

Nebraska's Annual Report  
Under Bullet 3 Section IV of the  
Platte River Recovery Implementation Program  
Nebraska New Depletion Plan  
January 1, 2018, to December 31, 2018

**VIA ELECTRONIC MAIL ONLY**

**DATE:** December 31, 2019

**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, 2018, to December 31, 2018

---

This report fulfills the annual reporting requirement for Nebraska for the period of January 1, 2018, to December 31, 2018, 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 2018 permitted water related activities is positive. This means that the mitigation activities have an accretive effect to the river that is greater than the depletive effect of the new permitted uses.

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 upstream of or within the PRRIP designated critical habitat reach, which includes Central Platte

Nebraska's Annual Report  
Under Bullet 3 Section IV of the  
Platte River Recovery Implementation Program  
Nebraska New Depletion Plan  
January 1, 2018, to December 31, 2018

NRD (CPNRD), North Platte NRD (NPNRD), South Platte NRD (SPNRD), Tri-Basin NRD (TBNRD), and Twin Platte NRD (TPNRD).

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**

---

In 2018, the NRDs and the Department issued the following permits:

- 43 groundwater transfer permits (Table 1);
- 35 groundwater well permits (Table 2);
- 5 groundwater variance permits (Table 3); and
- 4 new surface water permits (Table 4).

Tables 1–4 in Appendix 1 summarize the water use permits issued upstream of and within the PRRIP Critical Habitat Reach (CHR) in 2018, (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**

---

Based upon the data contained in this report and the depletion analysis, the resulting net effect of all 2018 permitted activities located within the 28/40 area is positive. This means that the mitigation activities 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 2029 for all activities permitted in 2018. 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

Nebraska's Annual Report  
Under Bullet 3 Section IV of the  
Platte River Recovery Implementation Program  
Nebraska New Depletion Plan  
January 1, 2018, to December 31, 2018

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 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) new wells with a corresponding transfer permit (Table 5) that included mitigating action or no new use; 3) supplemental wells to supplement existing groundwater irrigation with no associated increase in irrigated acres; or 4) a public water supply well that should 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 permits issued were for: 1) the purpose of correcting certified acre records (with proof of irrigation prior to 2004), or 2) a variance to well abandonment requirements.

The surface water permits issued, listed in Table 8, were temporary (one-year) permits for the diversion of unappropriated, excess streamflows for groundwater recharge or for road construction. The groundwater recharge permits are using unappropriated water and do not require offset according to Nebraska's surface water rules. The road construction permit is a temporary use of less than ten acre-feet for public road construction and does not require an offset according to Nebraska's surface water rules.

Figure 1 illustrates the net effect to streamflow upstream of the CHR is positive and the net effect within the PRRIP CHR is negative. The aggregate net effect to both reaches for all activities permitted in 2018 is positive. Nebraska's new permitted activities and associated mitigation efforts within the 28/40 area result in a net increase in streamflow upstream of the PRRIP CHR, a net decrease within the CHR, and a net increase to streamflow overall.

---

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

Nebraska's Annual Report  
 Under Bullet 3 Section IV of the  
 Platte River Recovery Implementation Program  
 Nebraska New Depletion Plan  
 January 1, 2018, to December 31, 2018

