/24/2015	30	11	22	W	4.94	N/A	2015
CPNRD	Mitigation	1486	7/24/2015	30	11	22	W	5.92	N/A	2015
CPNRD	New Use	1498*	7/30/2015	11	11	11	W	12.06	N/A	2015
CPNRD	New Use	1498*	7/30/2015	12	11	11	W	13.89	N/A	2015
CPNRD	New Use	1498*	7/30/2015	12	11	11	W	2.97	N/A	2015
CPNRD	New Use	1498*	7/30/2015	12	11	11	W	4.84	N/A	2015
CPNRD	Mitigation	1498	7/30/2015	11	8	14	W	1.19	N/A	2015
CPNRD	New Use	1502*	7/30/2015	13	10	15	W	18.87	N/A	2015
CPNRD	New Use	1502*	7/30/2015	13	10	15	W	45.40	N/A	2015
CPNRD	New Use	1502*	7/30/2015	13	10	15	W	6.88	N/A	2015
CPNRD	New Use	1502*	7/30/2015	13	10	15	W	8.04	N/A	2015
CPNRD	Mitigation	1502	7/30/2015	10	8	17	W	12.55	N/A	2015

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
CPNRD	New Use	1527*	8/17/2015	27	10	9	W	3.45	N/A	2015
CPNRD	Mitigation	1527*	8/17/2015	27	10	9	W	1.33	N/A	2015
CPNRD	Mitigation	1527*	8/17/2015	27	10	9	W	1.00	N/A	2015
CPNRD	Mitigation	1527*	8/17/2015	27	10	9	W	1.19	N/A	2015
CPNRD	New Use	1527*	8/17/2015	27	10	9	W	6.31	N/A	2015
CPNRD	Mitigation	1527	8/17/2015	2	8	18	W	0.24	N/A	2015
CPNRD	New Use	1530	8/17/2015	13	9	21	W	7.04	N/A	2015
CPNRD	Mitigation	1530	8/17/2015	14	9	21	W	4.74	N/A	2015
CPNRD	Mitigation	1534	8/20/2015	13	9	21	W	1.46	N/A	2015
CPNRD	New Use	1534	8/20/2015	12	9	21	W	1.40	N/A	2015
CPNRD	New Use	1538*	9/8/2015	35	11	9	W	1.03	N/A	2015
CPNRD	Mitigation	1538	9/8/2015	7	8	14	W	1.00	N/A	2015
CPNRD	New Use	1538*	9/8/2015	35	11	9	W	2.42	N/A	2015
CPNRD	New Use	1538*	9/8/2015	36	11	9	W	1.23	N/A	2015
CPNRD	New Use	1538*	9/8/2015	35	11	9	W	0.32	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	239.15	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	30.25	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	2.67	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	2.85	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	2.81	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	0.83	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	0.57	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	3.97	N/A	2015
CPNRD	New Use	1542*	9/16/2015	17	11	10	W	2.98	N/A	2015
CPNRD	Mitigation	1542	9/16/2015	3	8	14	W	0.35	N/A	2015
CPNRD	Mitigation	1542	9/16/2015	10	8	14	W	9.48	N/A	2015
CPNRD	New Use	1543*	9/18/2015	18	13	9	W	5.39	N/A	2015
CPNRD	New Use	1543*	9/18/2015	18	13	9	W	42.27	N/A	2015
CPNRD	New Use	1543*	9/18/2015	18	13	9	W	3.12	N/A	2015
CPNRD	New Use	1543*	9/18/2015	18	13	9	W	1.85	N/A	2015

