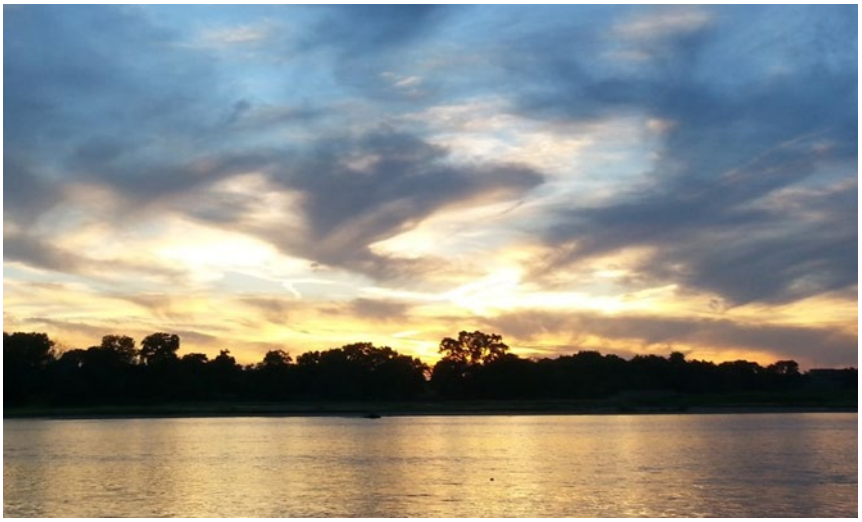
ANNUAL INTEGRATED MANAGEMENT PLAN REPORT

2024



JOINTLY PREPARED BY THE LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT AND THE NEBRASKA DEPARTMENT OF NATURAL RESOURCES

Submitted at the Lower Platte South Board Meeting/IMP Annual Review
August 20, 2025

LOWER PLATTE SOUTH
natural resources district

NEBRASKA
Good Life. Great Water.
DEPT. OF NATURAL RESOURCES

TABLE OF CONTENTS

TABLE OF CONTENTS 2

LIST OF FIGURES 3

LIST OF TABLES 3

INTRODUCTION 4

MONITORING AND DATA COLLECTION 4

Surface Water Monitoring 5
- Streamgaging 5
- Surface Water Permitting Actions 9
- Voluntary Surface Water Use Reporting 12
- Surface Water Pump-Site Visits 13

Groundwater Monitoring 13
- IMP Groundwater Management Area 13
- Metering and Groundwater Level Monitoring 15
- Groundwater Permitting Activities 17
- Land Use and Land Cover (LULC) Monitoring and Actions 18

2024 IMP REGULATORY ACTIONS 21

LPSNRD Groundwater Acres Limitations 21

NeDNR Surface Water Acres Limitations 21

Future limits on water use 21

STUDIES AND PLANNING 22

Lower Platte Missouri Tributaries Model Development 22

Lower Platte Missouri Tributaries 3 District Model 22

USGS Trend Analysis on Continuous Water Quality 25

WATER INVENTORY AND WATER USE/SUPPLY MANAGEMENT 25

LPSNRD Accomplishments 25

NeDNR's INSIGHT Web Portal 25

EDUCATION/OUTREACH **26**

NeDNR Activities **26**
Events 26

LPSNRD Activities **26**

COLLABORATION WITH OTHER ENTITIES **27**

Eastern Nebraska Water Resources Assessment **27**

Lower Platte River Basin Coalition **27**

Lower Platte River Consortium **27**

Lower Platte River Corridor Alliance **27**

Other Collaborations **28**

JOINTLY IDENTIFIED ACTIONS FOR SUCCEEDING TWO YEARS **29**

LIST OF FIGURES

FIGURE 1: USGS STREAMGAGES MAP, LPSNRD LOCATIONS 6
FIGURE 2: HISTORICAL ANNUAL DISCHARGE FOR SALT CREEK AT ROCA, NE (USGS-NWIS) 7
FIGURE 3: HISTORICAL ANNUAL DISCHARGE FOR SALT CREEK NEAR 27TH STREET, LINCOLN, NE (USGS-NWIS) 7
FIGURE 4: HISTORICAL ANNUAL DISCHARGE FOR THE PLATTE RIVER AT ASHLAND, NE (USGS-NWIS) 8

FIGURE 5: HISTORICAL ANNUAL DISCHARGE FOR THE PLATTE RIVER AT LOUISVILLE, NE (USGS-NWIS) 8
FIGURE 6: NEDNR SURFACE WATER PERMITTING ACTIONS OCCURING IN 2022 WITHIN LPSNRD 9
FIGURE 7: LPSNRD 2022 GROUNDWATER USE IN THE HYDROLOGICALLY CONNECTED AREA (HCA) 12
FIGURE 8: LPSNRD 2022 REGISTERED DOMESTIC AND PUBLIC SUPPLY WELLS (HCA) 13
FIGURE 9: 2022 GROUNDWATER LEVEL MEASUREMENT CAOMPARISON, SPRING 2021 AND SPRING 2022 14
FIGURE 10: LPSNRD 2022 GROUNDWATER WELL PERMITS APPROVED OR COMPLETED 16
FIGURE 11: 2022 HCA CERTIFIED GROUNDWATER IRRIGATED ACRES, LPSNRD 17
FIGURE 12: 2022 LPSNRD CERTIFIED GROUNDWATER IRRIGATED ACRES 18
FIGURE 13: LOWER PLATTE AND MISSOURI TRIBUTARIES MODELS' GEOGRAPHIC LOCATION 21

LIST OF TABLES

TABLE 1: USGS STREAMGAGES, LPSNRD LOCATIONS 5
TABLE 2: 2022 IRRIGATED ACRE CHANGES ASSOCIATED WITH SURFACE WATER PERMITTING ACTION 10
TABLE 3: 2022 CANCELLED SURFACE WATER PERMITS 10
TABLE 4: NEDNR 2022 APPROVED SURFACE WATER APPLICATIONS IN LPSNRD IMP AREA. 11
TABLE 5: GROUNDWATER RESERVOIR AVERAGE WELL LEVEL CHANGE, SPRING 2021 TO SPRING 2022 14
TABLE 6: LPSNRD 2022 APPROVED OR COMPLETED GROUNDWATER WELLS 15

2024 ANNUAL REPORT FOR LOWER PLATTE SOUTH

NATURAL RESOURCES DISTRICT and NEBRASKA DEPARTMENT OF NATURAL RESOURCES INTEGRATED MANAGEMENT PLAN

Jointly prepared by the Lower Platte South NRD and the Nebraska Department of Natural Resources
Submitted on August 20, 2025

Introduction

The Lower Platte South Natural Resources District (LPSNRD) and the Nebraska Department of Natural Resources (NeDNR) jointly adopted a voluntary Integrated Management Plan (IMP), which became effective on May 15, 2014. The over-arching purpose of the IMP is to jointly manage groundwater and surface waters within the LPSNRD in order to sustain a balance between water uses and supplies for the near and long term. An in-depth public involvement plan, which included focus groups, a 13-month stakeholder process, a virtual town hall, and outside agency outreach, was an integral part in developing goals and objectives for the IMP.

The 2024 Annual Report covers the progress made towards IMP implementation for both the LPSNRD and NeDNR in 2024. It is consistent with Chapter 9 of the IMP, that outlines the procedures for review and potential modification of the IMP. LPSNRD and NeDNR report on data collected, report on new groundwater or surface water permits and uses, and review progress made toward achieving the goals and objectives of the IMP.

As a part of the process, the LPSNRD and NeDNR staff met to discuss progress made in 2024 towards the goals and objectives of the plan, action steps for the next two years (see the "Jointly Identified Actions" section), and whether modifications to the IMP were needed. The LPSNRD and NeDNR have initiated the process for modifications to achieve consistency between the IMP and the Lower Platte Basin Water Management Plan, which was finalized in October 2017.

The LPSNRD and NeDNR worked collaboratively to write this report. Highlights from the report were presented to the LPSNRD Board and the public on August 20, 2025, at LPSNRD's regularly scheduled Board meeting. Notice of the Board meeting was published in the *Lincoln Journal Star* on August 7, 2025, and a public announcement of the IMP review was posted on both the LPSNRD and NeDNR websites at least one week prior to the Board meeting.

Because the LPSNRD regulates groundwater and the NeDNR regulates surface water, some sections were individually written. Wherever possible, sections were written jointly to reflect our partnership for integrated groundwater and surface water management. The 2024 annual report provides transparency to the public and ourselves about the progress made by LPSNRD and NeDNR in implementing the IMP as a means to protect interconnected groundwater and surface water resources for the near and long term.