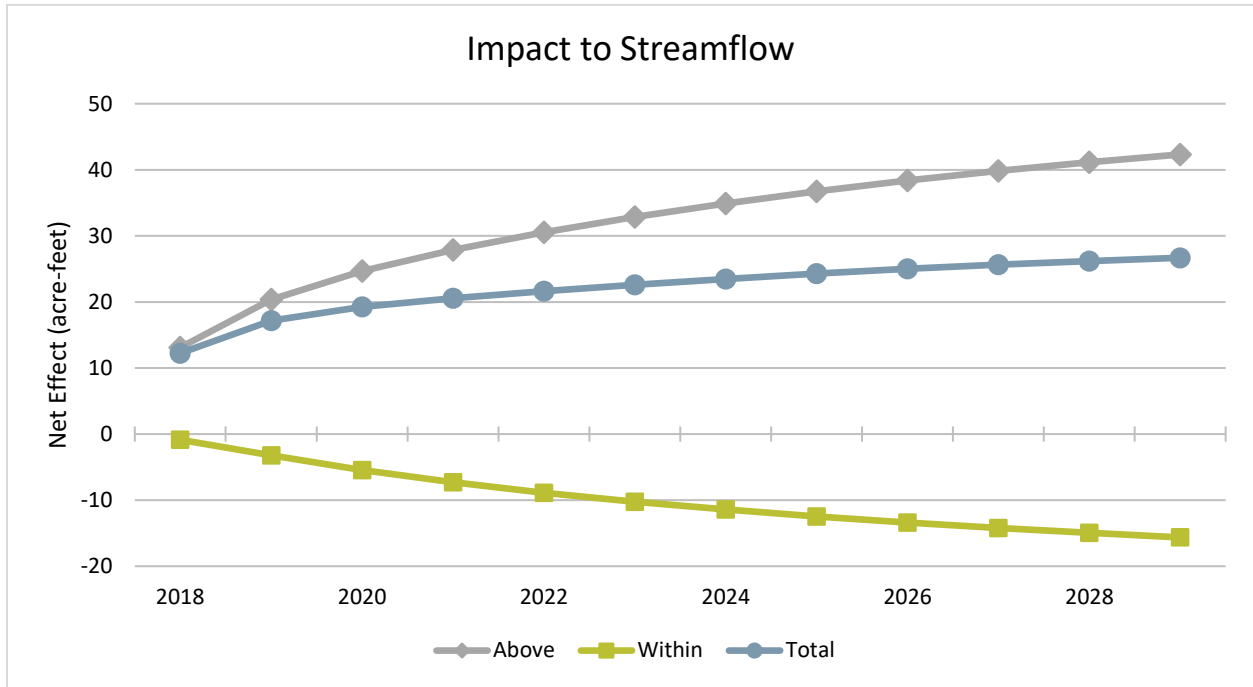


Figure 1: Aggregate net effect to streamflow resulting from all activities permitted in 2018, through the end of the second 10-year planning increment in 2029.

**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 2018 and their cumulative depletions and mitigation accretions, no additional mitigation measures for 2018 permitted activities are required at this time.

**Update on Other NNDP Related Activities and Nebraska's Robust Review**

To meet the requirements of the Upper Platte Basin-Wide Plan and the NRD integrated management plans (IMPs), the Department and the Upper Platte NRDs conducted a Robust Review, which was completed in 2019. This Review analyzed the impacts of new or expanded permitted activities since July 1, 1997, along with the impacts of mitigation or offset measures conducted through 2013, and non-permitted activities such as changes in livestock populations, municipal and industrial uses, and human populations. The Robust Review resulted in updated estimates of new net depletions due to new or

Nebraska's Annual Report  
Under Bullet 3 Section IV of the  
Platte River Recovery Implementation Program  
Nebraska New Depletion Plan  
January 1, 2018, to December 31, 2018

expanded uses of water subsequent to July 1, 1997. The quantification of these depletions is also a requirement of the NNDP. The analysis shows that Nebraska is meeting their goals in terms of offsetting post-1997 depletions within the basin. More details on the analysis can be found at <http://upjointplanning.nebraska.gov/>. More information regarding the Robust Review and compliance with NNDP requirements can be found in the Update memo submitted to the GC along with this report.