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
CPNRD	Mitigation	1543	9/18/2015	11	8	14	W	6.00	N/A	2015
CPNRD	New Use	1545	9/18/2015	8	8	15	W	24.21	N/A	2015
CPNRD	New Use	1545	9/18/2015	8	8	15	W	9.88	N/A	2015
CPNRD	Mitigation	1546	9/18/2015	9	8	15	W	5.96	N/A	2015
CPNRD	Mitigation	1546	9/18/2015	9	8	15	W	1.21	N/A	2015
CPNRD	New Use	1546	9/18/2015	9	8	15	W	24.46	N/A	2015
CPNRD	Mitigation	1546	9/18/2015	8	8	15	W	8.72	N/A	2015
CPNRD	New Use	1558*	10/20/2015	5	10	9	W	26.16	N/A	2015
CPNRD	New Use	1558*	10/20/2015	5	10	9	W	7.19	N/A	2015
CPNRD	New Use	1558*	10/20/2015	5	10	9	W	6.67	N/A	2015
CPNRD	Mitigation	1558	10/20/2015	7	8	14	W	9.63	N/A	2015
TBNRD	New Use	TBAT-0258	4/14/2015	29	8	14	W	10.00	N/A	2015
TBNRD	Mitigation	TBAT-0258	4/14/2015	28	8	14	W	10.00	N/A	2015
TBNRD	Mitigation	TBAT-0259	4/14/2015	30	7	19	W	5.37	N/A	2015
TBNRD	New Use	TBAT-0259*	4/14/2015	19	6	19	W	5.37	N/A	2015
TBNRD	New Use	TBAT-0267	7/14/2015	19	7	19	W	11.00	N/A	2015
TBNRD	Mitigation	TBAT-0267	7/14/2015	27	7	19	W	11.00	N/A	2015
TBNRD	Mitigation	TBAT-0268	7/14/2015	15	7	20	W	7.68	N/A	2015
TBNRD	New Use	TBAT-0268*	7/14/2015	17	6	19	W	7.68	N/A	2015
TBNRD	New Use	TBAT-0269*	7/14/2015	8	6	19	W	13.22	N/A	2015
TBNRD	Mitigation	TBAT-0269	7/14/2015	15	7	20	W	7.68	N/A	2015
TPNRD	New Use	TP-TRANS-15.06	6/10/2015	2	13	30	W	2.40	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.06	6/10/2015	2	13	30	W	2.40	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.07	2/5/2015	28	17	35	W	76.55	N/A	2014
TPNRD	New Use	TP-TRANS-15.07	2/5/2015	28	17	35	W	76.55	N/A	2014
TPNRD	New Use	TP-TRANS-15.09	2/18/2015	4	13	37	W	73.37	N/A	2015
TPNRD	New Use	TP-TRANS-15.09	2/18/2015	3	13	37	W	26.63	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.09	2/18/2015	24	13	41	W	100.00	N/A	2015
TPNRD	New Use	TP-TRANS-15.10	2/23/2015	26	15	38	W	2.50	N/A	2012
TPNRD	Mitigation	TP-TRANS-15.10	2/23/2015	26	15	38	W	2.50	N/A	2012