Monitoring and Data Collection

Surface Water Monitoring

Streamgaging

The U.S. Geological Survey (USGS) owns and operates 21 streamgages in LPSNRD (Table 1: USGS Streamgages, LPSNRD locations. All but one (Weeping Water Creek at Union, NE) are located in the IMP surface water management area (Figure 1: USGS Streamgages map). Streamflow data on these gages is available on the USGS's National Water Information System (NWIS) at http://waterdata.usgs.gov/. NeDNR regularly assesses the need for modifications to the network in the IMP area.

Table 1: USGS Streamgages, LPSNRD locations.

Gage Name	Gage Number	Begin Date	LPSNRD funding assistance
Salt Creek at Roca, Nebr.	06803000	5/14/1951	yes
Salt Creek at Pioneers Boulevard at Lincoln, Nebr.	06803080	6/20/1994	yes
Haines Branch at SW 56th St at Lincoln, Nebr.	06803093	6/20/1994	yes
Middle Creek at SW 63rd St at Lincoln, Nebr.	06803170	6/20/1994	yes
Oak Creek at Air Park Road at Lincoln, Nebr.	06803486	5/21/1987	yes
Salt Creek at Fairgrounds at Lincoln, Nebr.	06803495	6/20/1994	no
Salt Creek at 27th ST, Lincoln, Nebr.	06803500	5/11/1942	yes
Little Salt Creek near Lincoln, Nebr.	06803510	5/11/1942	yes
Salt Creek at 70th Street at Lincoln, Nebr.	06803513	5/31/1994	yes
Stevens Creek near Lincoln, Nebr.	06803520	10/14/1968	yes
Rock Creek near Ceresco, Nebr.	06803530	4/1/1970	yes
Salt Creek at Greenwood, Nebr.	06803555	1/16/1952	no
Wahoo Creek at Ashland, Nebr.	06804700	2/22/1990	yes
Weeping Water Creek at Union, Nebr.	06806500	1/11/1950	yes
Antelope Creek at 27th St at Lincoln, Nebr.	06803300	3/14/2012	yes
Deadman's Run at 38th Street at Lincoln, Nebr.	06803502	08/27/2014	no
Salt Creek near Ashland, Nebr.	06805000	10/01/2007	yes
North Oak Creek at Valparaiso, Nebr.	06803430	8/12/2016	yes
North Oak Creek near Touhy, Nebr.	06803420	8/12/2016	yes
Platte River near Ashland, Nebr.	06801000	8/20/1928	no
Platte River at Louisville, Nebr.	06805500	6/22/1952	yes

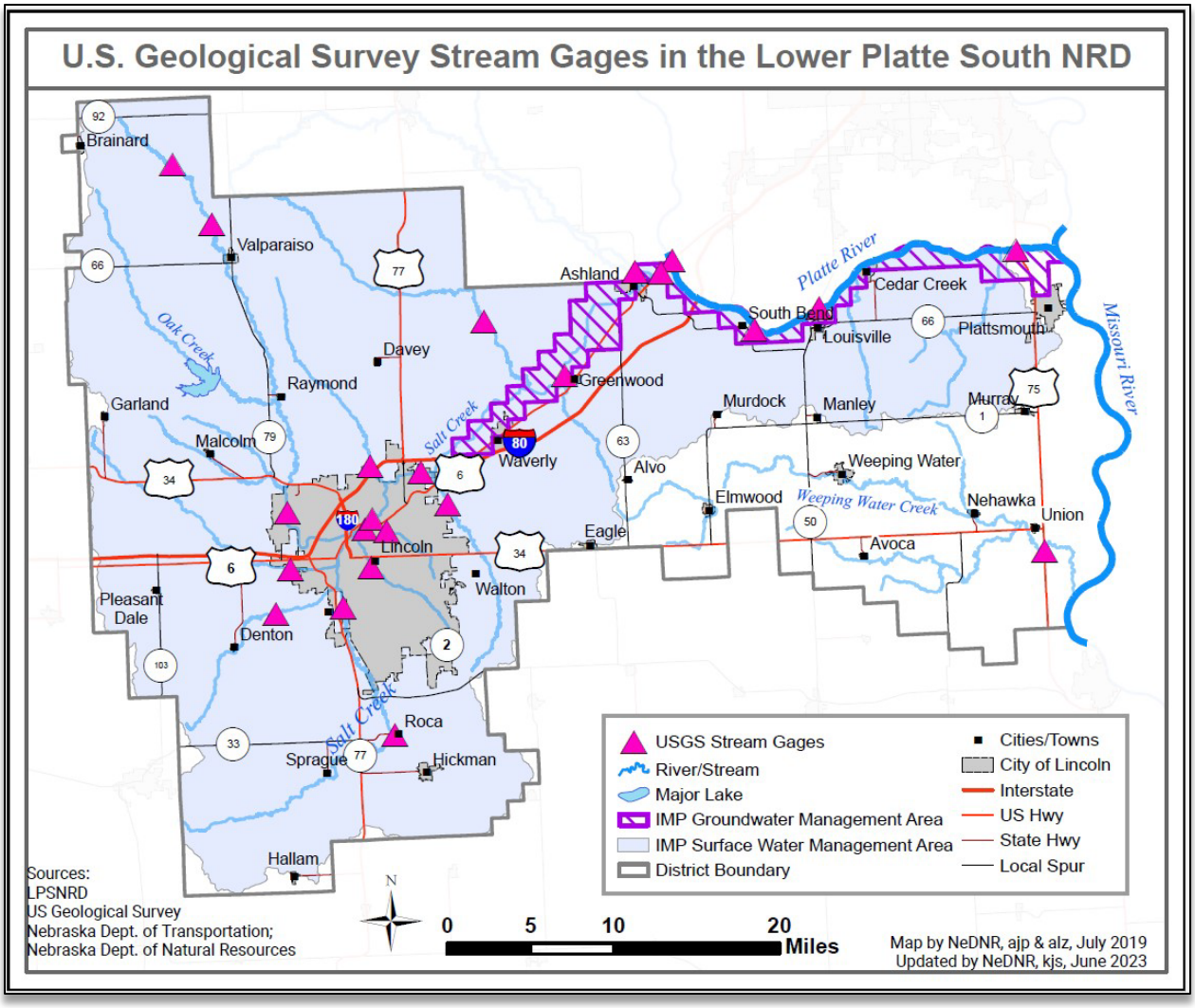


Figure 1: USGS Streamgages map, LPSNRD locations.

Streamgage data for select gages is included below. One gage is located on Salt Creek near Roca, one is on Salt Creek near 27th St. in Lincoln, and one is on the Platte River (Platte River at Louisville). These locations have long periods of record (near or over 50 years) and provide general insight into water supply trends over time.

The mean annual daily discharge over the period of record for the select streamgages is shown in Figures 2, 3, 4, and 5.

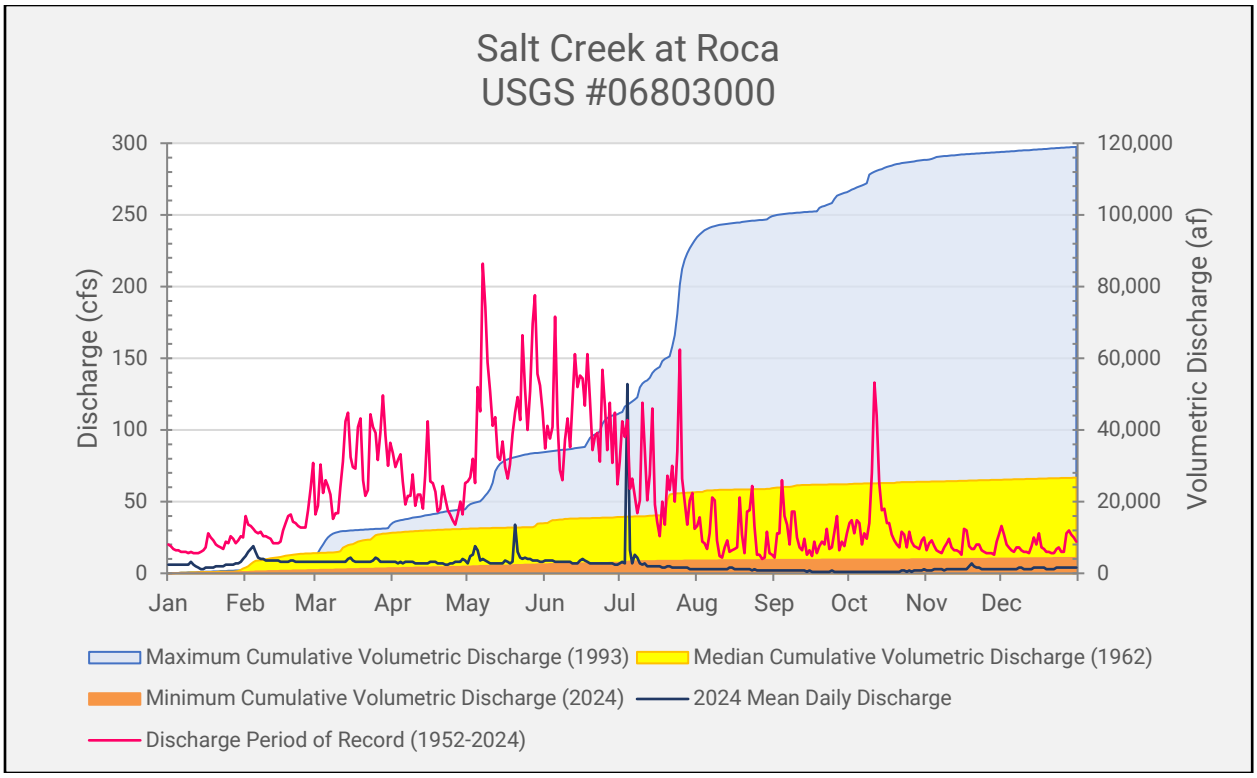


Figure 2: Streamgage measurements for 2024 for Salt Creek at Roca, NE (USGS-NWIS).
Note: Minimum Cumulative Volumetric Discharge (2024) and 2024 Cumulative Volumetric Discharge are identical, so 2024 Cumulative Volumetric Discharge is hidden.