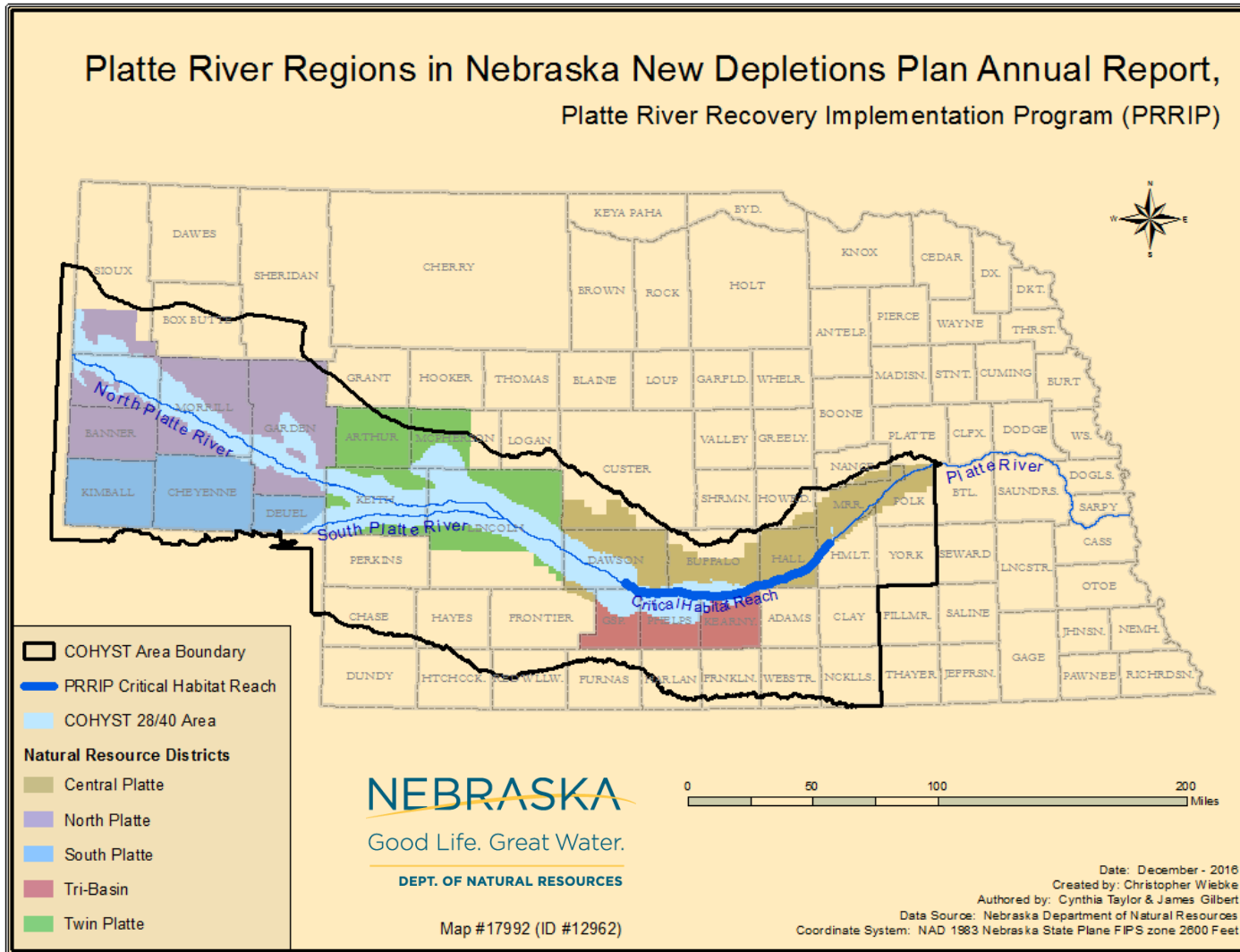
Future Robust Reviews are planned for 2023 and 2027. Nebraska will no longer be providing the additional annual update report, but will inform the GC of the future Robust Review activities and the results as they are available.

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 J Schellpeper

Supporting information can be found at <https://dnr.nebraska.gov/water-planning/upper-platte-river-basin>.

# Appendix 1



Map 1: COHYST 28/40 modeled area and PRRIP Critical Habitat Reach.<sup>2</sup>

<sup>2</sup> Map features the boundary of the original COHYST model

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

Use	#Upstream	#Within	Total
Total	28	15	43

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

Use	#Upstream	#Within	Total
New Well	1	1	2
Replacement	14	11	25
Supplemental GW	3	5	8
Total	18	17	35

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	--	2	2
Replacement Well	1	--	1
Converting Irrigated Acres to Livestock Area	1	1	2
Total	2	3	5

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)	3	--	3
Road Construction (Temporary)	--	1	1
Total	3	1	4



Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	Mitigation	1840	1/15/2018	10	10	25	W	2018	1.58
CPNRD	Mitigation	1840	1/15/2018	10	10	25	W	2018	1.43
CPNRD	Mitigation	1840	1/15/2018	10	10	25	W	2018	1.19
CPNRD	Mitigation	1840	1/15/2018	10	10	25	W	2018	2.78
CPNRD	New Use	1840	1/15/2018	10	10	25	W	2018	6.97
CPNRD	Mitigation	1852	2/28/2018	18	9	21	W	2018	0.19
CPNRD	Mitigation	1852	2/28/2018	18	9	21	W	2018	3.50
CPNRD	Mitigation	1852	2/28/2018	13	9	22	W	2018	1.00
CPNRD	New Use	1852	2/28/2018	18	9	21	W	2018	1.67
CPNRD	New Use	1852	2/28/2018	18	9	21	W	2018	2.20
CPNRD	New Use	1852	2/28/2018	18	9	21	W	2018	0.98
CPNRD	Mitigation	1862	3/2/2018	15	10	23	W	2018	1.00
CPNRD	Mitigation	1862	3/2/2018	30	11	24	W	2018	1.45
CPNRD	New Use	1862*	3/2/2018	8	9	13	W	2018	41.69
CPNRD	Mitigation	1868	3/13/2018	22	9	22	W	2018	2.10
CPNRD	Mitigation	1868	3/13/2018	22	9	22	W	2018	0.90
CPNRD	New Use	1868	3/13/2018	22	9	22	W	2018	3.00
CPNRD	Mitigation	1870*	3/13/2018	19	10	17	W	2018	0.97
CPNRD	Mitigation	1870*	3/13/2018	19	10	17	W	2018	0.75
CPNRD	Mitigation	1870*	3/13/2018	19	10	17	W	2018	1.52
CPNRD	Mitigation	1870*	3/13/2018	19	10	17	W	2018	4.13
CPNRD	Mitigation	1870*	3/13/2018	19	10	17	W	2018	1.85
CPNRD	Mitigation	1870	3/13/2018	7	8	17	W	2018	1.00
CPNRD	New Use	1870*	3/13/2018	19	10	17	W	2018	0.38
CPNRD	New Use	1870*	3/13/2018	19	10	17	W	2018	17.83
CPNRD	Mitigation	1878	3/22/2018	34	9	15	W	2018	1.37
CPNRD	New Use	1878	3/22/2018	34	9	15	W	2018	1.37
CPNRD	Mitigation	1880	4/3/2018	36	12	25	W	2018	4.29