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
TPNRD	New Use	TP-TRANS-15.11	3/25/2015	6	12	41	W	4.80	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.11	3/25/2015	6	12	41	W	4.80	N/A	2014
TPNRD	New Use	TP-TRANS-15.12	4/1/2015	25	14	39	W	7.00	N/A	2009
TPNRD	Mitigation	TP-TRANS-15.12	4/1/2015	25	14	39	W	7.00	N/A	2009
TPNRD	Mitigation	TP-TRANS-15.13	3/12/2015	20	13	28	W	6.00	N/A	2012
TPNRD	New Use	TP-TRANS-15.13	3/12/2015	20	13	28	W	6.00	N/A	2012
TPNRD	New Use	TP-TRANS-15.14	5/26/2015	33	12	27	W	8.55	N/A	2012
TPNRD	Mitigation	TP-TRANS-15.14	5/26/2015	33	12	27	W	8.55	N/A	2012
TPNRD	Mitigation	TP-TRANS-15.15	n/a	33	15	31	W	2.00	Transfer resulted in a net decrease in acres	2014
TPNRD	New Use	TP-TRANS-15.15	n/a	33	15	31	W	2.00	Transfer resulted in a net decrease in acres	2014
TPNRD	Mitigation	TP-TRANS-15.16	4/8/2015	20	13	30	W	1.30	N/A	2014
TPNRD	New Use	TP-TRANS-15.16	4/8/2015	17	13	30	W	2.60	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.16	4/8/2015	17	13	30	W	1.40	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.17	4/6/2015	6	13	33	W	21.90	N/A	2015
TPNRD	New Use	TP-TRANS-15.17	4/6/2015	6	13	33	W	3.25	N/A	2015
TPNRD	New Use	TP-TRANS-15.17	4/6/2015	6	13	33	W	19.48	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.20	3/12/2015	20	13	41	W	10.00	N/A	2015
TPNRD	New Use	TP-TRANS-15.20	3/12/2015	19	13	37	W	10.00	N/A	2015
TPNRD	New Use	TP-TRANS-15.23	4/10/2015	26	11	26	W	1.60	N/A	2012
TPNRD	Mitigation	TP-TRANS-15.24	6/30/2015	28	17	34	W	141.54	N/A	2015
TPNRD	New Use	TP-TRANS-15.24	6/30/2015	28	17	34	W	138.29	N/A	2015
TPNRD	New Use	TP-TRANS-15.25	4/15/2015	13	13	32	W	3.00	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.25	4/15/2015	22	13	32	W	3.50	N/A	2014
TPNRD	New Use	TP-TRANS-15.28*	4/15/2015	22	16	28	W	89.64	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.28	4/15/2015	23	12	28	W	8.25	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.28	4/15/2015	15	12	28	W	19.34	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.28	4/15/2015	14	12	28	W	40.55	N/A	2015
TPNRD	New Use	TP-TRANS-15.31	4/9/2015	31	14	34	W	19.15	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.31	4/9/2015	20	13	41	W	21.75	N/A	2014
TPNRD	Mitigation	TP-TRANS-15.35	6/12/2015	26	11	26	W	0.75	N/A	2015

Table 5: Groundwater Transfer Permits, continued

NRD	Type	NRD Permit	Permit Date	Section	Township	Range	E/W	Acres	Notes	Year Implemented**
TPNRD	New Use	TP-TRANS-15.35	6/12/2015	26	11	26	W	0.75	N/A	2015
TPNRD	New Use	TP-TRANS-15.35	6/12/2015	19	12	27	W	2.90	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.35	6/12/2015	19	12	27	W	2.90	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.36*	6/12/2015	35	12	30	W	114.47	N/A	2015
TPNRD	New Use	TP-TRANS-15.36*	6/12/2015	12	11	33	W	11.30	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.36	6/12/2015	15	12	28	W	8.50	N/A	2015
TPNRD	New Use	TP-TRANS-15.36*	6/12/2015	7	11	32	W	119.37	N/A	2015
TPNRD	Mitigation	TP-TRANS-15.40	8/13/2015	23	14	33	W	38.81	N/A	2016
TPNRD	Mitigation	TP-TRANS-15.40	8/13/2015	23	14	33	W	19.40	N/A	2016
TPNRD	New Use	TP-TRANS-15.40	8/13/2015	27	14	32	W	50.00	N/A	2016
TPNRD	Mitigation	TP-TRANS-15.43	9/10/2015	8	13	37	W	53.61	N/A	2016
TPNRD	New Use	TP-TRANS-15.43	9/10/2015	24	13	36	W	53.61	N/A	2016

\*Indicates this part of the transfer was not in the 28/40 area. These transfers are still included in the totals in Table 1 and the analysis for Table 9.

\*\*All permits in the table were issued in the 2015 calendar year. The year implemented field reflects when the permit takes effect.