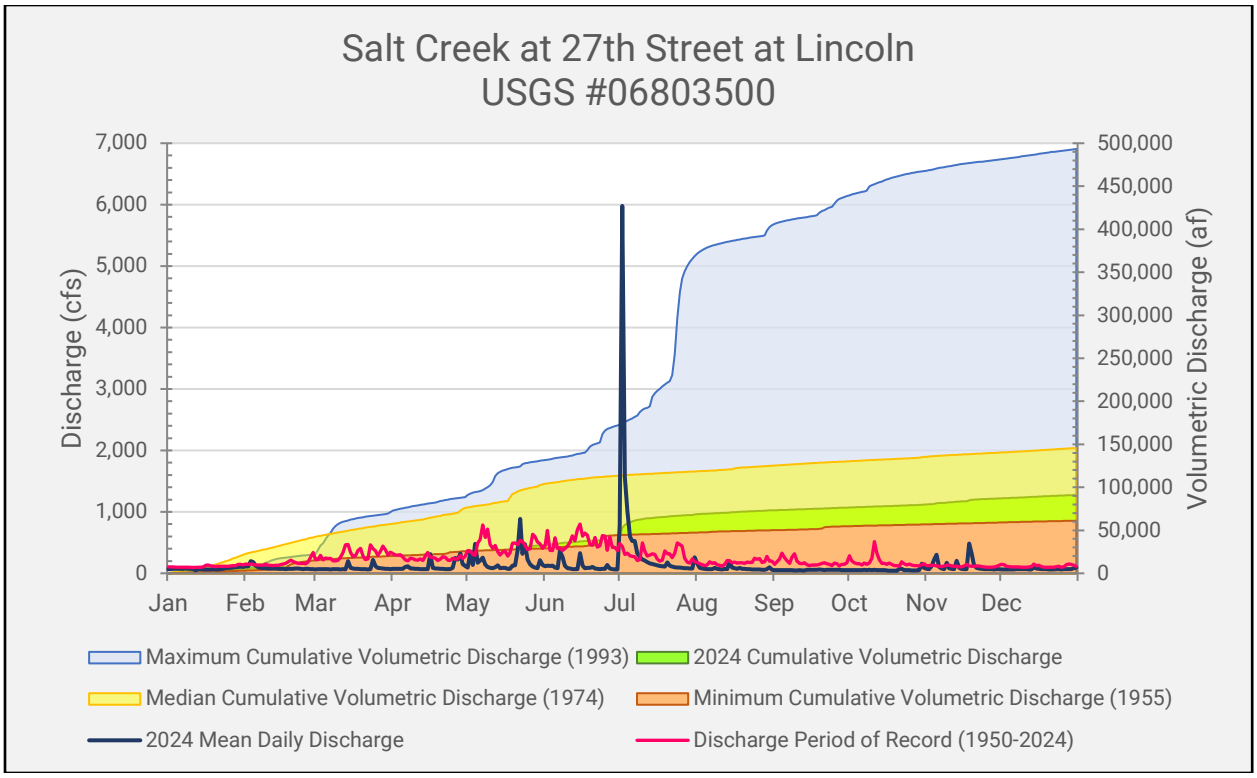


Figure 3: Streamgage measurements for 2024 for Salt Creek near 27th St, Lincoln, NE (USGS-NWIS).

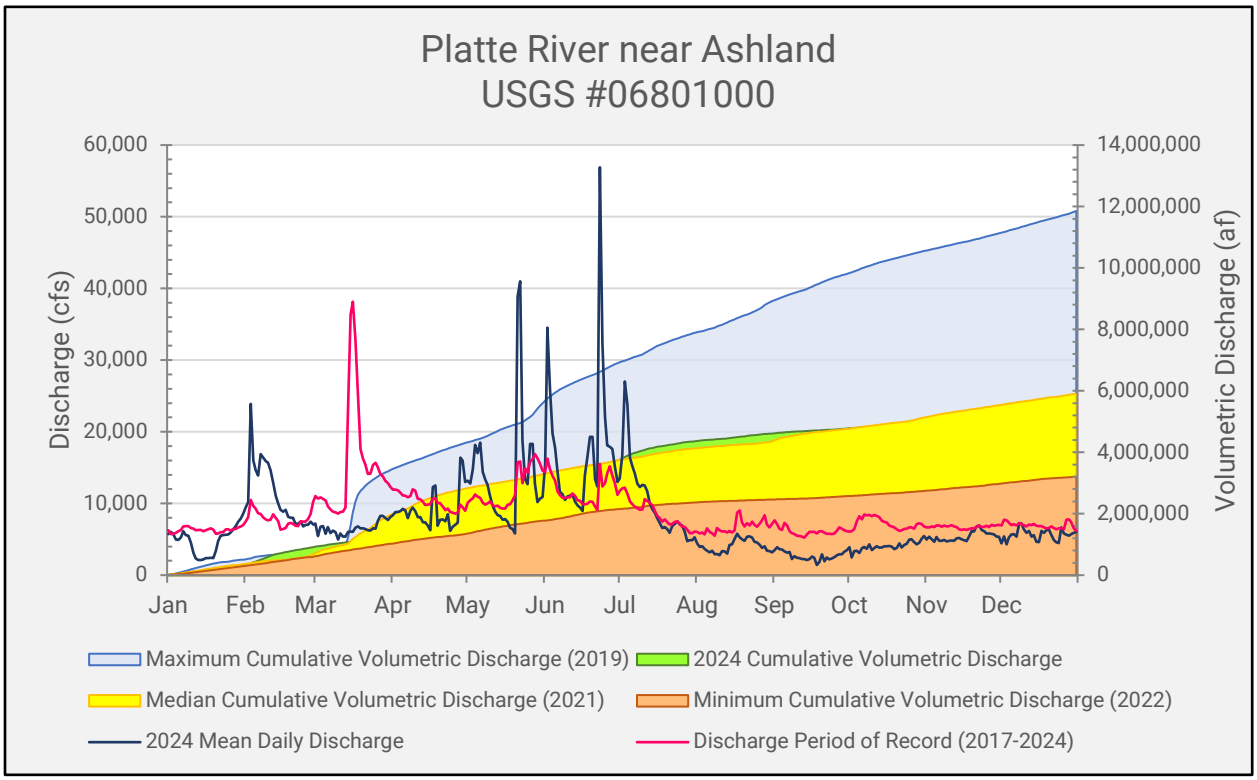


Figure 4: Streamgage measurements for 2024 for the Platte River at Ashland, NE (USGS-NWIS).

