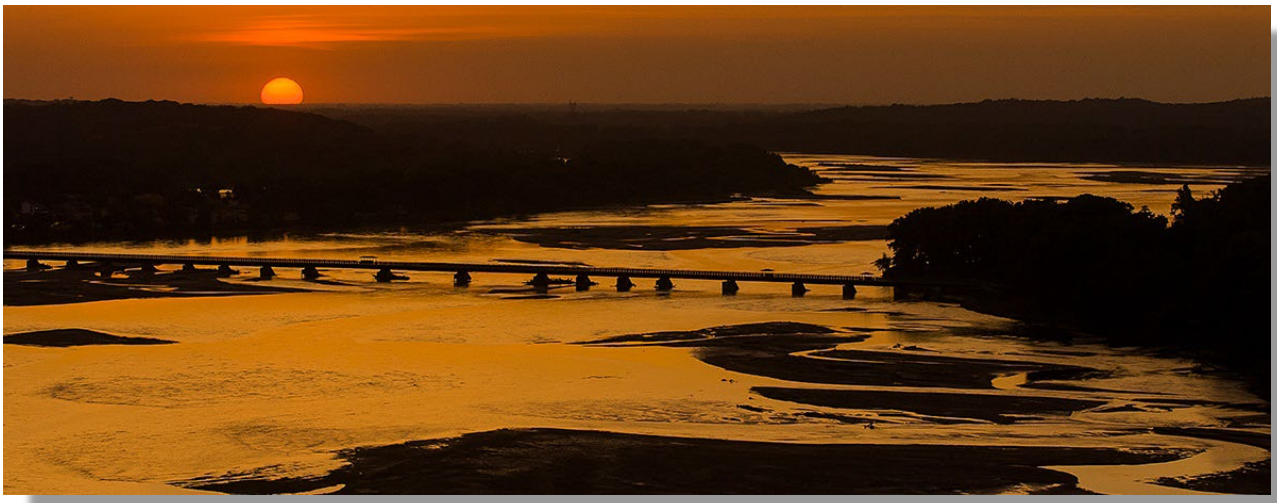
Nebraska Department of Natural Resources
2025 Annual Report



of 2024 Data for the

Lower Platte River Basin Coalition's
Basin Water Management Plan

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1. Introduction

In April 2013, The Nebraska Department of Natural Resources (NeDNR) and seven Natural Resources Districts (NRDs) entered into an Interlocal Cooperative Agreement to form the **Lower Platte River Basin Water Management Plan Coalition** (Coalition). The Nebraska Association of Resource Districts (NARD) serves as the coordinator on behalf of the Coalition. The members of the Coalition are:

- Lower Platte South NRD,
- Lower Platte North NRD,
- Papio-Missouri River NRD,
- Lower Loup NRD,
- Lower Elkhorn NRD,
- Upper Elkhorn NRD,
- Upper Loup NRD, and
- NeDNR.

The Lower Platte River Basin (Basin) overlies portions of central and eastern Nebraska (Figure 1). The Coalition recognizes the hydrologic connectivity of groundwater and surface water resources within the Basin and works together to manage the resources. The Coalition jointly developed and adopted the Lower Platte River Basin Water Management Plan (Plan) in 2018 to protect and sustain the long-term balance between the water uses and water supplies. The Plan requires reporting on an annual basis, which this report serves to fulfill.

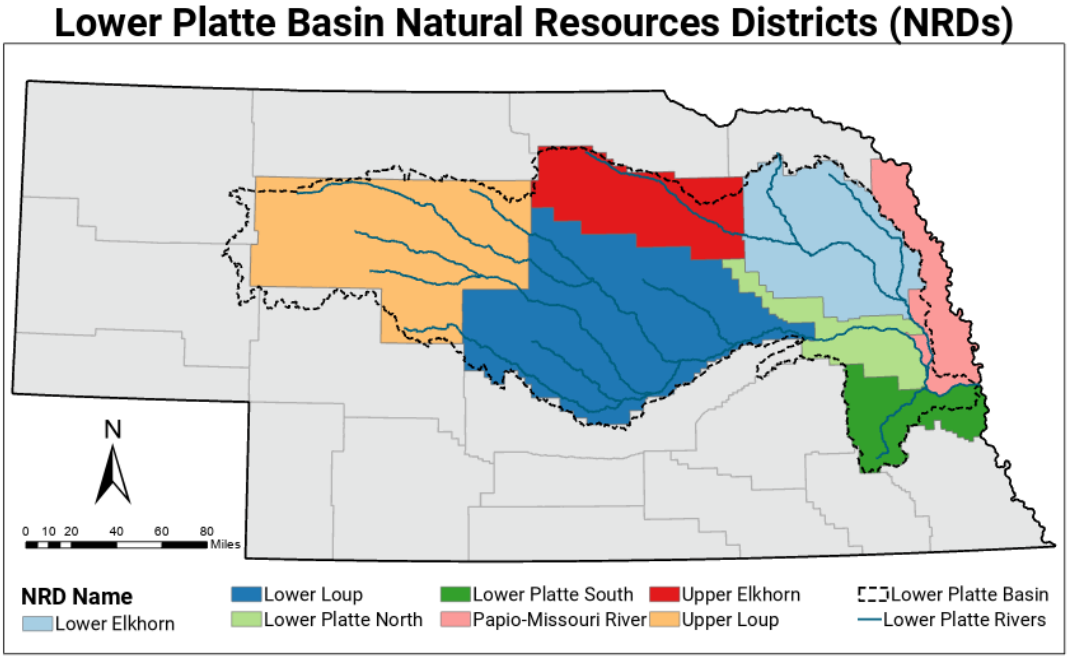

Figure 1. Map of Lower Platte River Basin Coalition NRDs

2. Surface Water and Groundwater Monitoring

A. NeDNR Streamgage Monitoring

NeDNR is authorized to measure and monitor the water flowing in Nebraska streams. Within the Basin, NeDNR maintains 21 streamgages (Table 1). Additional gages are maintained by the U.S. Geological Survey (USGS). Instantaneous and historical streamflow data for both NeDNR and USGS gages may be accessed by visiting NeDNR's interactive streamgaging map at Data - NeDNR Real Time Water (aquaticinformatics.net). All website data are provisional and subject to revision unless otherwise denoted.

Table 1. A listing of NeDNR maintained streamgages

NeDNR Streamgages in the Lower Platte River Basin		
Station Name	Station Number	River Basin
Middle Loup River at Rockville	6780000	Loup
Mud Creek near Sweetwater	6783500	Loup
Turkey Creek near Dannebrog	6784800	Loup
Calamus River near Harrop	6787000	Loup
Calamus River near Burwell	6787500	Loup
North Loup River at Ord	6788500	Loup
Mira Creek near North Loup	6788988	Loup
Cedar River near Spalding	6791500	Loup
Cedar River near Fullerton	6792000	Loup
Beaver Creek at Loretto	6793500	Loup
Loup River at Columbus	6794500	Loup
Willow Creek near Pierce	232500	Elkhorn
Elkhorn River near Atkinson	6796973	Elkhorn
South Fork Elkhorn River near Ewing	6798000	Elkhorn
Elkhorn River at Neligh	6798500	Elkhorn
Elkhorn River near Tilden	6798780	Elkhorn
Willow Creek near Foster	6799080	Elkhorn
Union Creek at Madison	6799230	Elkhorn
Pebble Creek at Scribner	6799385	Elkhorn
Logan Creek at Pender	6799450	Elkhorn
Elkhorn River near Winslow	6799510	Elkhorn

B. NeDNR Irrigation Canal Monitoring

In addition to streamgaging, NeDNR monitors and measures major surface water diversions at 21 sites across the Basin (Table 2). Instantaneous and historical canal diversion data may be accessed at NeDNR's interactive streamgage map at: Data - NeDNR Real Time Water (aquaticinformatics.net).