**Table 6:** Groundwater Well Permits

NRD	Permit Type	NRD Permit	NeDNR Well Registration #	Permit Date	Section	Township	Range	E/W	Notes	Year Implemented*
CPNRD	Dewatering Well	CPDW24-15-024	G-177579	9/9/2015	15	11	25	W	N/A	2015
CPNRD	Industrial Well	CPIN24-15-026	G-104002	9/22/2015	9	9	21	W	No New Use - Replacement	2015
CPNRD	Replacement Well	CPRP10-15-014	G-011584	4/20/2015	11	8	14	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-015	G-011131	4/21/2015	15	8	14	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-017	G-027815	6/1/2015	11	8	14	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-018	G-014022	7/6/2015	3	8	14	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-023	G-068398	8/25/2015	14	8	15	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-024	G-009969	9/22/2015	5	8	15	W	N/A	2015
CPNRD	Replacement Well	CPRP10-15-025	G-177284	9/22/2015	35	9	16	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-001	G-017934	1/13/2015	10	10	25	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-002	G-009262	1/23/2015	34	10	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-004	G-001925	2/25/2015	16	10	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-006	G-007928	3/16/2015	30	10	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-008	G-003248	3/31/2015	21	11	23	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-010	G-062546	4/2/2015	3	9	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-011	G-057778	4/8/2015	23	9	24	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-012	G-013532	4/27/2015	13	11	24	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-013	G-021258	4/30/2015	2	9	23	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-014	G-012500	5/4/2015	30	10	22	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-017	G-041525	6/1/2015	4	10	23	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-020	G-087770	7/28/2015	21	11	24	W	N/A	2015



Table 6: Groundwater Well Permits, continued

NRD	Permit Type	NRD Permit	NeDNR Well Registration #	Permit Date	Section	Township	Range	E/W	Notes	Year Implemented*
CPNRD	Replacement Well	CPRP24-15-021	G-001808	8/10/2015	36	10	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-025	G-016614	9/14/2015	30	9	21	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-028	G-017080	10/2/2015	10	9	23	W	N/A	2016
CPNRD	Replacement Well	CPRP24-15-029	G-109881	10/8/2015	10	11	25	W	N/A	2015
CPNRD	Replacement Well	CPRP24-15-030	G-134334	10/13/2015	25	9	21	W	N/A	2016
CPNRD	Replacement Well	CPRP24-15-031	G-005600	11/2/2015	35	9	22	W	N/A	2016
CPNRD	Replacement Well	CPRP24-15-033	G-018924	11/16/2015	35	11	22	W	N/A	2016
CPNRD	Replacement Well	CPRP24-15-034	G-020969	11/18/2015	22	9	24	W	N/A	2016
CPNRD	Replacement Well	CPRP24-15-035	G-000243B	12/16/2015	34	10	21	W	N/A	2016
CPNRD	Supplemental GW	CPSG10-15-011	G-176717	3/31/2015	7	8	15	W	N/A	2015
CPNRD	Supplemental GW	CPSG24-15-005	G-175851	3/16/2015	35	10	22	W	N/A	2015
NPNRD	Replacement Well	NPRP15004	G-021027	4/15/2015	31	21	51	W	N/A	2015
NPNRD	Replacement Well	NPRP15007	G-009899	5/8/2015	3	22	55	W	N/A	2015
NPNRD	Replacement Well	NPRP15010	Not registered yet	12/21/2015	9	21	52	W	N/A	2015
NPNRD	Replacement Well	NPRP15011	G-058010	12/21/2015	15	24	57	W	N/A	2015
NPNRD	Supplemental GW	NPSG15005	G-177126	5/12/2015	33	23	56	W	N/A	2015
NPNRD	Supplemental GW	NPSG15008	Not registered yet	7/6/2015	12	20	53	W	N/A	2015
SPNRD	Replacement Well	SP-RP-209-2015	G-028525	1/8/2015	15	12	42	W	N/A	2015
TBNRD	New Well	TB-1492	G-175384	1/13/2015	15	7	20	W	Livestock well	2015
TBNRD	New Well	TB-1493	G-175373	1/13/2015	15	7	20	W	Livestock well	2015
TBNRD	Dewatering Well	TBDW-1500	G-178735	11/30/2015	10	8	20	W	Streamflow augmentation – Phelps Canal recapture well; TBwellvariancePB_2015_1	2016
TBNRD	Industrial Well	TBIN-1494	G-175614	1/20/2015	33	8	23	W	Drilled for road construction then converted to stock well	2015