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	New Use	1880	4/3/2018	36	12	25	W	2018	2.71
CPNRD	New Use	1880	4/3/2018	36	12	25	W	2018	1.58
CPNRD	Mitigation	1884	4/3/2018	3	9	23	W	2018	1.00
CPNRD	New Use	1884*	4/3/2018	16	15	5	W	2018	1.34
CPNRD	New Use	1884*	4/3/2018	34	15	5	W	2018	5.01
CPNRD	Mitigation	1885	4/4/2018	26	11	23	W	2018	1.48
CPNRD	Mitigation	1885	4/4/2018	26	11	23	W	2018	3.21
CPNRD	Mitigation	1885	4/4/2018	26	11	23	W	2018	1.57
CPNRD	New Use	1885	4/4/2018	26	11	23	W	2018	6.26
CPNRD	Mitigation	1887	4/4/2018	35	10	22	W	2018	1.44
CPNRD	New Use	1887	4/4/2018	35	10	22	W	2018	1.44
CPNRD	Mitigation	1889	4/4/2018	10	11	8	W	2018	0.53
CPNRD	Mitigation	1889	4/4/2018	10	11	8	W	2018	0.47
CPNRD	Mitigation	1889	4/4/2018	10	11	8	W	2018	5.80
CPNRD	New Use	1889	4/4/2018	10	11	8	W	2018	6.80
CPNRD	Mitigation	1901	4/13/2018	3	9	23	W	2018	2.00
CPNRD	New Use	1901	4/13/2018	31	9	21	W	2018	2.70
CPNRD	Mitigation	1907	4/19/2018	18	9	11	W	2018	10.38
CPNRD	Mitigation	1907	4/19/2018	18	9	11	W	2018	5.39
CPNRD	New Use	1907	4/19/2018	18	9	11	W	2018	0.64
CPNRD	New Use	1907	4/19/2018	18	9	11	W	2018	15.31
CPNRD	Mitigation	1911	4/19/2018	11	8	14	W	2018	1.09
CPNRD	New Use	1911*	4/19/2018	32	10	11	W	2018	5.69
CPNRD	New Use	1911*	4/19/2018	32	10	11	W	2018	2.99
CPNRD	New Use	1911*	4/19/2018	32	10	11	W	2018	8.04
CPNRD	New Use	1911*	4/19/2018	14	9	12	W	2018	3.51
CPNRD	Mitigation	1917	5/16/2018	12	9	21	W	2018	3.04
CPNRD	New Use	1917	4/26/2018	12	9	21	W	2018	3.02