Table 2. A listing of NeDNR irrigation canal measurement sites

NeDNR Irrigation Canal Measurement Sites		
Canal Name	Canal Number	River Basin
Calamus Fish Hatchery inlet from Calamus	19800	Loup
Farwell (Sherman Feeder) Canal from Middle Loup River	47000	Loup
Farwell Main Canal from Sherman Reservoir	48000	Loup
Farwell South Canal from Sherman Reservoir	49000	Loup
Fullerton Canal from Davis Creek Reservoir	54700	Loup
Kent Canal from North Loup River	76500	Loup
Loup River Power Canal Return at Columbus	82100	Loup
Inlet Canal to Davis Cr. Res. from Mirdan	88500	Loup
Middle Loup Canal No. 1 from Middle Loup	90000	Loup
Middle Loup Canal No. 1 Pump from Middle	90200	Loup
Middle Loup Canal No. 2 from Middle Loup	91000	Loup
Middle Loup Canal No. 3 from Middle Loup	92000	Loup
Middle Loup Canal No. 4 from Middle Loup	93000	Loup
Middle Loup Canal No. 4 from Sherman Feeder Canal	93200	Loup
Mirdan Canal from Calamus Reservoir	100500	Loup
Taylor-Ord Canal from North Loup River	107000	Loup
Taylor-Ord Canal inlet to Mirdan Canal	107100	Loup
Taylor-Ord Canal outlet from Mirdan Canal	107200	Loup
Burwell-Sumter Canal from North Loup River	108000	Loup
Ord-North Loup Canal from North Loup River	109000	Loup
Sargent Canal from Middle Loup River	130000	Loup

C. Surface Water Pump Site Monitoring

The NeDNR field office staff regularly inspect pump sites of permitted surface water diversions as a part of surface water monitoring. Depending on conditions and staffing, not all pump sites are inspected every year, and some pump sites may be visited more than one time per year. NeDNR field offices within the Basin are in Lincoln, Norfolk, and Ord, Nebraska. Table 3 provides a listing of surface water pump site inspections conducted in 2024. The data are organized by NRD and provide information about the total number of surface water appropriations, the number of pump sites inspected, and, of those, how many sites were set up for irrigation at the time of the inspection. It should be noted that some pump site inspections occur outside of prime irrigation season, so sites without a pump set up may not have done so yet for the season.

Table 3. Surface water pump site inspections conducted in 2024

2024 Surface Water Pump Site Inspections			
NRD	Total Number of Permits	Number of pump site Inspections	Number of pump sites set up for irrigation
Lower Elkhorn	339	323	71
Lower Loup	754	658	348
Lower Platte North	139	139	24
Lower Platte South	149	124	8
Papio-Missouri River	50	46	20
Upper Elkhorn	73	73	17
Upper Loup	24	18	0
Total	**1528**	**1381**	**488**

D. Surface Water Administration

Surface water administration is the enforcement of the prior appropriation doctrine principle of "first in time, first in right," in times of shortage. Surface water administration began on May 29 and continued periodically through October 31, 2024. Here, NeDNR issued closing notices for the benefit of the instream flow permits held by the Lower Loup NRD (LLNRD) and the Nebraska Game and Parks Commission (NGPC). The closures applied to both storage and natural flow appropriations that have a priority date junior to July 28, 2017 for LLNRD and November 30, 1993 for NGPC. A summary of 2024 water administration is provided in Table 4.

Table 4. 2024 Lower Platte River Basin Surface Water Administration

2024 Lower Platte River Basin Surface Water Administration						
NeDNR Water Division	Date of Closure	Date Reopened	Permit Type	Number of Affected Permits	Reason for closure	Reason for reopening
2A-Loup River Basin	29-May	3-Jun	Natural Flow	19	LLNRD In-stream flow not met	LLNRD In-stream flow being met
			Storage	1		
	18-Jul	15-Aug	Natural Flow	142	Not enough water for NGPC instream flow right	Water for NGPC instream flow right has been exceeded
	18-Jul	15-Aug	Storage	29		
	27-Aug	31-Oct	Natural Flow	161		
	27-Aug	31-Oct	Storage	30		
2B-Elkhorn River Basin	5-Sep	31-Oct	Natural Flow	82		
	5-Sep	31-Oct	Storage	87		

E. Surface Water Permits for Induced Groundwater Recharge (Previously Issued)

No new induced groundwater recharge permits were issued and no changes to existing permits occurred in 2024. Induced groundwater recharge permits have no reporting requirements as a condition of the permit. Currently, the City of Lincoln and the Metropolitan Utilities District (MUD) are the only two appropriators holding induced groundwater recharge permits within the Basin.

Table 5 provides a summary of the induced groundwater recharge permits within the Basin. The associated municipal groundwater transfer permits, although not surface water, are also included. For example, the City of Lincoln has one induced groundwater recharge surface water permit, A-17312, with two associated municipal groundwater transfer permits for the Ashland wellfield. MUD has two induced groundwater recharge surface water permits, each with an associated municipal groundwater transfer permit, for each of its two wellfields: A-17310 and A-10538 in the south wellfield and A-17318 and A-17356 in the west wellfield.

Table 5. City of Lincoln and MUD surface water permits for induced groundwater recharge

Surface Water Permits for Induced Groundwater Recharge						
Permit Holder	Permit Number	Priority Date	Associated GW Municipal Transfer	Number of Wells	Rate in cubic feet per second (cfs)	Required Reporting
City of Lincoln	A-17312	1/21/1964	A-10367	31	704 - Summer	No
					200 - All Other Seasons	
		1/1/1970	A-16917	7	No additional streamflow	No
		1/1/1980		6	No additional streamflow	
		1/1/1990		2	No additional streamflow	
		1/1 /1993		2	No additional streamflow	
MUD	A-17310	1/1/1970	A-10538	38	480	No
		1/1/1990		1	20	
	A-17318	10/6/1993	A-17356	42	160	No

F. Groundwater Permits (Previously Issued by NeDNR)

No new groundwater permits were issued in 2024. The data provided by permit holders of groundwater pumped in 2024, for the applicable permits listed in Table 7, are available electronically upon request. The types of groundwater permits shown are authorized as follows:

- "Municipal" is a Municipal Groundwater Transfer Permit pursuant to Neb. Rev. Stat. §46-613.01, §§46-639 - 46-650
- "Industrial Transfer" is an Industrial Groundwater Transfer Permit pursuant to Neb. Rev. Stat. §§46-675 – 46-689
- "Municipal Notice of Intent" is a notice pursuant to Neb. Rev. Stat. §46-655.01

Table 6 provides a summary of the permitted maximum water withdrawals for the City of Lincoln's and MUD's Municipal Groundwater Transfer Permits. The annual reports submitted by City of Lincoln and MUD for these permits are available upon request.

Table 6. Municipal groundwater transfer permits held by the City of Lincoln and MUD

Municipal Groundwater Transfer Permits					
Permit Holder	Appropriation Number	Priority Date	Maximum Daily Withdrawal	Total Annual Withdrawal	Required Reporting
City of Lincoln	A-10367	6/15/1931	60 million Gallons	NA	Yes
	A-16917	1/25/1990	50 million Gallons	NA	Yes
MUD	A-10538	2/15/1965	60 million Gallons	NA	Yes
	A-17356	3/1/1994	104 million Gallons	19 billion Gallons	Yes

Table 7. NeDNR groundwater permits (previously issued)

NeDNR Groundwater Permits (Previously Issued)				
Index Number	Permit Holder	Appropriation Number	Approval Date	Permit Type
3	Lincoln, City of	A-10367	5/28/1964	Municipal
4	Fremont, City of	A-10411	8/21/1964	Municipal
8	Wakefield, City of	A-10531	3/8/1965	Municipal
9	Plattsmouth, City of	A-10533	3/8/1965	Municipal
11	Metropolitan Utilities District	A-10538	6/9/1965	Municipal
17	Leigh, Village of	A-10578	5/10/1965	Municipal