Table 6: Groundwater Well Permits, continued

NRD	Permit Type	NRD Permit	NeDNR Well Registration #	Permit Date	Section	Township	Range	E/W	Notes	Year Implemented*
TBNRD	Industrial Well	TBIN-1499	G-177447	6/8/2015	19	7	19	W	Livestock well - 13.5 certified irrigated acres required for offset	2015
TBNRD	Replacement Well	TBRP-G001136-R1	G-001136	7/13/2015	22	7	20	W	N/A	2015
TBNRD	Replacement Well	TBRP-G011605-R1	G-011605	3/25/2015	5	8	21	W	N/A	2015
TBNRD	Replacement Well	TBRP-G012216-R1	G-012216	4/1/2015	25	7	18	W	N/A	2015
TBNRD	Replacement Well	TBRP-G013642-R1	G-013642	2/2/2015	30	7	19	W	N/A	2015
TBNRD	Replacement Well	TBRP-G023786-R1	G-023786	3/2/2015	20	7	16	W	N/A	2015
TBNRD	Replacement Well	TBRP-G027502-R2	G-027502	3/26/2015	6	7	17	W	N/A	2015
TBNRD	Replacement Well	TBRP-G041511-R1	G-041511	11/2/2015	21	8	20	W	N/A	2016
TBNRD	Replacement Well	TBRP-G043889-R1	G-043889	1/27/2015	33	8	18	W	N/A	2015
TBNRD	Replacement Well	TBRP-G044895-R1	G-044895	7/28/2015	34	8	17	W	N/A	2015
TBNRD	Replacement Well	TBRP-G049984-R1	G-049984	1/28/2015	25	8	15	W	N/A	2015
TBNRD	Replacement Well	TBRP-G068519-R1	G-068519	12/24/2015	32	7	18	W	N/A	2016
TBNRD	Replacement Well	TBRP-G097707-R1	G-097707	2/2/2015	29	8	14	W	N/A	2015
TBNRD	Supplemental GW	TBSG-1495	G-176401	1/6/2015	33	8	16	W	N/A	2015
TBNRD	Supplemental GW	TBSG-1503	G-177578	8/17/2015	16	8	21	W	N/A	2016
TBNRD	Supplemental GW	TBSG-1508	Not registered yet	12/8/2015	7	6	17	W	N/A	2016
TPNRD	Dewatering Well	TP-DW-15.39	G-176859	7/17/2015	4	13	30	W	N/A	2015
TPNRD	Industrial Well	TP-IN-15.38	G-177143	6/12/2015	27	12	26	W	Used for 30 days then decommissioned	2015
TPNRD	New Well	TP-NP-15.04	G-175584	2/6/2015	28	12	26	W	Time limit for replacement expired; registered as new well	2015
TPNRD	New Well	TP-NP-15.22	Not drilled	3/13/2015	6	13	33	W	Permit expired; well not drilled	2015
TPNRD	New Well	TP-NP-15.26	G-176349	4/10/2015	28	17	34	W	Associated with acres transfer TP-TRANS-15.24	2015
TPNRD	New Well	TP-NP-15.33	G-139664	5/14/2015	31	14	33	W	Municipal well	2015
TPNRD	New Well	TP-NP-15.34	G-176518	5/15/2015	19	12	27	W	Associated with acres transfer	2015

Table 6: Groundwater Well Permits, continued

NRD	Permit Type	NRD Permit	NeDNR Well Registration #	Permit Date	Section	Township	Range	E/W	Notes	Year Implemented*
									TP-TRANS-15.35	
TPNRD	New Well	TP-NP-15.41	G-177185	8/14/2015	27	14	32	W	Associated with acres transfer TP-TRANS-15.40	2015
TPNRD	New Well	TP-NP-15.42	G-179358	9/11/2015	24	13	36	W	Associated with acres transfer TP-TRANS-15.43	2015
TPNRD	Replacement Well	TP-RP-15.01	G-053746	2/3/2015	26	13	38	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.02	G-005242	2/3/2015	36	15	38	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.03	G-032409	2/3/2015	25	15	38	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.05	G-019611	2/13/2015	32	13	40	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.06	G-001937	2/13/2015	28	13	40	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.07	G-017117	4/1/2015	3	12	27	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.08	A-010510C	4/7/2015	5	13	30	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.10	G-070695	4/21/2015	1	14	38	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.11	G-058931	5/5/2015	1	16	36	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.12	A-005657	6/8/2015	30	13	36	W	N/A	2015
TPNRD	Replacement Well	TP-RP-15.14	G-019725	11/10/2015	30	14	32	W	N/A	2015