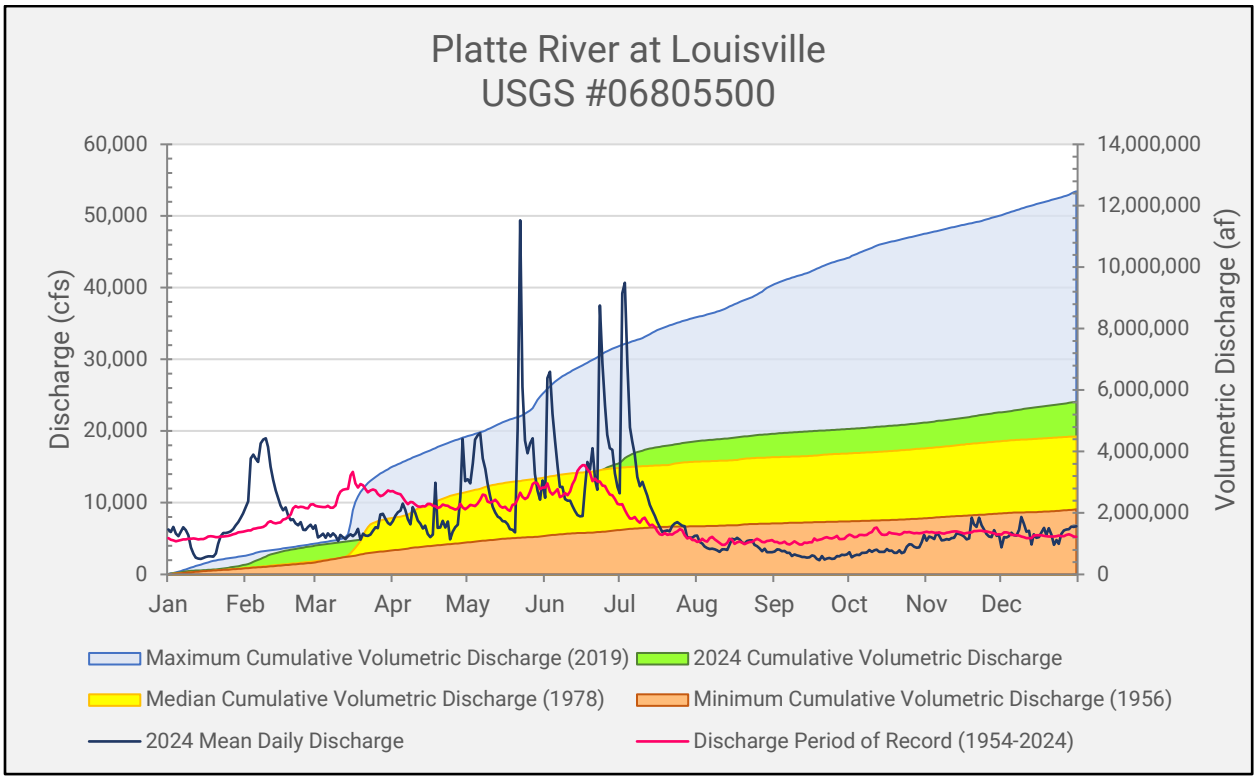


Figure 5: Streamgage measurements for 2024 for the Platte River at Louisville, NE (USGS-NWIS).

Surface Water Permitting Actions

NeDNR continued to monitor and administer surface water appropriations and maintain records for new, cancelled, or transferred surface water permits. Figure 6 shows the general location of the irrigation permits cancelled in full during 2024. Table 2 provides a summary of the 2024 irrigated acres change from all surface water permitting actions.

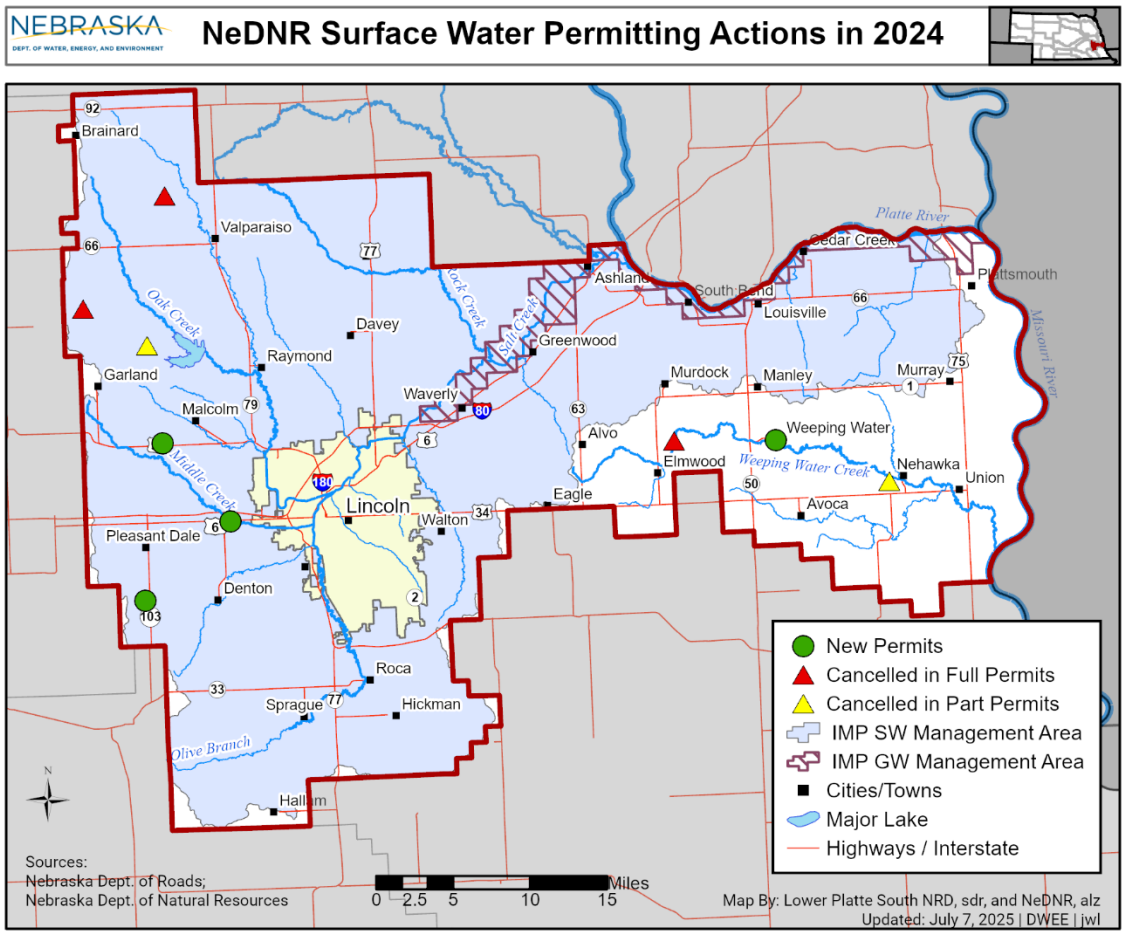


Figure 6: NeDNR surface water permitting actions occurring in 2024 within LPSNRD.

Surface water controls only apply to the area of the District within the Surface Water IMP area shown on Figure 6. Three irrigation permits were cancelled in the IMP area, and two were cancelled outside the area. There were three new surface water permits that were approved within the Basin during 2024. Two were for storage and one was for irrigation. One additional storage permit was approved outside the IMP area.

Table 2: 2024 Irrigated acres changes associated with surface water permitting actions.

2024 Irrigated Acres Changes Associated with Surface Water Permitting Actions		
Geographic Area	**Newly Permitted Acres**	**Cancelled Acres**
Lower Platte River Basin	90	260.8
Missouri River Tributaries Basin	0	31.2
Total (Whole NRD)	90	292

Table 3: 2024 Cancelled surface water permits.

Surface Water Appropriations Expired, Cancelled-in-Part or Cancelled-in-Full in 2024 Within the IMP Area											
Appropriation Number	**Cancel Date**	**Source**	**NeDNR Action**	**Location of Diversion or Reservoir**	**Use**	**Begin Acres**	**Cancelled**			**Estimated Date of Last Use**	**Basis for NeDNR Action**
							Acres	**Grant in cfs**	**Grant in af**		
A-11211	3/18/2024	Oak Creek, Middle	Cancelled in Full	Pump	IR	57	57	0.81	171	Pre-2016	REL-10180
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
A-11495	4/23/2024	Oak Creek, Middle	Cancelled in Part	Pump	IR	26	176.5	0.37	78	2017	REL-10218

Table 4 summarizes new surface water applications that were approved within the Lower Platte South NRD in calendar year 2024. No surface water rights were transferred in 2024.

Table 4: NeDNR 2024 Approved surface water applications in LPSNRD IMP area

Surface Water Appropriations Approved in 2024 Within the IMP area								
Appropriation Number	**Date Approved**	**Source**	**Location of Diversion or Reservoir**	**Sub-Basin**	**Use**	**Grant in cfs**	**Grant in af**	**Acres**
Lower Platte South	A-19960	1/17/2024	Holmes Creek, Trib to	Reed Reservoir	ST	0	73	0
Lower Platte South	A-20011	10/2/2024	Middle Creek, Trib to	Piening Water Quality Basin	ST	0	67.87	0
Lower Platte South	A-20035	10/18/2024	Middle Creek	Pump	IR	1.29	270	90

Voluntary Surface Water Use Reporting

NeDNR invites surface water irrigation permit holders within LPSNRD to participate in the voluntary reporting program. Participants could submit information via an online form or by directly calling NeDNR. Fifty-nine reports from a possible 200 water rights were received in 2024 for a response rate of about 30%. The data collected through the voluntary water use reporting program includes information about whether a surface water permit holder irrigated that year, if they used groundwater or surface water, how many acres they irrigated, what types of crops were grown, and reasons for not irrigating (if applicable).