NeDNR Groundwater Permits (Previously Issued)				
Index Number	Permit Holder	Appropriation Number	Approval Date	Permit Type
18	Laurel, City of	A-10579	5/10/1965	Municipal
24	Ashland, City of	A-10589	5/10/1965	Municipal
26	Lincoln, City of	A-10595	5/10/1965	Municipal
27	Columbus, City of	A-10596	5/10/1965	Municipal
32	Fremont, City of	A-12171	4/29/1971	Municipal
33	Fremont, City of	A-13909	2/19/1976	Municipal
34	Columbus, City of	A-15704	10/17/1980	Municipal
41	Wayne, City of	A-16525	1/16/1987	Municipal
42	Laurel, City of	A-16530	1/16/1987	Municipal
49	Howells, Village of	A-16888	12/8/1989	Municipal
51	Howells, Village of	A-16911	4/6/1990	Municipal
52	Lincoln, City of	A-16917	8/31/1990	Municipal
53	Wayne, City of	A-16927	6/25/1990	Municipal
54	Bruno, Village of	A-16964	7/12/1990	Municipal
57	Howells, Village of	A-17082	9/16/1991	Municipal
58	Valparaiso, Village of	A-17086	9/16/1991	Municipal
63	Valparaiso, Village of	A-17212	9/29/1992	Municipal
71	Columbus, City of	A-17325	12/11/1995	Municipal
72	Pleasant Dale, Village of	A-17351	4/11/1994	Municipal
73	Eagle, Village of	A-17352	10/27/1994	Municipal
74	Metropolitan Utilities District	A-17356	12/10/1998	Municipal
78	St. Paul, City of	A-17426	1/4/1996	Municipal
121	Clarkson, City of	A-17556	4/2/1998	Municipal
158	Humphrey, City of	A-17807	3/7/2001	Municipal
194	Palmer, Village of	A-17949	2/19/2002	Municipal
128	Ceresco, Village of	A-18018	8/27/2002	Municipal
199	Cuming County Rural Water District #1	A-18024	6/13/2005	Municipal
218	Weston, Village of	A-18070	6/13/2005	Municipal
212	Springfield, City of	A-18104	4/14/2006	Municipal
225	Cass County Rural Water District #2	A-18163	5/3/2006	Municipal
109	Tyson Fresh Meats, Inc.	I-4	10/22/1996	Industrial Transfer
110	Nebco, Inc.	I-5	9/27/1996	Industrial Transfer
270	Nebco, Inc.	I-5A	7/31/2006	Industrial Transfer
141	Hormel Foods Corp.	I-6	1/5/1999	Industrial Transfer

NeDNR Groundwater Permits (Previously Issued)				
Index Number	Permit Holder	Appropriation Number	Approval Date	Permit Type
423	Coleridge, Village of	MNI-22	1/22/2014	Municipal Notice of Intent
261	Waverly, City of	MT-13	9/12/2007	Municipal
262	Cuming County Rural Water District #1	MT-14	6/7/2006	Municipal
263	Pierce, City of	MT-15	7/12/2007	Municipal
264	Madison, City of	MT-16	1/11/2007	Municipal
268	Papillion, City of	MT-18	11/6/2018	Municipal
284	Louisville, City of	MT-23	9/29/2006	Municipal
332	Wayne, City of	MT-24	7/12/2007	Municipal
351	Palmer, Village of	MT-27	10/5/2007	Municipal
375	Broken Bow, City of	MT-35	11/30/2009	Municipal
391	Waverly, City of	MT-38	2/25/2011	Municipal
473	Archer Daniels Midland Company and Vantage Corn Processing, LLC	I-25	5/1/2020	Industrial Transfer

3. NeDNR Surface Water and Groundwater Permitting Activities

A. Surface Water Permitting Activity

Details of surface water permitting activities are provided in *Table 8. Surface water applications approved in 2024 within the Lower Platte River Basin*

To summarize, the following surface water permitting activities occurred in 2024:

- Irrigation (IR) – Seventeen permits were approved within the Basin. One permit was approved outside the Basin. Within the Basin a total of forty permits were cancelled in full and eleven were cancelled in part. Outside the Basin a total of nine permits were cancelled in full and three were cancelled in part.
- Manufacturing Permits (MF) — No temporary (one year) manufacturing permits were approved in the basin. No permits were approved outside the Basin. Outside the Basin one manufacturing permit from 2023 expired in 2024.
- Municipal Permits (MU) — No permits were granted in 2024.
- Storage Permits (ST) — Within the Basin, three permits were granted. Four permits were approved outside the Basin. No permits were cancelled in the Basin or outside the Basin.
- Transfers – Nine expedited transfers were approved within the Basin and four non-expedited transfers were approved.
- Irrigation District Filings–Twin Loups Reclamation District filed six Relinquishments and Reassignments. Farwell Irrigation District, filed one Relinquishments and Reassignments.
- District Transfers – A total of two transfers were approved.
- Instream Flow (IF) – Four permits were approved within the Basin. No permits were approved outside the Basin. No permits were cancelled.
- Domestic (DO) – No permits were approved within the Basin. No permits were approved outside the Basin. No permits were cancelled.
- Flood Control (FC) – Two permits were approved within the Basin. No permits were approved outside the Basin. No permits were cancelled.
- Recharge (RE) – Three permits were approved within the Basin. No permits were approved outside the Basin. No permits were cancelled.

New Surface Water Appropriations Granted in 2024

Table 8 below contains the surface water applications approved from January 1, 2024, to December 31, 2024, within the Lower Platte Basin Coalition NRDs and the area within the Lower Platte Basin.

Table 8. Surface water applications approved in 2024 within the Lower Platte River Basin

Surface Water Applications Approved January 1, 2024 to December 31, 2024									
NRD	Appropriation Number	Date Approved	Source	Diversion/ Reservoir Location	Use	Grant (cfs)	Grant in af	Acres	New Acres
Lower Elkhorn	A-19945	3/5/2024	Elkhorn River	Pump	IR	1.14	480	160	160
Lower Elkhorn	A-19989	4/18/2024	Willow Creek	Pump	IR	2.29	480	160	160
Lower Elkhorn	A-19990	4/18/2024	Willow Creek	Pump	IR	2.29	480	160	160
Lower Elkhorn	A-19580A	8/2/2024	Elkhorn River	USGS Gage 06799000 by Norfolk to USGS Gage 06800500 by Waterloo	IF	600	0	0	0
Lower Elkhorn	A-19580B	8/2/2024	Elkhorn River	USGS Gage 06799000 by Norfolk to USGS Gage 06800500 by Waterloo	IF	2100	0	0	0
Lower Elkhorn	A-19580C	8/2/2024	Elkhorn River	USGS Gage 06799000 by Norfolk to USGS Gage 06800500 by Waterloo	IF	1400	0	0	0
Lower Elkhorn	A-19580D	8/2/2024	Elkhorn River	USGS Gage 06799000 by Norfolk to USGS Gage 06800500 by Waterloo	IF	470	0	0	0
Lower Elkhorn	A-20036	12/2/2024	Elkhorn River	Pump	IR	0.49	320.7	106.9	106.9
Lower Elkhorn	A-20046	11/13/2024	Willow Creek	Pump	IR	0.82	171.3	57.1	57.1
Lower Loup	A-19193	7/26/2024	Loup River, South	Pump	IR	0.99	208.2	69.4	69.4
Lower Loup	A-19876	6/5/2024	Calamus Reservoir	Mirdan Canal	IR	0	159.3	53.1	53.1
Lower Loup	A-19877	6/5/2024	Davis Creek Reservoir	Fullerton Canal	IR	0	159.3	53.1	53.1
Lower Loup	A-20010	5/30/2024	Spring Creek	Pump	IR	0.28	59.1	19.7	19.7

Surface Water Applications Approved January 1, 2024 to December 31, 2024									
NRD	Appropriation Number	Date Approved	Source	Diversion/ Reservoir Location	Use	Grant (cfs)	Grant in af	Acres	New Acres
Lower Loup	A-19982	4/12/2024	Loup River, Middle	Canal 1 & 2	IR	0.32	66.9	22.3	22.3
Lower Loup	A-20018	9/12/2024	Sherman Reservoir	Not in Map Transfer	IR	0	83.3	83.3	83.3
Lower Loup	A-20037	9/17/2024	Loup River, North	Ord North Loup Canal	RE	100	0	0	0
Lower Loup	A-20038	9/17/2024	Loup River, North	Burwell Sumter Canal	RE	100	0	0	0
Lower Loup	A-20039	9/17/2024	Loup River, North	Taylor Ord Canal	RE	100	0	0	0
Lower Platte North	A-19949	1/3/2024	Wahoo Creek, North Fork, Trib. to	Wahoo Creek 26A	ST	0	65.2	0	0
Lower Platte North	A-19973	7/26/2024	Wahoo Creek	Pump	IR	0.84	177.3	59.1	59.1
Lower Platte North	A-19956	1/5/2024	Wahoo Creek, North Fork, Trib. to	Wahoo Creek 26B	FC	0	121.6	0	0
Lower Platte North	A-19957	1/5/2024	Wahoo Creek, North Fork, Trib. to	Wahoo Creek 27	FC	0	169.5	0	0
Lower Platte South	A-19960	1/17/2024	Holmes Creek, Trib to	Reed Reservoir	ST	0	73	0	0
Lower Platte South	A-20011	10/2/2024	Middle Creek, Trib to	Piening Water Quality Basin	ST	0	67.87	0	0
Lower Platte South	A-20035	10/18/2024	Middle Creek	Pump	IR	1.29	270	90	90
Papio-Missouri River	A-19963	1/30/2024	Bell Creek	Pump	IR	2.22	465.9	155.3	155.3
Papio-Missouri River	A-19991	6/5/2024	Bell Creek	Pump	IR	1.65	347.1	115.7	115.7
Papio-Missouri River	A-19992	5/28/2024	Bell Creek	Pump	IR	0.8	167.4	55.8	55.8