\*All permits in the table were issued in the 2015 calendar year. The year implemented field reflects the year in which the well was drilled.

**Table 7:** Variance Permits

NRD	NRD Permit	NeDNR Well Registration #	Permit Date	S	T	R	E/W	Type of Variance	Notes	Year Implemented*	Associated Well Permits	Associated Transfers
TBNRD	TBconversionPB_2015_1	G-177447	7/14/2015	19	7	19	W	Livestock conversion	Irrigated acres transferred to offset	2015	N/A	TBAT-0267
TBNRD	TBcorrectionPB_2015_1	A-005806	1/13/2015	29	8	14	W	Certified Acre Correction	Proof of 2004 or prior irrigation	2015	N/A	N/A
TBNRD	TBcorrectionPB_2015_2	G-074176	3/10/2015	6	6	17	W	Certified Acre Correction	Proof of 2004 or prior irrigation	2015	N/A	N/A
TBNRD	TBcorrectionPB_2015_3	G-015264	5/12/2015	10	7	20	W	Certified Acre Correction	Proof of 2004 or prior irrigation	2015	N/A	N/A
TBNRD	TBcorrectionPB_2015_4	G-012463	10/13/2015	3	8	21	W	Certified Acre Correction	Proof of 2004 or prior irrigation	2015	N/A	N/A
TBNRD	TBwellvariancePB_2015_1	G-178735	9/8/2015	10	8	20	W	Dewatering well (streamflow augmentation)	PRRIP Phelps Canal recharge recapture well	2015	TBDW-1500	N/A

\*All permits in the table were issued in the 2015 calendar year. The year implemented field reflects when the permit takes effect

**Table 8:** Surface Water Permits

Appropriation Number	Approval Date	Section	Township	Range	E/W	Acres	Grant in CFS	Grant in AF	Use	Mitigation	Associated Variance
A-18922*	3/19/2015	15	11	25	W	N/A	100	N/A	Permanent Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-2144
A-18923*	3/19/2015	9	10	24	W	N/A	75	N/A	Permanent Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-2145
A-18924*	3/13/2015	30	12	26	W	N/A	100	N/A	Permanent Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-2143
A-19364	6/5/2015	27	13	29	W	N/A	1.0	N/A	Temporary Construction	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.06	VAR-5392
A-19375*	6/12/2015	8	13	29	W	N/A	350	N/A	Temporary Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-5427
A-19385*	8/31/2015	19	12	26	W	N/A	100	N/A	Temporary Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-5348
A-19386*	8/31/2015	18	10	23	W	N/A	100	N/A	Temporary Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-5349
A-19392	11/17/2015	8	13	29	W	N/A	0.45	N/A	Temporary Construction	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.06	VAR-5528
A-19400*	11/25/2015	5	10	25	W	N/A	600	N/A	Temporary Groundwater Recharge	Variance granted pursuant to 457 Neb. Admin. Code Ch. 23, § 001.03	VAR-5529

\*Permit is for use of excess flows, which are those flows in excess of U.S. Fish and Wildlife target flows and other state-protected appropriations when in priority.

**Table 9:** Effects to streamflow from 2015 to 2019 in the Platte River resulting from all groundwater and surface water permitting activities in 2015. A positive value for the net effect indicates that the permitted activities have an overall positive effect on streamflow. Values are given in acre-feet.