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	Mitigation	1925		35	12	25	W	2018	1.13
CPNRD	Mitigation	1925		35	12	25	W	2018	0.87
CPNRD	New Use	1925	5/9/2018	35	12	25	W	2018	2.00
CPNRD	Mitigation	1931	5/24/2018	16	10	22	W	2018	7.98
CPNRD	Mitigation	1931	5/24/2018	16	10	22	W	2018	7.89
CPNRD	New Use	1931	5/24/2018	16	10	22	W	2018	0.46
CPNRD	New Use	1931	5/24/2018	16	10	22	W	2018	0.07
CPNRD	Mitigation	1936		3	9	23	W	2018	1.00
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	4.78
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	1.09
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	4.85
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	6.03
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	0.78
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	0.39
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	0.31
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	0.93
CPNRD	New Use	1936*	5/30/2018	9	10	12	W	2018	5.72
CPNRD	Mitigation	1937		3	9	23	W	2018	5.87
CPNRD	New Use	1937*	5/31/2018	16	14	6	W	2018	38.55
CPNRD	Mitigation	1944	6/19/2018	23	10	22	W	2018	0.21
CPNRD	Mitigation	1944	6/19/2018	23	10	22	W	2018	0.25
CPNRD	Mitigation	1944	6/19/2018	26	10	22	W	2018	0.03
CPNRD	Mitigation	1944	6/19/2018	3	9	23	W	2018	5.67
CPNRD	New Use	1944	6/19/2018	23	10	22	W	2018	3.98
CPNRD	New Use	1944	6/19/2018	23	10	22	W	2018	3.59
CPNRD	New Use	1944	6/19/2018	23	10	22	W	2018	2.81
CPNRD	Mitigation	1945	6/19/2018	23	10	22	W	2018	0.25
CPNRD	Mitigation	1945	6/19/2018	23	10	22	W	2018	0.21

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	Mitigation	1945	6/19/2018	26	10	22	W	2018	0.03
CPNRD	Mitigation	1945	6/19/2018	3	9	23	W	2018	5.67
CPNRD	New Use	1945	6/19/2018	23	10	22	W	2018	3.98
CPNRD	New Use	1945	6/19/2018	23	10	22	W	2018	3.59
CPNRD	New Use	1945	6/19/2018	23	10	22	W	2018	2.81
CPNRD	Mitigation	1948	6/19/2018	23	10	22	W	2018	0.21
CPNRD	Mitigation	1948	6/19/2018	23	10	22	W	2018	0.25
CPNRD	Mitigation	1948	6/19/2018	26	10	22	W	2018	0.03
CPNRD	Mitigation	1948	6/19/2018	3	9	23	W	2018	5.67
CPNRD	New Use	1948	6/19/2018	23	10	22	W	2018	3.98
CPNRD	New Use	1948	6/19/2018	23	10	22	W	2018	2.81
CPNRD	New Use	1948	6/19/2018	23	10	22	W	2018	3.59
CPNRD	Mitigation	1950	6/25/2018	17	11	25	W	2018	1.07
CPNRD	Mitigation	1950	6/25/2018	20	11	25	W	2018	0.73
CPNRD	Mitigation	1950	6/25/2018	20	11	25	W	2018	0.57
CPNRD	Mitigation	1950	6/25/2018	20	11	25	W	2018	0.45
CPNRD	Mitigation	1950	6/25/2018	19	11	25	W	2018	1.14
CPNRD	New Use	1950	6/25/2018	19	11	25	W	2018	5.75
CPNRD	Mitigation	1951	6/25/2018	20	11	25	W	2018	2.76
CPNRD	Mitigation	1951	6/25/2018	20	11	25	W	2018	2.58
CPNRD	New Use	1951	6/25/2018	20	11	25	W	2018	5.34
CPNRD	Mitigation	1954	7/3/2018	32	9	23	W	2018	2.56
CPNRD	Mitigation	1954	7/3/2018	32	9	23	W	2018	3.31
CPNRD	New Use	1954	7/3/2018	33	9	23	W	2018	2.96
CPNRD	New Use	1954	7/3/2018	33	9	23	W	2018	2.96
CPNRD	Mitigation	1955	7/3/2018	17	9	23	W	2018	1.59
CPNRD	Mitigation	1955	7/3/2018	17	9	23	W	2018	0.60
CPNRD	New Use	1955	7/3/2018	17	9	23	W	2018	2.19