Surface Water Applications Approved January 1, 2024 to December 31, 2024									
NRD	Appropriation Number	Date Approved	Source	Diversion/ Reservoir Location	Use	Grant (cfs)	Grant in af	Acres	New Acres
Papio-Missouri River	A-20047	12/19/2024	Elkhorn River	Pump	IR	1.94	1160.7	386.9	386.9

Table 9 provides a listing of new surface water applications that were approved within the seven NRDs in calendar year 2024 but are outside of the Lower Platte Basin. While the permits do not count as new uses within the Basin, these are included to meet the reporting requirements for those NRDs' Integrated Management Plans.

Table 9. Surface water applications approved in 2024 outside of the Basin

Surface Water Applications Approved between January 1, 2024 to December 31, 2024 (Outside of the Lower Platte River Basin but Within Coalition NRDs)								
NRD	Appropriation Number	Date Approved	Source	Diversion/ Reservoir Location	Use	Grant (cfs)	Grant (af)	Acres
Papio-Missouri River	A-19964	6/5/2024	Papillion Creek, Big, Trib. To	Dunker Reservoir	ST	0	91.33	0
	A-20030	9/19/2024	Missouri River	pump	IR	0.05	10.2	3.4
	A-19985	12/9/2024	Papillion Creek, West, Trib. To	WP-1 Reservoir	ST	0	92.8	0
	A-20049	11/20/2024	Blackbird Creek	pump	ST	1.15	16.4	0
Lower Platte South	A-19983	4/22/2024	Weeping Water Creek	Weeping Water Park Lakes	ST	0	10	0

Expired and Cancelled Surface Water Appropriations in 2024

Table 10 provides a listing for Basin surface water appropriations that expired, were cancelled in full, or cancelled in part in 2024. Table 11 lists any expired or cancelled appropriations that are outside of the Lower Platte River Basin but within Coalition NRDs. NeDNR must follow statutory requirements when proceeding with any cancellation, in full or in part, of a surface water appropriation. The "Basis for Action" columns in both tables pertain to one of the authorities listed below.

- BUC (Beneficial Use Cancellation): The field offices investigate all new appropriations after the time period given in the approval order to perfect the water right. If for any reason the appropriation has not been perfected, and water has not been put to beneficial use as stated in the approval order, it may be cancelled in full or in part.
    - Authority upon which the action was based: *Neb. Rev. Stat.* §46-229.02(7) "A water appropriation that has not been perfected pursuant to the terms of the permit may be canceled by the department without complying with sections 46-229.01 to 46-229.04 if the owner of such appropriation fails to comply with any of the conditions of approval in the permit, except that this subsection does not apply to appropriations to which subsection (2) of section 46-237 applies."
- PDNU (Preliminary Determination of Non-use): This can occur after a field investigation finding the appropriation has not been used in the last five years, and if the owner does not successfully contest the preliminary determination of nonuse.
    - Authority upon which the action was based: *Neb. Rev. Stat.* §§ 46-229.02(1) through 46-229.02(6) which state that if the NeDNR makes a preliminary determination that an appropriation has not been used for more than five consecutive years, and the owner of said appropriation does not successfully contest the determination, then NeDNR may cancel said appropriation in whole or in part.
- REL (Relinquishment): An appropriator can file a voluntary relinquishment of part or all of their water appropriation.
    - Authority upon which the action was based: Department of Natural Resources *Rules for Surface Water, Neb. Admin. Code. Title 457*, Chapter 3, which specifies that any appropriation, or part of any appropriation, may be voluntarily relinquished.
- Temporary permits: Temporary permits may not be granted for a term of more than one year. These permits expire one year from the order date and are cancelled without further action by the Department as of that date.

Table 10. Expired or cancelled surface water appropriations in 2024 within the Lower Platte River Basin

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Lower Elkhorn	A-10923	4/2/2024	Willow Creek	Cancelled in Full	Pump	IR	40	40	0.57	120	2000	PDNU-10119
Lower Elkhorn	A-13432B	4/15/2024	Elkhorn River	Cancelled in Full	Pump	IR	12	12	0.08	36	2000	PDNU-10176
Lower Elkhorn	A-13482A	5/21/2024	Willow Creek	Cancelled in Full	Pump	IR	88	88	1.26	264	2008	PDNU-10229
Lower Elkhorn	A-14045	1/17/2024	Willow Creek	Cancelled in Full	Pump	IR	21	21	0.3	0	2010	REL-10114
Lower Elkhorn	A-14797	1/16/2024	Elkhorn River	Cancelled in Full	Pump	IR	130	130	1.86	390	Unknown	PDNU-10105
Lower Elkhorn	A-16914	9/25/2024	Willow Creek	Cancelled in Full	Pump	IR	50	50	0.71	150	2012	REL-10522
Lower Elkhorn	A-2588	4/2/2024	Elkhorn River, North Fork	Cancelled in Full	Pump	IR	40.2	40.2	0.29	120.6	2005	PDNU-10157
Lower Elkhorn	A-2602	1/30/2024	Elkhorn River, North Fork	Cancelled in Full	Pump	IR	119.2	119.2	0.47	198	Unknown	REL-10117
Lower Elkhorn	A-8875	3/21/2024	Willow Creek	Cancelled in Full	Pump	IR	8.2	8.2	0.12	24.69	2003	REL-10118

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Lower Elkhorn	A-12937	10/2/2024	Willow Creek	Cancelled in Full	Pump	IR	25	25	0.36	75	1980	REL-10111
Lower Elkhorn	A-13414	5/1/2024	Elkhorn River, North Fork	Cancelled in Full	Pump	IR	40	40	0.57	120	1993	PDNU-10158
Lower Elkhorn	A-13482B	6/10/2024	Willow Creek	Cancelled in Full	Pump	IR	77	77	1.1	231	Pre 2016	PDNU-10231
Lower Elkhorn	A-13807*	4/18/2024	Willow Creek	Cancelled in Full	Pump	IR	320	320	4.57	960	2019	REL-10226 REL-10230
Lower Elkhorn	A-3958	3/21/2024	Elkhorn River, North Fork	Cancelled in Full	Pump	IR	256	256	1.83	768	Unknown	PDNU-10152
Lower Loup	A-10811	4/2/2024	Calamus River	Cancelled in Full	Pump	IR	97.5	97.5	1.39	292.5	Unknown	REL-10208
Lower Loup	A-11111	9/12/2024	Turkey Creek	Cancelled in Full	Pump - Not in Map Transfer	IR	9	9	0.13	27	Pre 2016	REL-10252
Lower Loup	A-13045	11/20/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	73	73	1.04	219	Unknown	REL-10738
Lower Loup	A-17761R	9/12/2024	Turkey Creek	Cancelled in Full	Pump	IR	35	35	0.5	105	Unknown	REL-10333

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Lower Loup	A-17883A	11/13/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	88.7	88.7	0.64	266.1	2003	REL-10736
Lower Loup	A-17883B	5/3/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	44.8	44.8	0.32	134.4	Unknown	REL-10238
Lower Loup	A-2263ER	3/4/2024	Loup River, North	Cancelled in Full	Pump	IR	43.6	43.6	0.63	130.8	Unknown	REL-10169
Lower Loup	A-3517	4/2/2024	Barnum Creek	Cancelled in Full	Pump	IR	150.9	150.9	1.08	452.7	Unknown	REL-10195
Lower Loup	A-5148	5/3/2024	Loup River, South	Cancelled in Full	Pump	IR	72.9	72.9	0.63	218.7	Unknown	PDNU-10237
Lower Loup	A-6684	5/3/2024	Lost Creek	Cancelled in Full	Pump	IR	74	74	0.53	138	Pre 2016	REL-10240
Lower Loup	A-8242A	12/9/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	16.6	16.6	0.12	49.8	Unknown	REL-10798
Lower Loup	A-8511	11/13/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	88.7	88.7	0.63	266.1	2000	REL-10735
Lower Loup	A-8616	5/3/2024	Loup River	Cancelled in Full	Columbus-Genoa Canal	IR	44.8	44.8	0.32	159.9	Pre 2016	REL-10239