Surface Water Pump-Site Visits

The NeDNR Field Office staff has been conducting surface water pump-site inspections across Nebraska for the past seven years. Pump-site inspections complement the voluntary water use reporting program and provide further information about surface water use. The field office staff's goal is to inspect each pump-site at least once every two years as time and conditions allow. In 2024, NeDNR Field Office staff inspected 171 of a possible 200 irrigation permit pump-sites (85%). 35 sites had been set up for surface water irrigation with a total of 177 observations made[1].

Groundwater Monitoring

IMP Groundwater Management Area

The IMP Groundwater Management Area is limited to the Hydrologically Connected Area (HCA). There are a total of 360 wells in the HCA. Flow measurement meters and water use reports are required for any well used with the capacity to pump 50 gallons per minute or greater. Of these, there are 30 irrigation wells, 5 commercial wells, and 7 other wells which, when combined, account for nearly 665 million gallons of groundwater pumped. Also in the HCA area, there are 253 registered domestic wells, and 70 registered public water supply wells. Municipal water wells in the HCA include wells for Waverly, Ashland, Louisville, Lincoln, Metropolitan Utilities District, Omaha Fish & Wildlife Club, Cass SID #5, and Cass Rural Water District #1.

[1] Includes multiple visits to same site for water administration

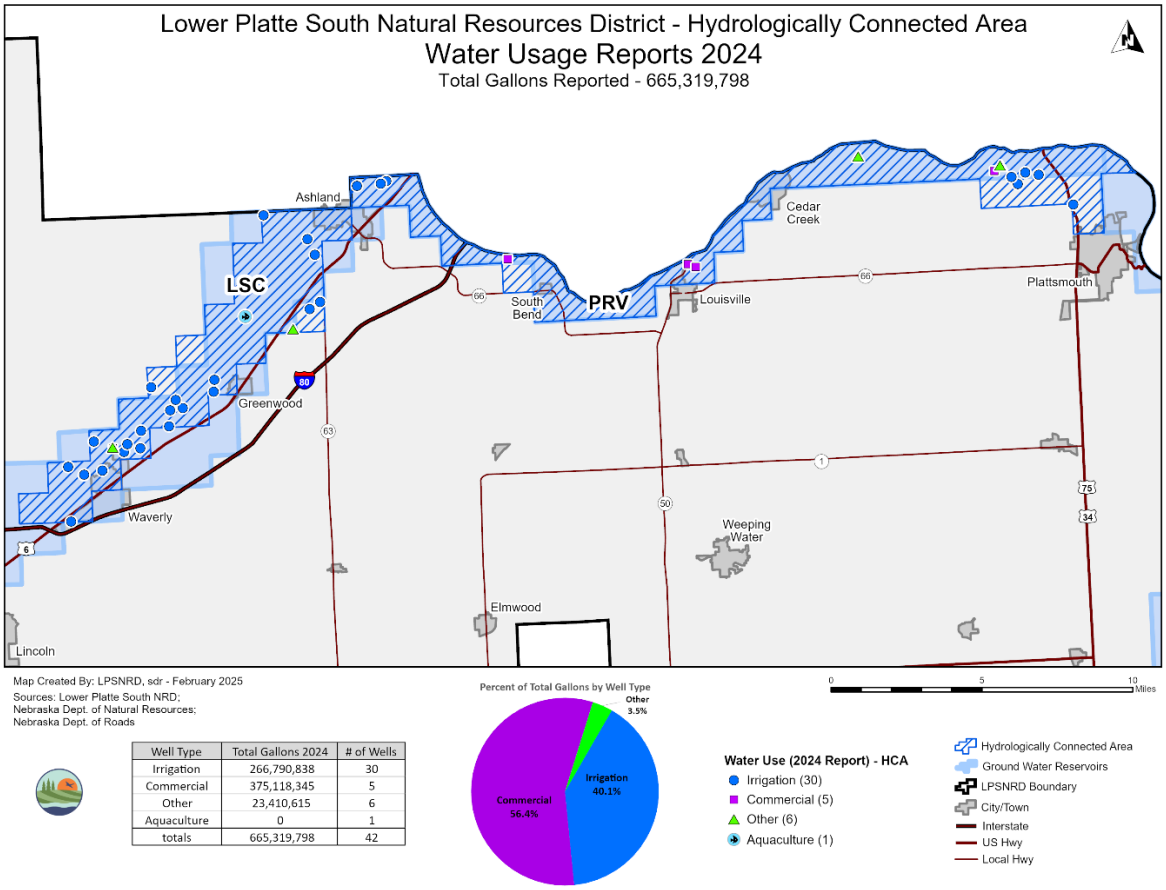


Figure 7: LPSNRD 2024 Groundwater use in the hydrologically connected area (HCA).

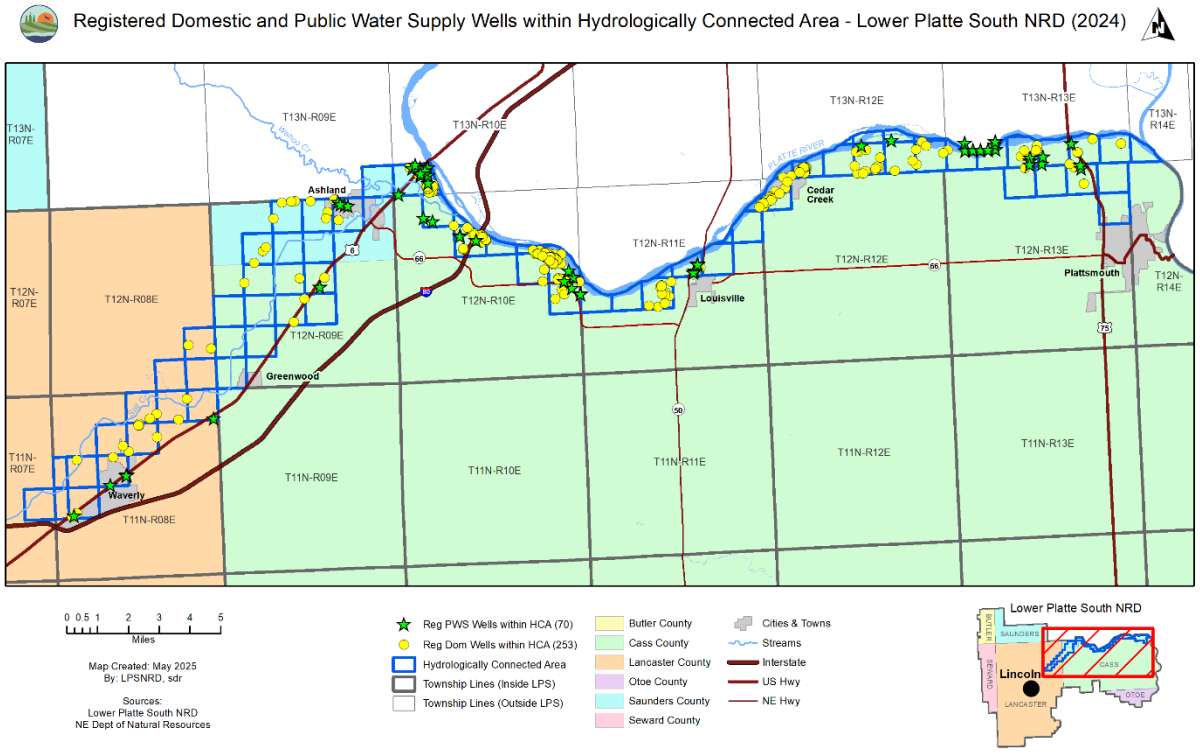


Figure 8: LPSNRD 2024 Registered domestic and public supply wells (HCA).

Metering and Groundwater Level Monitoring

All active wells with capacity to pump over 50 gallons per minute (gpm) are metered before use. There were 364 such wells in LPSNRD at the close of 2024. LPSNRD collected records of usage from these wells and all public water supply (PWS) wells. The calculated total pumping for 2024 from these metered wells (not including PWS wells) was 5.12 billion gallons, with 293 irrigation wells accounting for 66% of the total measured pumping. In addition, LPSNRD inspected and read 285 groundwater well meters during 2024. LPSNRD also collected groundwater level data from 148 wells in the spring and fall of 2024 and all those wells are part of LPSNRD's official water level network. Of those, 13 wells showed an increase, and 135 wells showed a decline from spring 2023 to spring 2024; the maximum decline was 5.55 feet while the maximum increase was 3.36 feet, with an average static water level decrease of 3.66 feet. Figure 9 shows a spatial representation of groundwater level changes.
The average change by groundwater reservoir is shown in Table 5.