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	0.77
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	2.61
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	0.17
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	2.68
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	0.39
CPNRD	Mitigation	1956	7/3/2018	20	9	23	W	2018	1.67
CPNRD	New Use	1956	7/3/2018	20	9	23	W	2018	1.33
CPNRD	New Use	1956	7/3/2018	20	9	23	W	2018	6.94
CPNRD	Mitigation	1959	7/9/2018	14	9	16	W	2018	1.10
CPNRD	Mitigation	1959	7/9/2018	14	9	16	W	2018	0.10
CPNRD	Mitigation	1959	7/9/2018	14	9	16	W	2018	4.50
CPNRD	New Use	1959	7/9/2018	14	9	16	W	2018	5.70
CPNRD	Mitigation	1969	7/13/2018	10	10	23	W	2018	1.14
CPNRD	New Use	1969	7/13/2018	10	10	23	W	2018	1.14
CPNRD	Mitigation	1974	7/18/2018	2	9	21	W	2018	4.86
CPNRD	New Use	1974	7/18/2018	3	9	21	W	2018	4.16
CPNRD	Mitigation	1981	9/27/2018	1	8	15	W	2018	0.50
CPNRD	Mitigation	1981	9/27/2018	1	8	15	W	2018	0.02
CPNRD	Mitigation	1981	9/27/2018	1	8	15	W	2018	0.56
CPNRD	Mitigation	1981	9/27/2018	12	8	15	W	2018	0.90
CPNRD	New Use	1981	9/27/2018	1	8	15	W	2018	2.27
CPNRD	Mitigation	1986	11/1/2018	35	9	20	W	2018	1.16
CPNRD	New Use	1986	11/1/2018	35	9	20	W	2018	1.16
CPNRD	Mitigation	1995*	12/27/2018	18	9	16	W	2018	9.00
CPNRD	Mitigation	1995*	12/27/2018	18	9	16	W	2018	6.82
CPNRD	New Use	1995*	12/27/2018	12	12	10	W	2018	4.03
CPNRD	New Use	1995*	12/27/2018	33	11	12	W	2018	4.44
CPNRD	New Use	1995*	12/27/2018	33	11	12	W	2018	1.50

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
CPNRD	New Use	1995	12/27/2018	11	8	14	W	2018	2.52
CPNRD	New Use	1995*	12/27/2018	1	10	12	W	2018	8.38
SPNRD	Mitigation	TR-AC-18-Harris	9/27/2018	7	12	42	W	2018	34.70
SPNRD	New Use	TR-AC-18-Harris	9/27/2018	18	12	42	W	2018	34.70
TBNRD	Mitigation	TBAT-0334	1/9/2018	23	8	21	W	2018	6.00
TBNRD	New Use	TBAT-0334	1/9/2018	8	7	20	W	2018	6.00
TBNRD	Mitigation	TBAT-0337	3/13/2018	31	7	17	W	2018	3.00
TBNRD	New Use	TBAT-0337	3/13/2018	31	7	17	W	2018	3.00
TBNRD	Mitigation	TBAT-0342	8/14/2018	9	8	23	W	2018	7.00
TBNRD	New Use	TBAT-0342	8/14/2018	21	8	23	W	2018	7.00
TPNRD	Mitigation	TP-TRANS-18.01	2/14/2018	17	13	40	W	2018	3.35
TPNRD	Mitigation	TP-TRANS-18.01	2/14/2018	17	13	40	W	2018	3.40
TPNRD	New Use	TP-TRANS-18.01	2/14/2018	17	13	40	W	2018	6.75
TPNRD	Mitigation	TP-TRANS-18.02	2/21/2018	7	11	26	W	2018	0.35
TPNRD	Mitigation	TP-TRANS-18.02	2/21/2018	7	11	26	W	2018	7.35
TPNRD	Mitigation	TP-TRANS-18.02	2/21/2018	7	11	26	W	2018	2.90
TPNRD	Mitigation	TP-TRANS-18.02	2/21/2018	7	11	26	W	2018	5.75
TPNRD	New Use	TP-TRANS-18.02	2/21/2018	35	12	27	W	2018	3.95
TPNRD	New Use	TP-TRANS-18.02	2/21/2018	35	12	27	W	2018	4.60
TPNRD	New Use	TP-TRANS-18.02	2/21/2018	2	11	27	W	2018	4.25
TPNRD	New Use	TP-TRANS-18.02	2/21/2018	2	11	27	W	2018	3.55
TPNRD	Mitigation	TP-TRANS-18.05	7/23/2018	8	12	27	W	2018	3.80
TPNRD	New Use	TP-TRANS-18.05	7/23/2018	8	12	27	W	2018	3.80
TPNRD	Mitigation	TP-TRANS-18.06	10/11/2018	16	13	40	W	2018	65.00
TPNRD	New Use	TP-TRANS-18.06	10/11/2018	36	13	36	W	2018	65.00
TPNRD	Mitigation	TP-TRANS-18.07*	1/3/2019	8	14	28	W	2018	60.24
TPNRD	Mitigation	TP-TRANS-18.07	1/3/2019	17	14	28	W	2018	75.18
TPNRD	New Use	TP-TRANS-18.07*	1/3/2019	16	16	28	W	2018	135.42

Table 5: Groundwater Transfer Permits

NRD	Permit Type	NRD Permit	Permit Date	S	T	R	E/W	Year Implemented**	Acres
TPNRD	Mitigation	TP-TRANS-18.08	1/1/2018	27	13	28	W	2018	2.00
TPNRD	New Use	TP-TRANS-18.08	1/1/2018	27	13	28	W	2018	2.00

\*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 2018 calendar year. The Year Implemented field reflects when the permit takes effect.