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Lower Loup	A-10386	4/2/2024	Calamus River	Cancelled in Full	Pump	IR	50.8	50.8	0.72	152.4	Unknown	REL-10207
Lower Loup	A-10454BR	9/12/2024	Turkey Creek	Cancelled in Full	Pump - Not in Map Transfer	IR	9	9	0.13	27	2024	REL-10253
Lower Loup	A-11915	1/5/2024	Loup River, Middle	Cancelled in Full	Pump	IR	86	86	1.23	258	Unknown	REL-10109
Lower Loup	A-7285	12/9/2024	Loup River, South	Cancelled in Full	Pump	IR	29.9	29.9	0.27	162	Unknown	REL-10814
Lower Platte North	A-19732*	1/17/2024	Gruenewald Reservoir	Cancelled in Full	Pump	IR	128	128	0	60.5	Never Used	BUC-10121
Lower Platte North	A-2787B	12/9/2024	Shell Creek	Cancelled in Full	Pump	IR	45.5	45.5	0.33	136.5	Unknown	REL-10797
Lower Platte South	A-11211	3/18/2024	Oak Creek, Middle	Cancelled in Full	Pump	IR	57	57	0.81	171	Pre 2016	REL-10180
Lower Platte South	A-13666	1/5/2024	Oak Creek, North, Trib. To	Cancelled in Full	Pump	IR	27.3	27.3	0.39	81.9	Unknown	REL-10110
Papio-Missouri River	A-10237B	4/2/2024	Bell Creek	Cancelled in Full	Pump	IR	1.6	1.6	0.03	4.8	Pre 2016	REL-10174

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Papio-Missouri River	A-13575	5/22/2024	Bell Creek	Cancelled in Full	Pump	IR	53	53	0.76	159	Unknown	REL-10171
Papio-Missouri River	A-14685	2/26/2024	Bell Creek, Little	Cancelled in Full	Pump	IR	152.5	152.5	2.18	457.5	Pre 2016	REL-10134
Papio-Missouri River	A-13130	3/18/2024	Bell Creek, Little	Cancelled in Full	Pump	IR	125	125	1.79	375	Pre 2016	PDNU-10144
Papio-Missouri River	A-13772	4/23/2024	Bell Creek, Little	Cancelled in Full	Pump	IR	156	156	2.23	468	2010	PDNU-10172
Papio-Missouri River	A-10237A	5/3/2024	Bell Creek	Cancelled in Part	Pump	IR	14.1	26.7	0.2	42.3	2023	PDNU-10170
Papio-Missouri River	A-10237C	8/29/2024	Bell Creek	Cancelled in Part	Pump	IR	21.6	108	0.31	64.8	2000	REL-10209
Lower Loup	A-11293	9/25/2024	Loup River	Cancelled in Part	Columbus-Genoa Canal	IR	66.6	144.8	0.9	189.1	Unknown	REL-10354
Lower Platte South	A-11495	4/23/2024	Oak Creek, Middle	Cancelled in Part	Pump	IR	26	176.5	0.37	78	2017	REL-10218
Lower Elkhorn	A-13297	12/2/2024	Elkhorn River	Cancelled in Part	Pump	IR	106.9	100.4	1.04	320.7	Unknown	PDNU-10617

Surface Water Appropriations Expired, Cancelled in Full or Cancelled in Part from January 1, 2024 to December 31, 2024												
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Diversion Location	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Cancelled Grant (af)	Estimated Last Use	Basis for Action
Lower Loup	A-13515	9/12/2024	Turkey Creek	Cancelled in Part	Pump	IR	39.4	30.3	0.56	118.2	Unknown	REL-10250
Lower Loup	A-17750A	6/5/2024	Loup River	Cancelled in Part	Columbus-Genoa Canal	IR	53.6	7.1	0.1	182.1	Unknown	REL-10116
Lower Loup	A-19662	2/5/2024	Sherman Reservoir	Cancelled in Part	Not in Map Transfer	IR	157.6	4.3	0	157.6	Never Used	BUC-10102
Lower Elkhorn	A-19989	9/23/2024	Willow Creek	Cancelled in Part	Pump	IR	155.7	4.3	2.22	467.2	Never Used	BUC-10504
Lower Elkhorn	A-19990	9/19/2024	Willow Creek	Cancelled in Part	Pump	IR	147.5	12.5	2.11	442.5	Never Used	BUC-10452
Papio-Missouri River	A-9284	8/1/2024	Rawhide Creek	Cancelled in Part	Pump	IR	23.9	134.1	0.34	71.7	2017	PDNU-10060
* Represents that the cancelled right is included in the accretions table.												

Table 11. Expired or cancelled surface water appropriations, outside of the Basin

Surface Water Appropriations Expired or Cancelled from January 1, 2024 to December 31, 2024 Outside of Basin											
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Location of Diversion	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Estimated Year of Last Use	Basis for Action
Lower Platte South	A-13751C	7/23/2024	Weeping Water Creek	Cancelled in Full	S4-T10-R10E	IR	4.6	4.6	0.06	2004	PDNU-10271
Papio-Missouri River	A-10103	6/18/2024	Carr Creek	Cancelled in Full	S21-T20-R11E	IR	43	43	1.04	2019	PDNU-10148
	A-12446	1/16/2024	New York Creek	Cancelled in Full	S8-T19-R10E	IR	33	33	0.47	2007	PDNU-10106
	A-13033	3/18/2024	New York Creek	Cancelled in Full	S13-T19-R10E	IR	74	74	1.06	Pre 2016	PDNU-10141
	A-13187	4/8/2024	New York Creek, Trib. To	Cancelled in Full	S18-T19-R11E	IR	15	15	0.22	Unknown	PDNU-10143
	A-13486	5/3/2024	Davis Creek	Cancelled in Full	S23-T20-R10E	IR	0	160.7	2.3	2018	PDNU-10155
	A-13725	12/16/2024	Papillion Creek, Big, Northwest Branch, Trib. To	Cancelled in Full	S27-T18-R10E	IR	192	192	2.74	2012	REL-10732

Surface Water Appropriations Expired or Cancelled from January 1, 2024 to December 31, 2024 Outside of Basin											
NRD	Permit Number	Cancelled Date	Source	NeDNR Action	Location of Diversion	Use	Begin Acres	Cancelled Acres	Cancelled Grant (cfs)	Estimated Year of Last Use	Basis for Action
	A-14645	12/16/2024	Andersen Reservoir	Cancelled in Full	S27-T18-R10E	IR	192	192	0	2012	REL-10733
	A-17561	5/22/2024	Missouri River	Cancelled in Full	S25-T20-R11E	IR	0	10.5	0.15	1999	REL-10133
	A-19937	8/3/2023	Missouri River	Cancelled in Full	S13-T15-R13E	MF	0	0	0.67	2024	Expired
	A-13487	6/7/2024	Carr Creek	Cancelled in Part	S19-T20-R11E	IR	65.5	7.5	0.11	Unknown	PDNU-10156
	A-13237	6/18/2024	New York Creek	Cancelled in Part	S31-T20-R11E	IR	238.7	86.1	1.23	Unknown	PDNU-10149
Lower Platte South	A-19750	2/22/2024	Weeping Water Creek	Cancelled in Part	S13-T10-R12E	IR	84.6	26.6	0.38	Never Used	BUC-10147

Transferred Surface Water Permits in 2024

Table 12 summarizes the appropriations granted a "Non-Expedited" transfer, in 2024 there were four occurrences for this type of appropriation.

According to *Neb. Rev. Stat.* 46-290(1)(a) a "Non-Expedited Transfer" is restricted to the following: transfer of the originally stated location of such appropriation; the appropriation is used and will continue to be used exclusively for irrigation purposes.

Table 13 summarizes appropriations granted a location of use transfer (expedited transfer), The permit use code used in Tables 12 and 13 are defined as follows:

- IR (Irrigation) is a permit to divert water from natural flow for irrigation.