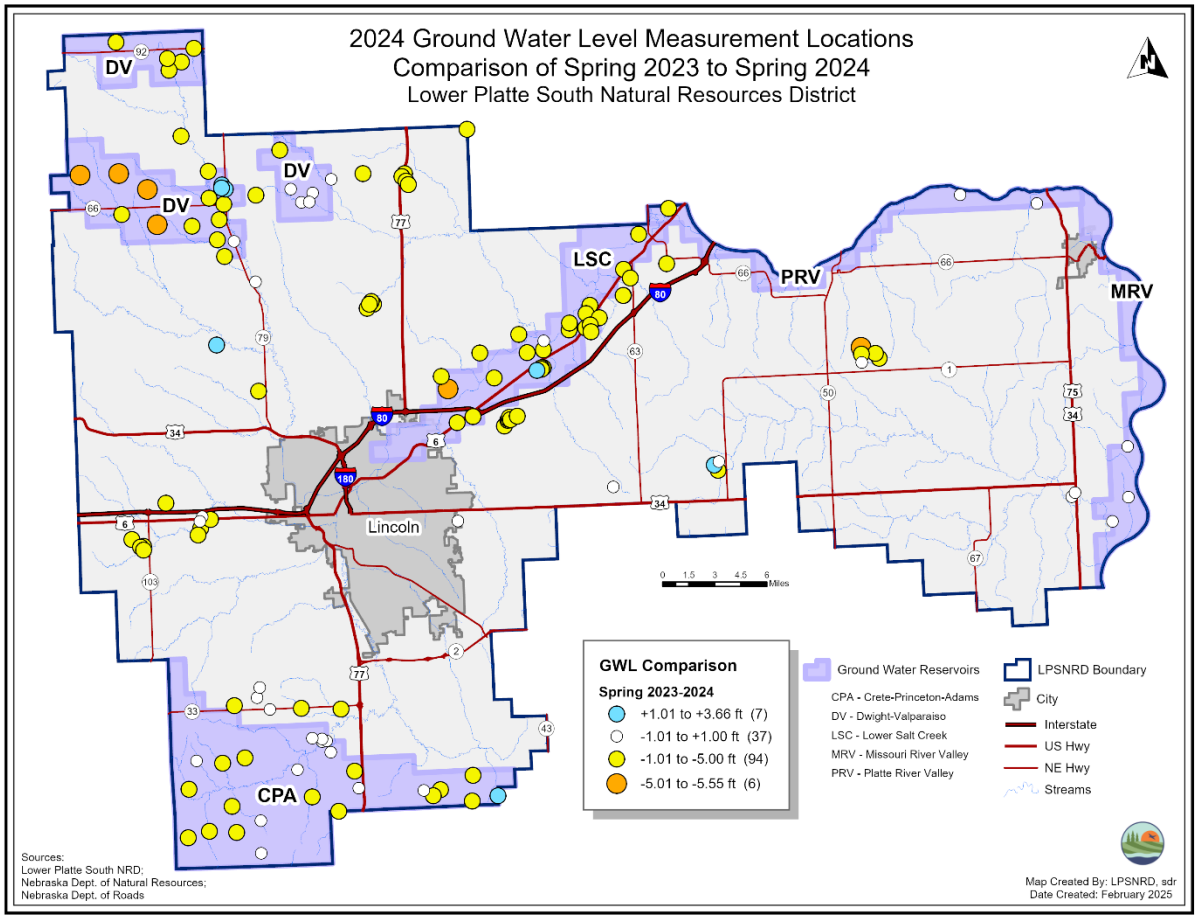


Figure 9: 2024 Groundwater level measurement comparison, spring 2023 and spring 2024.

Table 5: Groundwater reservoir average well level change, spring 2023 to spring 2024.

Average Well Level Change by Groundwater Reservoir	
GW Reservoir	**Spring 2023 to Spring 2024 (ft)**
Crete-Princeton-Adams	-1.21
Dwight-Valparaiso	-1.81
Lower Salt Creek	-2.06
Missouri River Valley	-3.84
Platte River Valley	-0.08
Remaining Area	-1.15

Groundwater Permitting Activities

LPSNRD issued 14 well permits throughout the District in 2024 for varied uses, as reported in Table 6. In 2024, 11 wells were completed, two of which were located in the hydrologically connected area but both were replacement wells. All statutory well-spacing minimum requirements were followed for all new and replacement wells.

Table 6: LPSNRD 2024 Approved or completed groundwater wells.

Well Type	Approved Well Permits, 2024	Completed Wells, 2024[2]
Irrigation	9	7
Commercial	1	1
Domestic	0	0
Public Water Supply	3	2
Livestock	0	0
Other	1	1
Totals	**14**	**11**

[2] Wells completed in 2024 may have been approved in a prior year

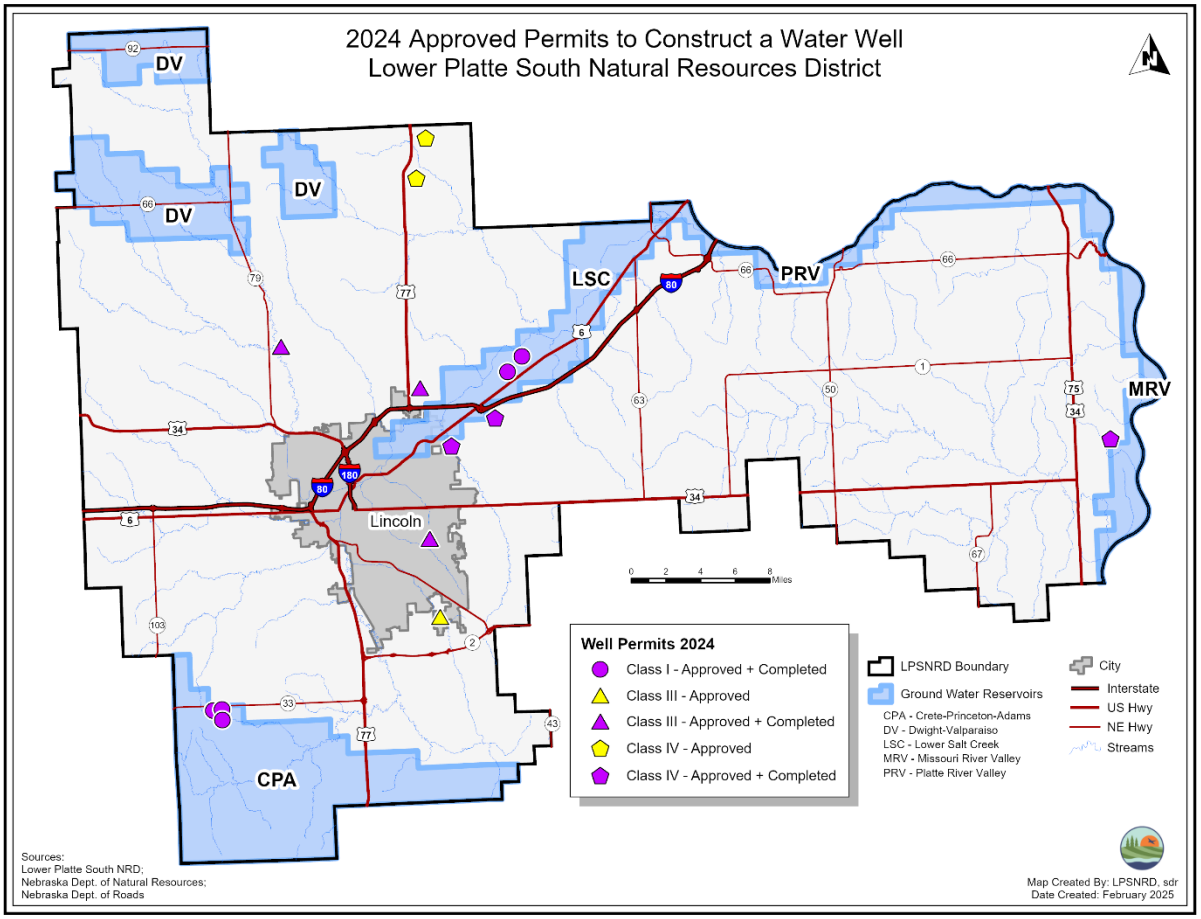


Figure 10: LPSNRD 2024 Groundwater well permits approved or completed.

Land Use and Land Cover (LULC) Monitoring and Actions

In 2024, LPSNRD did not certify any additional groundwater irrigated acres within the HCA. As specified in the IMP, newly certified groundwater irrigated acres within the HCA did not exceed the amount agreed to under the terms of the Platte River Basin Coalition agreement. The total number of certified acres in the HCA is 3,279 and the extent of these acres is shown in Figure 11. The district-wide extent of certified acres is shown in Figure 12. There were no variances requested in 2024.