Table 6: Groundwater Well Permits

NRD	Permit Type	NRD Permit	DNR Well Registration	Permit Date	Year Implemented*	S	T	R	E/W	Notes
CPNRD	New Well	CPNP10-18-006	G-184437	2/12/2018	2018	3	8	16	W	No New Use
CPNRD	Replacement	CPRP10-18-002	G-009619	2/1/2018	2018	20	9	15	W	No New Use
CPNRD	Replacement	CPRP10-18-008	G-040324	3/13/2018	2018	22	9	15	W	No New Use
CPNRD	Replacement	CPRP10-18-009	G-027740	3/16/2018	2018	2	8	15	W	No New Use
CPNRD	Replacement	CPRP10-18-010	G-008491	3/28/2018	2018	34	9	14	W	No New Use
CPNRD	Replacement	CPRP24-18-001	G-041263	2/2/2018	2018	4	11	24	W	No New Use
CPNRD	Replacement	CPRP24-18-002	G-018970	3/15/2018	2018	36	12	25	W	No New Use
CPNRD	Replacement	CPRP24-18-005	G-123488	4/13/2018	2018	28	10	21	W	No New Use
CPNRD	Replacement	CPRP24-18-007	G-012903	8/9/2018	2018	1	11	25	W	Stock Well
CPNRD	Replacement	CPRP24-18-010	G-006334	12/3/2018	2018	2	9	21	W	No New Use
CPNRD	Supplemental Groundwater	CPSG10-18-007	G-184805	3/2/2018	2018	6	8	15	W	No New Use
CPNRD	Supplemental Groundwater	CPSG10-18-011	G-185044	4/26/2018	2018	10	8	17	W	
CPNRD	Supplemental Groundwater	CPSG40-18-003	G-184938	3/21/2018	2018	18	9	11	W	No New Use
NPNRD	New Well	NPNP 18003	G-187148	4/18/2018	2018	10	23	56	W	
NPNRD	Replacement	NPRP 18001	G-083033	1/8/2018	2018	27	17	42	W	
NPNRD	Replacement	NPRP 18004		4/4/2018	2018	10	22	55	W	
NPNRD	Replacement	NPRP 18005	G-020864	4/25/2018	2018	8	16	42	W	
NPNRD	Replacement	NPRP 18006	G-007905	5/7/2018	2018	18	23	57	W	
NPNRD	Supplemental Groundwater	NPSG 18002	G-057502	1/18/2018	2018	20	24	57	W	
NPNRD	Supplemental Groundwater	NPSG 18007	G-186616	9/10/2018	2018	30	23	57	W	
NPNRD	Supplemental Groundwater	NPSG 18008	G-187150	11/28/2018	2018	30	21	53	W	
SPNRD	Replacement	SP-RP-220-2018	G-003031	10/9/2018	2019	7	12	42	W	
TBNRD	Replacement	TBRP-G009923-R1	G-009923	2/6/2018	2018	10	8	21	W	No New Depletion
TBNRD	Replacement	TBRP-G011187-R1	NDY	12/20/2018	2019	24	8	15	W	No New Depletion



Table 6: Groundwater Well Permits

NRD	Permit Type	NRD Permit	DNR Well Registration	Permit Date	Year Implemented*	S	T	R	E/W	Notes
TBNRD	Replacement	TBRP-G027543-R1	G-027543	7/3/2018	2018	25	7	20	W	No New Depletion
TBNRD	Replacement	TBRP-G044409-R1	NDY	12/11/2018	2019	23	8	17	W	No New Depletion
TBNRD	Replacement	TBRP-G056539-R1	G-056539	6/21/2018	2018	27	8	17	W	No New Depletion
TBNRD	Supplemental Groundwater	TBSG-1523	G-186486	11/1/2018	2019	14	8	18	W	Supplemental to G-018974 - this permit required spacing be confirmed and could not be done until field was harvested.
TBNRD	Supplemental Groundwater	TBSG-1524	G-186194	10/15/2018	2019	17	8	16	W	Supplemental to G-072231
TPNRD	Replacement	TP-RP-18.02	G-063465	3/8/2018	2018	9	12	30	W	
TPNRD	Replacement	TP-RP-18.03	G-015548	3/20/2018	2018	14	13	37	W	
TPNRD	Replacement	TP-RP-18.04	G-021789	4/12/2018	2018	3	13	30	W	
TPNRD	Replacement	TP-RP-18.05	A-005107	5/9/2018	2018	34	13	29	W	
TPNRD	Replacement	TP-RP-18.06	G-010151	7/10/2018	2018	14	13	37	W	

\*All permits in the table were issued in the 2018 calendar year. The Year Implemented field reflects the year in which the well was drilled. No Well Registration number in the table indicates that the well was not drilled at the time of reporting. NDY in the table stands for Not Drilled Yet.