According to *Neb. Rev. Stat*. §46-291(1) "Expedited Transfers" are restricted to the following but not limited to: appropriations that are for irrigation; no increase in the number of acres that could legally be irrigated under the appropriation prior to the transfer; location of use may only change to adjacent lands; and the point of diversion may not change significantly.

Table 12. Appropriation(s) approved for a change of appropriation (non-expedited transfer)

Surface Water Appropriations Approved for Non-expedited Transfer from January 1, 2024 to December 31, 2024									
NRD	Permit Number	Approval Date	Source	Use	Diversion Location	Acres Transferred	Grant Transferred (cfs)	Increase in Acres?	Application Number
Lower Loup	A-8681R A-8681AR A-8681BR	6/18/2024	Timber Creek; Cedar River	IR	S19 T17N-R06W	10.5	0.15	Yes	A-9348
Lower Loup	A-11743	6/18/2024	Ceder River	IR	S30 T17N-R06W	21.3	0.304	Yes	A-9349
Lower Elkhorn	A-13297	12/2/2024	Elkhorn River	IR	S17 T22N-R06E	106.9	1.04	No	A-10585
Papio-Missouri River	A-14446	12/19/2024	Elkhorn River	IR	S27 T16N-R10E	251	3.59	Yes	A-10682

Table 13. Appropriations granted a location of use transfer (expedited transfer)

Surface Water Appropriations Approved for an Expedited Transfer from January 1, 2024 to December 31, 2024								
NRD	Permit Number	Approval Date	Source	Use	Diversion Location	Acres Transferred	Grant (cfs) Transferred	Application Number
Lower Loup	EXT-9350	6/18/2024	Cedar River	IR	SW SW S19 T17N-R06W	42.2	0.3	A-4208
Lower Loup	EXT-9351	6/18/2024	Cedar River	IR	SW SW S19 T17N-R06W	42.2	0.3	A-17328AR
Lower Loup	EXT-9352	6/18/2024	Cedar River	IR	SW SW S19 T17N-R06W	37.3	0.53	A-17328B
Lower Elkhorn	EXT-9553	2/13/2024	Logan Creek Dredge	IR	NW NE S29 T20N-R08E	30.2	0.86	A-16085
Lower Elkhorn	EXT-9554	2/13/2024	Logan Creek Dredge	IR	NW NE S29 T20N-R08E	173.4	2.48	A-19642
Lower Loup	EXT-10005	6/5/2024	Loup River	IR	NE NW S06 T16N-R04W	14.3	0.1	A-8483C
Lower Loup	EXT-10006	6/5/2024	Loup River	IR	NE SW S13 T17N-R04W	53.6	0.77	A-17750A
Papio-Missouri River	EXT-10096	1/30/2024	Bell Creek	IR	NE NE S35 T20N-R09E	190	2.71	A-13315
Lower Loup	EXT-10120	2/26/2024	Turkey Creek	IR	NE SE S20 T14N-R10W	61.1	0.87	A-10860A

Surface Water Irrigation District Filings with NeDNR

In 2024, both the Twin Loups and Farwell Irrigation Districts filed "provisional Relinquishments and Reassignment of Acres" with NeDNR. These are listed in Tables 14 and 15 and are grouped by water source in Tables 16 and Table 17. Here, the Districts are exercising the latitude provided by *Neb. Rev. Stat.* § 46-229.04 (5) to file, with NeDNR, provisional relinquishments and reassignments of district land. These reassignments must occur within five years after an order of cancellation issued by the department following the filing of a voluntary relinquishment of the water appropriation; to assign the right to use that portion of the appropriation to other land within the district or the area served by the company. The department shall be notified of any such assignment within thirty days after such assignment. Such appropriators are bound by all terms and conditions set forth in the appropriation, and in no way does this relinquishment/reassignment allow any increase in the number of acres irrigated by surface water. There were two district transfers within the Lower Platte Basin. Tables 18 and 19 summarize District Transfers DST-10223 and 10124[1], respectively. No other types of transfers were acted upon in 2024.

[1] Pursuant to *Neb. Rev. Stat.* §§ 46-2,127 through 46-2,130 "After obtaining approval of an application for transfer and map pursuant to sections 46-2,122 to 46-2,126, the board of directors of any irrigation district, reclamation district, public power and irrigation district, rural water district, or mutual irrigation or canal company may transfer an appropriation of water distributed for agricultural purposes from a tract or tracts of land within the district or served by the company to another tract or tracts of land within the boundaries of the district or served by the company…" The Department does not issue an order for this action. The appropriator is responsible for following statutory requirements related to this type of transfer.

Table 14. Twin Loups Irrigation District 2024 filings

Provisional Relinquishments and Reassignments Filed by Twin Loups Irrigation District							
Permit Number	Source	Provisional Relinquishment ID	Acres Provisionally Relinquished	Grant Provisionally Relinquished (cfs)	Reassignment ID	Acres Reassigned	Grant Reassigned
A-9642	Calamus River	PREL -10210	50.1	0.72	Not yet reassigned; must occur within 5 years		
A-15088	Loup River, North	PREL-10211	50.1	0.72			
A-17105	Davis Creek Reservoir	PREL-10212	9.6	0			
A-17602	Calamus Reservoir	PREL-10213	9.6	0			
A-18290	Calamus Reservoir	PREL-10214	40.5	0			
A-18291	Davis Creek Reservoir	PREL-10215	40.5	0			

Table 15. Farwell Irrigation District 2024 filings

Provisional Relinquishments and Reassignments Filed by Farwell Irrigation District							
Permit Number	Source	Provisional Relinquishment	Acres Provisionally Relinquished	Grant Provisionally Relinquished (af)	Reassignment ID	Acres Reassigned	Grant Reassigned
A-19477	Sherman Reservoir	PREL -10126	2.8	2.8	REA - 10127	2.8	2.8

Table 16. Farwell Irrigation District's 2024 filings grouped by water source

Farwell Irrigation District, Provisional Relinquishments and Reassignments Filings by water source				
Water Source	Acres Provisionally Relinquished	Grant Provisionally Relinquished (cfs)	Acres Reassigned	Grant Reassigned
Loup River, North	50.1	0.72	Not yet reassigned; must occur within 5 years	
Calamus River	50.1	0.72		
Calamus Reservoir	50.1	0		
Davis Creek Reservoir	50.1	0		

Table 17. Twin Loups Irrigation District's 2024 filings grouped by water source

Twin Loups Irrigation District Provisional Relinquishments and Reassignments Filings by water source				
Water Source	Acres Provisionally Relinquished	Grant Provisionally Relinquished (af)	Acres Reassigned	Grant Reassigned
Sherman Reservoir	2.8	2.8	2.8	2.8

Table 18. District Transfer Approved by Middle Loup Public Power & Irrigation District

District Transfer DST-10223: Approved on March 25, 2024 by Middle Loup Public Power & Irrigation District				
Associated Permit Numbers	Use	Source	Total Number of Acres Transferred Out	Total Number of Acres Transferred In
A-2293A	IR	Loup River, Middle	124	124
A-2678A	IR	Loup River, Middle		
A-3979A	IR	Loup River, Middle		
A-3979A	IR	Loup River, Middle		
A-3981A	IR	Loup River, Middle		
A-3981A	IR	Loup River, Middle		
A-6623	IR	Loup River, Middle		
A-12842	IR	Loup River, Middle		

Table 19. District Transfer Approved by the Farwell Irrigation District

District Transfer DST-10124: Approved on May 8, 2024 by the Farwell Irrigation District				
Associated Permit Numbers	Use	Source	Total Number of Acres Transferred Out	Total Number of Acres Transferred In
A-4423	IR	Middle Loup River	147.2	147.2
A-4423A	IR	Middle Loup River		
A-5710	IR	Middle Loup River		
A-10470	IR	Middle Loup River		
A-15660	IR	Turkey Creek		
A-16399	IR	Middle Loup River		
A-16806	IR	Middle Loup River		
A-17306	IR	Middle Loup River		
A-18310	IR	Middle Loup River		
A-10260A	IR	Sherman Reservoir		
A-16400	IR	Sherman Reservoir		
A-16814	IR	Sherman Reservoir		
A-17307	IR	Sherman Reservoir		
A-18311	IR	Sherman Reservoir		

B. Groundwater Permitting Activity

The following is a listing of all the types of groundwater permits authorized by statute to be issued by NeDNR. In 2024, no groundwater permits were issued.