Year	Upstream of Critical Habitat Reach			Within Critical Habitat Reach			Aggregate Net Effect from Both Reaches
	Effect of New Uses	Effect of Mitigations	Net Effect	Effect of New Uses	Effect of Mitigations	Net Effect	Net Effect
2015	-49.29	68.95	<b>19.66</b>	-5.07	9.67	<b>4.60</b>	<b>24.26</b>
2016	-83.10	102.39	<b>19.29</b>	-13.25	16.54	<b>3.30</b>	<b>22.58</b>
2017	-103.87	126.20	<b>22.32</b>	-20.66	21.31	<b>0.65</b>	<b>22.98</b>
2018	-118.41	143.21	<b>24.81</b>	-27.47	24.85	<b>-2.61</b>	<b>22.20</b>
2019	-129.37	156.28	<b>26.90</b>	-33.93	27.62	<b>-6.31</b>	<b>20.59</b>

Note: Due to rounding in the calculations, the Net Effect shown does not exactly match the sum of effects in some rows

## Definition of Terms

28/40 Area	The area within the North Platte, South Platte, or Platte River watershed in which groundwater intentionally withdrawn for 40 years will result in a cumulative stream depletion to the North Platte, South Platte, or Platte River or a baseflow tributary greater than or equal to 28 percent of the total groundwater consumed as a result of the withdrawals (see Map 1).
Acre-Feet (AF)	A unit of volume, commonly used to measure quantities of water used or stored equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.
Application/Appropriation Number	Application Number (Docket and Application Numbers): Appropriations having docket numbers (D-) refer to claims covering rights which existed prior to April 4, 1895, or those rights that existed on the Missouri River that were covered by the law passed in 1980. Those appropriations having applications numbers (A-) were filed after April 4, 1895. Surface water appropriations can also be referred to as "permits" and "rights."
Area Correction	The correction of the amount of certified irrigated acres because acres with history of irrigation between 1997 and 2005 had not previously been classified as irrigated cropland by county assessors.
Augmentation Well	A groundwater well drilled to pump water into a stream to augment streamflows.
Cubic Feet per Second (CFS)	The USGS defines cubic foot per second (cfs) as "the flow rate or discharge equal to one cubic foot of water per second or about 7.5 gallons per second."
CRP Reinstatement	Formerly irrigated land on which the water use had been temporarily retired under the federal Conservation Reserve Program (CRP) that has since come out of retirement and may now be irrigated again.
Dewatering Well	A groundwater well drilled for the purpose of lowering the water table.
Feedlot Expansion	A type of variance to allow new wells for livestock use. New depletions are to be mitigated by applicant.

Grant in AF	The approved amount of acres per foot of water legally allowed to be pumped.
Grant in CFS	The approved amount of cubic feet per second of water legally allowed to be pumped.
Pooling	Any arrangement approved by the NRD board in which two or more certified irrigated tracts are combined. Additional information can be found in the SPNRD Rules and Regulations.
PRRIP Critical Habitat Reach	The reach of the Platte River from Lexington, NE, to Chapman, NE, which is of critical importance to the endangered target species (see Map 1).
Replacement Well	A groundwater well drilled to replace an existing groundwater well which has become unusable. The replaced well must be decommissioned. No increase in irrigated acres is associated with a replacement well unless a variance is granted.
Section/Township/Range	The legal description of where a well or water appropriation is located.
Temporary Recharge	A temporary (for one year) surface water permit issued for the purpose of diverting excess streamflow (unappropriated water) to recharge groundwater, intended to supply baseflow accretions back to the river.
Supplemental Well	A groundwater well drilled to either supplement an existing groundwater well or to augment surface water irrigation when surface water is not available. No increase in irrigated acres is associated with a supplemental well unless a variance is granted.
Transfer	To allow for the historic consumptive use of water to be changed, in location and/or purpose without causing an increase in depletions to the river or an impact to existing surface water or groundwater uses.
Use	The legally accepted use of the well or water appropriation.
Variance	To allow an exception to the stay on new irrigated acres and new consumptive uses while providing adequate mitigations or transfers to assure that there is no net increase in depletions to the river or impacts to existing surface water or groundwater uses; any request that is contrary to existing rules or regulations will require a variance.