Table 7: Variance Permits

NRD	NRD Permit	NeDNR Well Registration	Permit Date	S-T-R-W	Type of Variance	Notes	Year Implemented*	Associated Well Permits	Associated Transfers
SPNRD	VAR-IR-18-Harris	G-003031	10/9/2018	7-12-42W	Replacement well	Replacement well will not irrigate the same acres as the original well; however the acres it will irrigate are already certified so no new acres will exist	2019	SP-RP-220-2018	TR-AC-18-Harris
TBNRD	PBV_2018-3	G-141314	6/28/2018	9-8-23W	Converting Irrigated acres to Livestock Area	Owner required to convert 13 certified irrigated acres to offset for additional livestock	2018	N/A	TBAT-0342
TBNRD	PBV_2018-1	G-050564	2/13/2018	2-8-21W	Certified Acre Correction	Required Historic Proof from 1997-2004 and Current Proof 3 out of 5 recent year's irrigation provided.	2018	N/A	N/A
TBNRD	PBV_2018-4	G-013425	7/30/2018	3-7-20W	Converting Irrigated acres to Livestock Area	Owner required to convert 56.7 certified irrigated acres to offset for additional livestock	2018	N/A	N/A
TBNRD	PBV_2018-2	G-074311	4/5/2018	7-23-18W	Certified Acre Correction	Required Historic Proof from 1997 - 2004 and Current Proof 3 out of 5 recent year's irrigation provided.	2018	N/A	N/A

\*All permits in the table were issued in the 2018 calendar year. The Year Implemented field reflects when the permit takes effect

Table 8: Surface Water Permits

Appropriation Number	Approval Date	S-T-R-W	Use	Grant in CFS	Grant in AF	Surface Water or Groundwater Mitigation	Associated Variances
A-19617	30-Nov-18	8-13-29W	Temporary Recharge	950	---	Variance granted pursuant to 475 Neb. Admin. Code Ch. 23 § 001.03	VAR-7108
A-19608	16-Aug-18	18-10-23W	Temporary Recharge	100	---	Variance granted pursuant to 475 Neb. Admin. Code Ch. 23 § 001.03	VAR-6976
A-19607	16-Aug-18	18-10-23W	Temporary Recharge	100	---	Variance granted pursuant to 475 Neb. Admin. Code Ch. 23 § 001.03	VAR-6975
A-19593	16-Apr-18	11-6-20W	Temporary Road Construction	---	5	Variance granted pursuant to 475 Neb. Admin. Code Ch. 23 § 001.06	VAR-6602

Table 9: Effects to streamflow from 2018 to 2029 in the Platte River resulting from all groundwater and surface water permitting activities in 2018. A positive for the net effect indicates that the permitted activities have an overall positive effect on streamflow. Values are 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
2018	-4.91	18.01	13.10	-5.69	4.83	-0.86	12.24
2019	-10.68	31.04	20.36	-10.75	7.55	-3.20	17.16
2020	-16.03	40.69	24.66	-14.91	9.49	-5.42	19.24
2021	-20.68	48.55	27.87	-18.27	10.96	-7.30	20.56
2022	-24.70	55.24	30.54	-21.03	12.14	-8.89	21.65
2023	-28.20	61.06	32.86	-23.37	13.12	-10.25	22.61
2024	-31.28	66.19	34.92	-25.37	13.94	-11.43	23.49
2025	-34.02	70.77	36.75	-27.12	14.65	-12.46	24.28
2026	-36.51	74.89	38.38	-28.66	15.28	-13.38	25.00
2027	-38.78	78.63	39.85	-30.04	15.83	-14.21	25.64
2028	-40.88	82.03	41.16	-31.28	16.32	-14.96	26.20
2029	-42.83	85.16	42.32	-32.40	16.76	-15.64	26.69

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 volume amount of acre-feet of water legally allowed to be pumped or stored.

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 or modified to pump less than 50 gpm and used only for livestock, monitoring, observation, or other nonconsumptive or de minimis use approved by the NRD. 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.