- Application to Drill Without Regard to Spacing —No cancellations or new permits issued.
- Industrial Groundwater Transfers —No cancellations or new permits issued.
- Industrial Transfer Notice —No cancellations or new permits issued.
- Municipal Groundwater Transfers —No cancellations or new permits issued.
- Municipal Notice of Intent —No cancellations or new permits issued.
- Permit to Violate Well Spacing —No cancellations or new permits issued.
- Permit to Transfer to Adjoining State —No cancellations or new permits issued.

Table 20. 2024 Groundwater Permitting Activity for Lower Platte Basin

Groundwater Permitting Activity from January 1, 2024 to December 31, 2024				
NRD	Permit Number	Date	Status	Comments
No new filings				

4. Estimated Stream Depletions for New Surface Water Permits

The Plan provides an overview of the agreed-upon methodology to calculate stream depletions for newly permitted irrigated acres. NeDNR calculated stream depletions for new surface water uses and acres using this methodology. More details on the new permits are provided above in *Chapter 3, Table 8. Surface water applications approved in 2024 within the Lower Platte River Basin*

The net stream depletion estimates by NRD are provided in Table 21. For permits with new acres, the Net Irrigation Requirement (NIR), based on corn, was applied. For the new acres within the Basin, the NIR was calculated using the average Statewide values from 2018. All permits with a use of "ST" are to divert water from a reservoir for irrigation; therefore, depletions to streamflow are considered to occur in the non-peak season.

The permit use codes shown in Table 21 are defined as follows:

- IR (Irrigation) is a permit to divert water from natural flow for irrigation,
- MF (Manufacturing) is a permit to divert water for manufacturing, construction, or industrial uses,
- ST (Storage) is a permit to store water.
- FC (Flood Control) is a permit to store water for the purpose of controlling flood effects.

Table 22 provides a list of Seasonal Permits that hydrologically retime water for Basin accounting purposes.

The permit use codes shown in Table 22 are defined as follows:

- RE (Recharge)

Table 23 shows accretions that occurred in 2024. Accretions may be due to 1) any new permits reported in 2016 or later but since expired or were canceled, or 2) other permits that were granted, and used after, but then cancelled. Table 24 provides a summary of depletions and accretions that were reported between the years 2016 through 2021, during the first increments of the plan. Table 25 provides the summary of the depletions and accretions that have occurred thus far in the second increment of the Plan.

Table 21. Estimated stream depletion by NRD for newly permitted surface water uses and acres.

Estimated Stream Depletion for New Surface Water Permits between January 1, 2024 and December 31, 2024								
NRD	Permit Number	Use	Source	Net Irrigation Requirement (In)	Permitted Acres	Annual Consumptive use in acre feet (af)	Peak Season Depletion (af)	Non-Peak Season Depletion (af)
Lower Elkhorn	A-19945	IR	Elkhorn River	6.74	160	(6.74*160)/12 = 89.87 af	89.87	
	A-19989	IR	Willow Creek	9.14	160	(9.14*160)/12 = 121.87 af	121.87	
	A-19990	IR	Willow Creek	9.14	160	(9.14*160)/12 = 121.87 af	121.87	
	A-20036	IR	Elkhorn River	4.06	106.9	(4.06*106.9)/12 = 36.17 af	36.17	
	A-20046	IR	Willow Creek	9.12	57.1	(9.12*57.1)/12 = 43.4 af	43.39	
Lower Loup	A-19193	IR	Loup River, South	8.18	69.4	(8.18*69.4)/12 = 47.31 af	47.31	
	A-19876	IR	Calamus Reservoir	7.75	53.1	(7.75*53.1)/12 = 34.29 af	34.29	
	A-19877	IR	Davis Creek Reservoir	7.75	53.1	(7.75*53.1)/12 = 34.29 af	34.29	
	A-20010	IR	Spring Creek	7.59	19.7	(7.59*19.7)/12 = 12.46 af	12.46	
	A-19982	IR	Loup River, Middle	9.70	22.3	(9.7*22.3)/12 = 18.02 af	18.02	
	A-20018	IR	Sherman Reservoir	7.72	83.3	(7.72*83.3)/12 = 53.59 af	53.59	
Lower Platte North	A-19949	ST	Wahoo Creek, North Fork, Trib. to	5.98	0	65.2		65.2
	A-19973	IR	Wahoo Creek	6.78	59.1	(6.78*59.1)/12 = 33.39 af	33.39	

Estimated Stream Depletion for New Surface Water Permits between January 1, 2024 and December 31, 2024								
NRD	Permit Number	Use	Source	Net Irrigation Requirement (In)	Permitted Acres	Annual Consumptive use in acre feet (af)	Peak Season Depletion (af)	Non-Peak Season Depletion (af)
	A-19956	FC	Wahoo Creek, North Fork, Trib. to	5.98	0	113.5 af		113.5
	A-19957	FC	Wahoo Creek, North Fork, Trib. to	5.98	0	169.5 af		169.5
Lower Platte South	A-19960	ST	Holmes Creek, Trib to	6.40	0	73 af		73
	A-20011	ST	Middle Creek, Trib to	6.97	0	67.87 af		67.87
	A-20035	IR	Middle Creek	6.78	90	(6.78*90)/12 = 50.85 af	50.85	
Papio-Missouri River	A-19963	IR	Bell Creek	4.95	155.3	(4.95*155.3)/12 = 64.06 af	64.06	
	A-19991	IR	Bell Creek	5.60	115.7	(5.6*115.7)/12 = 53.99 af	53.99	
	A-19992	IR	Bell Creek	5.12	55.8	(5.12*55.8)/12 = 23.8 af	23.80	
	A-20047	IR	Elkhorn River	4.73	386.9	(4.73*386.9)/12 = 152.50 af	152.50	

Table 22. Seasonal Permits providing hydrologic retiming within the Basin

Seasonal Permits that Provide Hydrologic Retiming[1] from January 1, 2024 to December 31, 2024								
NRD	Permit Number	Use	Source	Net Irrigation Requirement (In)	Permitted Acres	Annual Consumptive use in acre feet (af)	Peak Season Depletion (af)	Non-Peak Season Depletion (af)
Lower Loup	A-20037	RE	Loup River, North	N/A	0	100 CFS Grant	0.00	0.00
	A-20038	RE	Loup River, North	N/A	0	100 CFS Grant	0.00	0.00
	A-20039	RE	Loup River, North	N/A	0	100 CFS Grant	0.00	0.00

[1] Though these temporary permits were issued in 2024 to the North Loup Public Power and Irrigation District, conditions were not met for the permit holder to exercise these rights. Therefore, no water was retimed under these permits in the basin.

Table 23. Estimated accretions for previously taken depletions that no longer occur

Estimated Stream Accretions (Corrections) for Previously Taken Depletions that No Longer Occur									
NRD	**Permit Number**	**Use**	**Source**	**Acres**	**WR Approval Year**	**Estimated Last Use**	**Original Depletion Peak/Non-Peak (af)**	**Resulting Stream Accretion (af)-Peak**	**Resulting Stream Accretion (af)-Non-Peak**
Lower Elkhorn	A-13807	IR	Willow Creek	320	1977	2019	243.5	243.5	
Lower Platte North	A-19732	IR	Gruenewald Reservoir	128	2020	2020	66.03		66.03

Table 24. 2016 to 2021 estimated surface water stream depletions and accretions

2016-2021 Estimated Stream Depletions and Accretions for New Surface Water Permits																		
NRD	2016-2017		2018		2019				2020				2021				Net Total Depletions[1]	
	Depletions		Depletions		Depletions		Accretions		Depletions		Accretions		Depletions		Accretions			
	Peak	Non-Peak[2]	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak
Lower Elkhorn	117	NA	97	0	70	60	0	0	0	0	103.6	0	94.65	0	0	0	**275**	**60**
Lower Loup	0	NA	228	0	130	638	0	0	46	339	0	0	45.91	13.63	10.0	0	**440**	**991**
Lower Platte North	0	NA	0	0	0	0	0	0	0	61	0	0	7.48	0	0	0	**7**	**61**
Lower Platte South	65	NA	10	0	0	0	10	0	2	18	0	0	14.90	10.00	2.0	0	**80**	**28**
Papio-Missouri River	67	NA	0.3	0	10	0	0	0	0	0	10.3	0	0	0	0	0	**67**	**0**
Upper Elkhorn	0	NA	0	0	0	0	0	0	85	0	0	0	0.39	0	0	0	**85**	**0**
Upper Loup	118	NA	345.32	89.41	0	0	65	0	9	0	38	89	0	0	0	0	**369**	**0**
Basin Total	**367**	**NA**	**681**	**89**	**210**	**698**	**75**	**0**	**142**	**418**	**152**	**89**	**163**	**24**	**12**	**0**	**1324**	**1140**

[1] Net total depletions by NRD and by Basin have been rounded to the nearest whole number, after calculations.
[2] Non-Peak season depletions were not calculated for the 2016-2017 report for any of the new surface water uses in any NRD and have not been evaluated at this point in time.