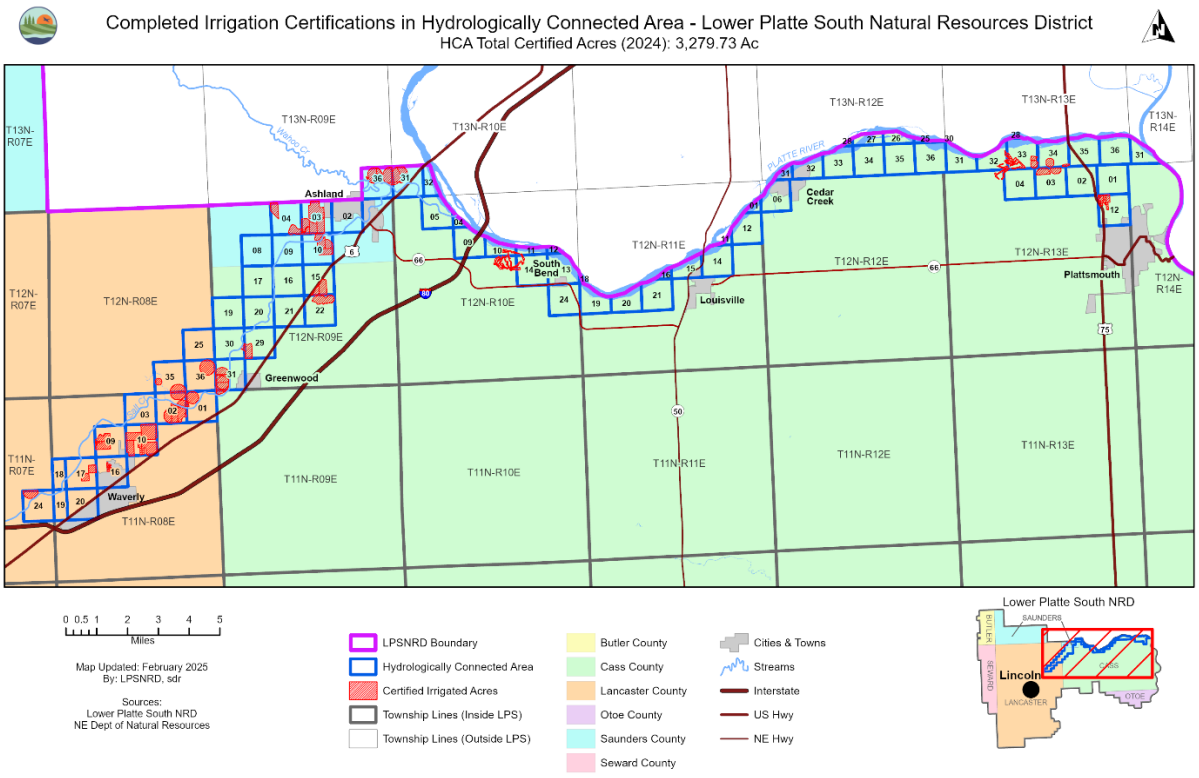


Figure 11: 2024 HCA Certified groundwater irrigated acres, LPSNRD.

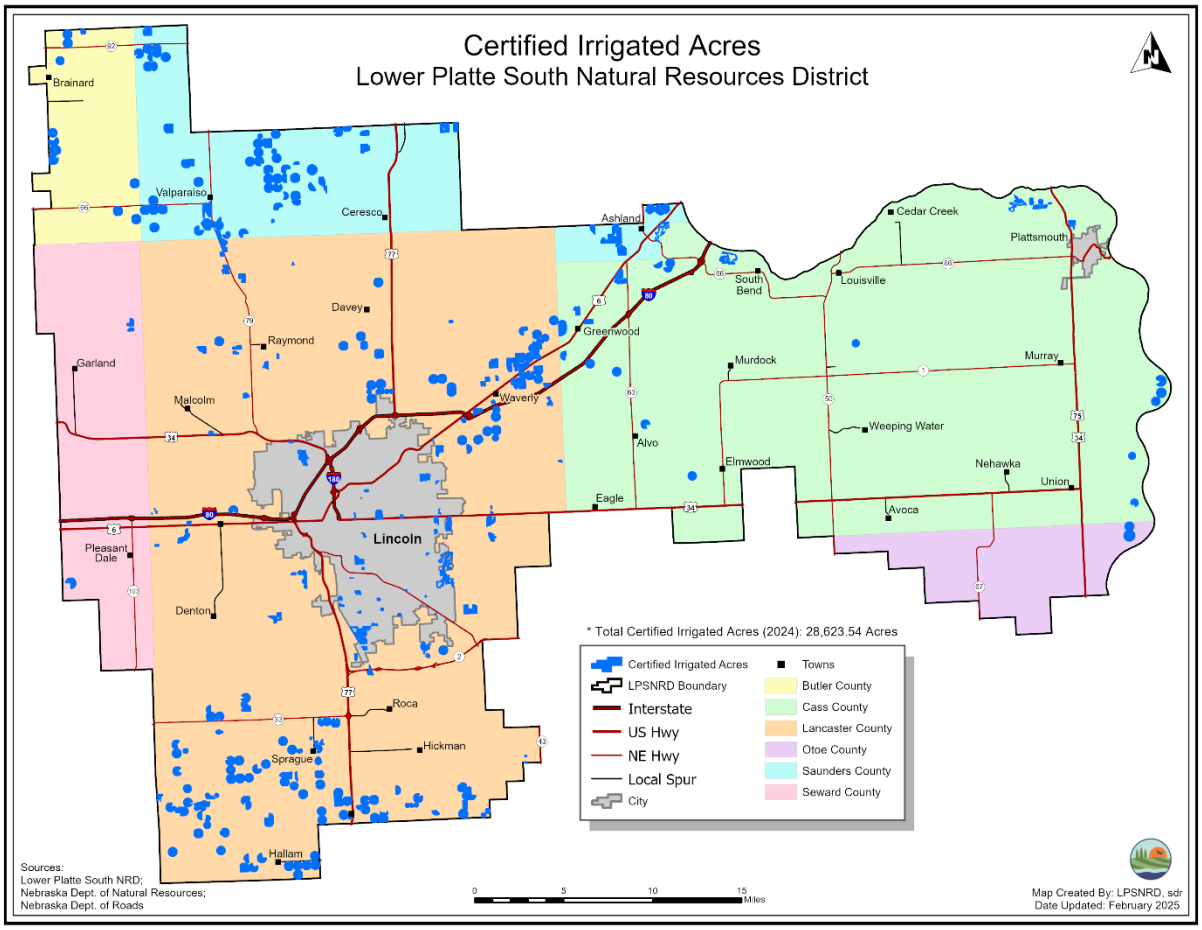


Figure 12: 2024 LPSNRD certified groundwater irrigated acres.

2024 IMP Regulatory Actions

LPSNRD Groundwater Acres Limitations

The expansion of irrigated acres in the HCA continues to be allowed as agreed by the conditions of the Lower Platte River Basin Coalition. A temporary moratorium on the Dwight-Valparaiso area was lifted in 2014 following designation of the Dwight-Valparaiso-Brainard Special Management Area (SMA). A rule to not allow an increase in irrigated acres continues to apply for the entire SMA, and pumping allocations for irrigated land continue to be in effect for the western portion of the Special Management Area.

NeDNR Surface Water Acres Limitations

Pursuant to the IMP, as of January 1st for each year NeDNR sets its surface water limitations to 1/3 the number of acres that the LPSNRD allows for groundwater irrigated acres. A limit of 198 surface water acres has been and continues to be in place for the LPSNRD's surface water management area. The surface water limit has remained consistent since the IMP was adopted, since LPSNRD's groundwater acres limit (593 acres) has stayed consistent throughout this time.

Future limits on water use

The LPSNRD and NeDNR have been and will continue to hold discussions about the method of limiting water development, relative to the adoption of the Lower Platte Basin Water Management Plan (Basin Plan). The Basin Plan has established limits on new basin wide water development and by individual NRDs for a five-year increment that ended in 2021. These limits are based on stream depletions rather than irrigated acres limitations. In 2023, LPSNRD continued to cooperate with the other Basin NRDs and agreed to implement the second five-year increment based on remaining new uses from the first increment. Preparations are underway to determine allowable depletions for the third increment of the Plan. The LPSNRD and NeDNR will continue to work together to ensure compliance with the Basin Plan, including updating the IMP surface water and groundwater control language to be consistent with the BWP and other Basin NRDs.

Studies and Planning

The following studies were continued or recently completed by the LPSNRD and NeDNR to gather and evaluate data, information, and methodologies that could be used to increase understanding of surface water and groundwater supplies and uses within, and, as appropriate, outside LPSNRD. These studies help to meet the goals and objectives that were developed through the IMP stakeholder process.