Table 25. 2022 to 2024 estimated surface water stream depletions and accretions

2022 - 2024 Estimated Stream Depletions and Accretions Summary														
NRD	2022				2023				2024				Net Total Depletions[1]	
	Depletions		Accretions		Depletions		Accretions		Depletions		Accretions			
	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak
Lower Elkhorn	0.0	0.0	10.0	0.0	0.0	0.0	38.0	0.0	413.2	0.0	243.5	0.0	**122**	**0**
Lower Loup	146.0	17.4	83.9	9.5	46.1	0.0	19.2	0.0	200.0	0.0	0.0	0.0	**289**	**8**
Lower Platte North	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	33.4	348.2	0.0	66.03	**47**	**282**
Lower Platte South	39.2	10.0	20.0	10.0	0.0	0.0	0.0	50.0	50.9	140.9	0.0	0.0	**70**	**91**
Papio-Missouri River	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	294.4	0.0	0.0	0.0	**294**	**18**
Upper Elkhorn	0.0	0.0	0.0	0.0	0.0	30.9	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**31**
Upper Loup	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0**	**0**
Basin Total	**185**	**45**	**114**	**20**	**60**	**31**	**57**	**50**	**991**	**489**	**244**	**66**	**823**	**430**

[1] Net total depletions by NRD and by Basin have been rounded to the nearest whole number, after calculations.

5. Basin Plan Implementation: Research, Projects, and Studies

A. Data-Sharing Improvements

One of the most important aspects of Basin management is annual reporting and data sharing between Basin NRDs and NeDNR. NeDNR is engaged in an effort to collect statewide permitted acres annually. Currently the process requires individual contact with, and collection from, the 23 NRDs statewide. NeDNR is in the planning stages of building a geographical information system (GIS) dashboard where NRDs could upload the spatial representations of their permitted acres. NeDNR is also exploring the automation and combination of several data exchange processes between itself and the NRDs.

B. Groundwater modeling and studies

Lower Platte Missouri Tributaries (LPMT) Model and Studies[1]

Regional LPMT Model Update

In 2022, NeDNR began work to extend the Lower Platte Missouri Tributaries (LPMT) regional groundwater model through 2021. The LPMT was published in 2018 and covers the northern and central portions of eastern Nebraska and extends from 1960 to 2013. For this extension, weather data inputs from 2010-2021 were sourced from PRISM spatially gridded climate data rather than from individual weather stations. This change in input source reduced data gaps, both temporally and spatially, and reduced the impacts of weather stations being decommissioned. In 2023, NeDNR commissioned an update to the groundwater model from MODFLOW-2005 to the United States Geological Survey's current core MODFLOW version – MODFLOW 6. MODFLOW 6 has an improved solver and is designed to simplify coupling with sub-regional or local models. In 2024, review of the MODFLOW 6 model version identified several issues in its streamflow routing package (SFR). These issues were traced back to the original MODFLOW-2005 model version. NeDNR commissioned corrections to the streamflow routing of the MODFLOW-2005 model and conversion of the corrected model to MODFLOW 6. NeDNR reviewed the updated MODFLOW 6 model version to confirm its appropriateness for regional objectives.

[1] Goal 1, Objective 1.4, Action Item A: Utilize best available data and tools to develop refined extents of the hydrologically connected ground and surface waters in the Lower Platte River Basin.

Sub-regional Models

As part of the future development and update to the LPMT model, the NRDs are working with NeDNR to develop sub-regional models which could be coupled with the LPMT to produce refined regional and subregional analyses. The sub-regional models will use the LPMT as a reference but with a greater spatial resolution. Extensive Airborne Electromagnetic (AEM) survey transect data previously collected by the NRDs and Eastern Nebraska Water Resources Assessment (ENWRA) are used for the sub-regional model refinements. AEM transect data are interpreted along and interpolated between the survey transects to produce spatially continuous subsurface hydrostratigraphic data within a defined study area (i.e., a 3D hydrostratigraphic model). This hydrostratigraphic model informs the hydrologic properties and dispersal, i.e., thickness and lateral extent of layers in the sub-regional groundwater models. In 2022, LENRD and NeDNR jointly published a sub-regional model covering the LENRD region (Lower Elkhorn Model- LEM).

In 2023, Lower Platte North, Lower Platte South, and Papio-Missouri River NRDs and NeDNR received partial funding from the Water Sustainability Fund for their project, focused on building a sub-regional child model (3-District model) and coupling it with the regional LPMT model. This project was initiated in Fall 2023. Development of the framework for the child model and coupling with the LPMT model was completed in late 2024. Calibration of the resultant coupled model will continue in early 2025, with anticipated completion of the model around mid-2025.

Lower Platte Missouri Tributaries Headwaters Inventory Program

In March of 2023, the NeDNR initiated verification of the headwaters of streams for use in the Lower Platte Missouri Tributaries model (Study Area). The focus of this effort is to confirm the furthest upstream extent of baseflow (groundwater input) in a stream reach, known as headwaters. Headwaters are the point-source of a stream or river. Over time, due to climate variability, water use, and other actions, the amount of baseflow within a stream reach may change or reduce to zero. Complete reduction in baseflow would result in disconnection of a stream reach from its groundwater source and subsequent migration of its headwaters. Accurate accounting of headwaters is necessary to identify the extent of “wet” stream reaches in the LPMT model. Since streams can only be depleted if they have a connection to groundwater, accurate accounting of stream headwaters is fundamental to model calibration efforts and accurate development of stream depletion maps. Field methods used by HIP include on-site verification, landowner communication, remote stage sensors, and temporal tracking. In 2024, several remote stage sensors were installed along streams in the Study Area to determine viability of remote stream gaging. However, widespread connectivity issues between the sensors and their communication gateways were encountered. These issues were investigated and troubleshot in 2024 and decisions regarding continued use of the sensors are ongoing in 2025.

C. Drought Planning

NeDNR continues to assist in drought planning efforts throughout the state. In 2022, the Coalition decided to assemble a review of the existing drought actions in the Lower Platte River Basin. NeDNR received and incorporated feedback from the NRDs on the drought review. NeDNR is prepared to support any further drought planning efforts undertaken by the Coalition.

Lower Platte River Consortium[1]

In 2016, Lower Platte South NRD, Lower Platte North NRD, Papio-Missouri River NRD, Omaha Metropolitan Utilities District, Lincoln Water System, and NeDNR entered an Interlocal Cooperative Agreement (ILCA) to form the Lower Platte River Consortium (Consortium). In 2019, the Consortium finalized the Lower Platte River Drought Contingency Plan (LPRDCP). The LPRDCP establishes a framework for coordination and communication amongst Consortium members to address drought across the Lower Platte River Basin. Information regarding the Lower Platte River Drought Contingency Plan is available here: Lower Platte River Drought Contingency Plan -- Lower Platte River Basin.

In 2024, the members of the Consortium updated and revised the Drought Contingency Plan. The updated Plan includes several new and prioritized drought mitigation activities and emphasizes public education and outreach. The Consortium adopted the updates in November 2024, and is beginning preparations to implement the new and prioritized efforts described in the Plan. NeDNR continues to update the Lower Platte Drought Monitoring Dashboard, adding new features as specified in the updated Plan. Improvements to performance, data sources, and data representation are currently in progress. The dashboard can be accessed at: Lower Platte Drought Monitoring Dashboard.

[1] Goal 1, Objective 1.5-Evaluate variations in water inventory due to climate cycles, and Goal 2, Objective 1-Collaborate with state and local governments to identify opportunities to augment water supplies within the Lower Platte River Basin.