Lower Platte Missouri Tributaries Model Development

NeDNR has completed the development of a regional numerical groundwater model for the Lower Platte and northern Missouri River Tributaries basins, the LPMT Model (Figure 13). The model may be used for future updates to NeDNR's Annual Evaluation of Availability of Hydrologically Connected Water Supplies. A future refinement to the model is being considered as the Lower Platte Basin NRDs discuss how airborne electromagnetic (AEM) data will be incorporated into this model. Data is collected via in-flight instrumentation.

The first AEM data step evaluation occurred via a study with the Lower Elkhorn NRD. The first phase concluded in FY 2019, the second phase was initiated in early FY 2020, and continued through FY 2022. Subsequently, the Papio-Missouri River and Lower Platte North NRDs conducted a similar scope project through a Water Sustainability Fund (WSF) award (#5303) with NeDNR in FY 2021 and FY 2022. Following FY 2022, Lower Platte South NRD was awarded WSF grant #5311: LPSNRD 3-D Hydrogeologic Framework. This project will build a three-dimensional geologic model delivered in a user-friendly platform that will be useable between NRD boundaries to support collaborative NRD and NeDNR efforts. LRE Water was contracted to complete the work required in 2022 and the project was completed in 2023.

NeDNR is currently working to update the Lower Platte Missouri Tributaries (LPMT) regional groundwater model for use in Fully Appropriated Basin (FAB) Analyses and updates to the Basinwide Plan. In September 2023, the Flatwater Group finalized the updated LPMT watershed model, extending the model with updated inputs from 2014-2021. In December 2023, Olsson completed the conversion of the LPMT to the most current groundwater model software supported by the United States Geological Survey, MODFLOW-6. NeDNR is now working with McDonald Morrissey Assoc. to prepare the LPMT for coupling with existing and in-development subregional models.

Lower Platte Missouri Tributaries 3 District Groundwater Model (LP3D)

NeDNR is collaborating with the Lower Platte South, Lower Platte North, and Papio-Missouri River NRDs to develop a sub-regional groundwater model with JEO Consulting, HDR Consulting, and Longspring Consulting. This model will incorporate Airborne Electromagnetic (AEM) Survey data that has been collected throughout the NRDs. This is following in the footsteps of the Lower Elkhorn NRD groundwater model, a first of its kind effort in Nebraska. The resulting groundwater

model will allow the NeDNR and NRDs to build on the significant data collection investments that have been made over the past decade and utilize this information to better inform future planning efforts. As of July 2025, a functioning LP3D Groundwater Model was constructed. Model calibration and testing is currently underway, and model documentation is simultaneously being drafted and reviewed during this process. Final calibration, testing, and documentation is anticipated to be completed in Q4 of 2025, at which time, Model-Use Training will be offered.

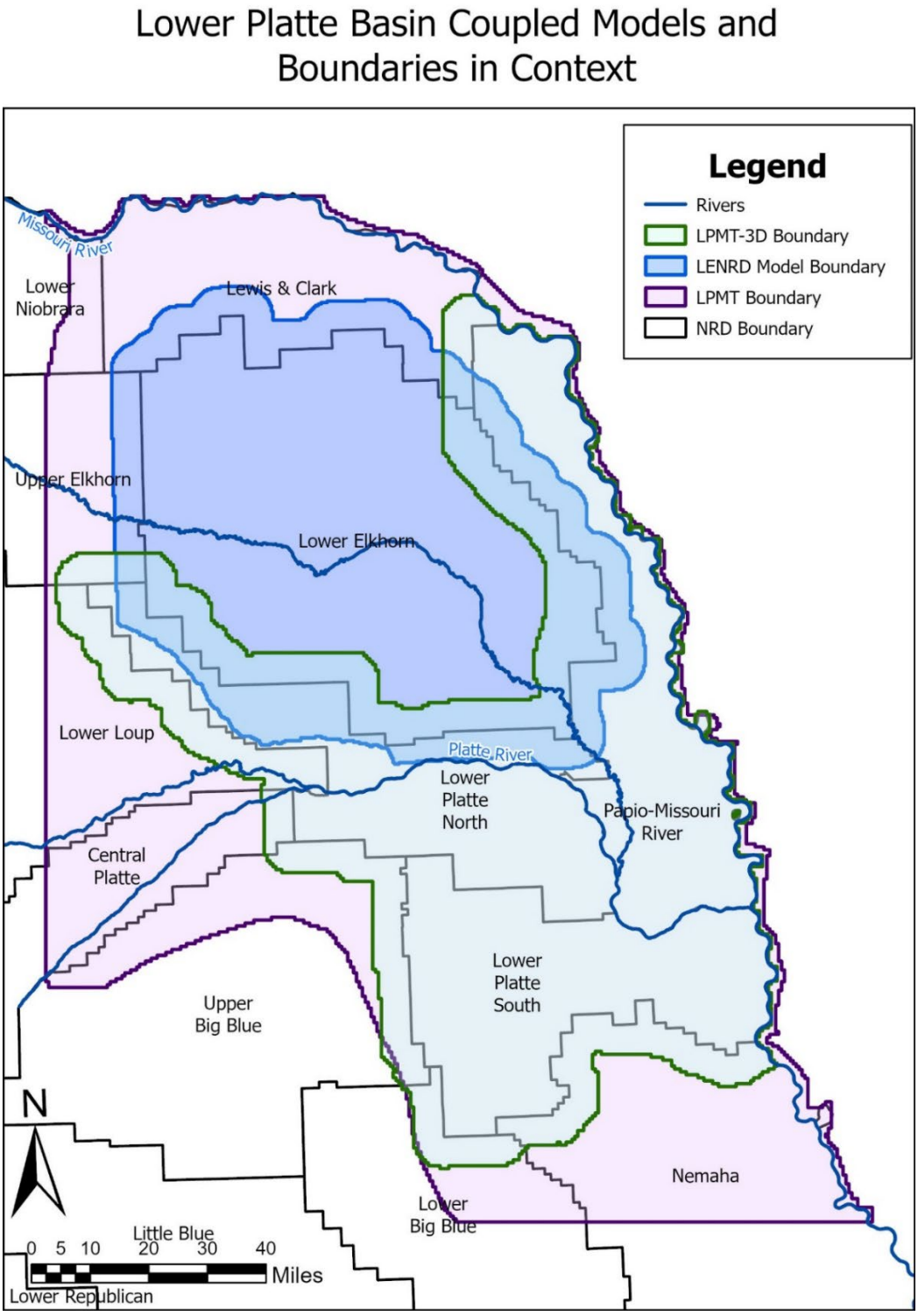


Figure 13: Lower Platte and Missouri tributaries models' geographic locations.

USGS Trend Analysis on Continuous Water Quality

The Lower Platte River Corridor Alliance (LPRCA), of which LPSNRD and NeDNR are members, has been working with the US Geological Survey (USGS) to collect continuous water quality data in the Lower Platte Basin for the past 15 years. Enough data has been collected to begin an analysis of water quality trends that may be occurring. Representing specific watersheds, the data for this study were collected from four streamgages: the Platte River at Louisville, Elkhorn River at Waterloo, Platte River at Leshara, and Salt Creek near Ashland. Data were collected for water temperature, specific conductance, dissolved oxygen, and turbidity. Nitrate data were collected at all sites except for the Salt Creek near Ashland location.

As part of this study's statistical analyses, two methodologies will be used. The first will be a trend analysis to identify any overall trends, and the second will be a linear regression done on any extreme and average trends. Once the linear regression has been completed, these trends can then be compared to any other identified trends within the period. This should provide a more complete picture of how water quality in the Lower Platte River Basin varies seasonally, during wet and dry years, and year-to-year over the study period. This trend analysis should be completed in early 2026 and help with determining the effectiveness of long-term management plans.

Water Inventory and Water Use/Supply Management

LPSNRD Accomplishments

LPSNRD continues to collect and share data and works to improve the database that houses the information, reviewed groundwater well permits relative to aquifer capacity and sustainability, and continues an open dialogue with public water suppliers on current and future water supplies and supported storm water capture and reuse projects in the district. Additionally, LPSNRD participates with the Lower Platte River Weed Authority and the Lancaster County Weed Authority on invasive species control relative to water supply.

NeDNR's INSIGHT Web Portal

The Integrated Network of Scientific Information and Geohydrologic Tools (INSIGHT) web portal (https://nednr.nebraska.gov/INSIGHT/) is a water use, supply, and balance tool developed by NeDNR and released in 2014. INSIGHT aids water managers and other interested parties in better understanding current and future water demands, effectiveness of water management strategies, and critical areas of water shortage. A user can access information pertaining to water supplies and demands (precipitation, irrigation, hydropower, etc.), as well as view maps with associated charts that show overall water balance (current, near-term, or long-term) at a subbasin scale. A valuable INSIGHT feature is that all the datasets used to compile the water balance analyses are also stored within the web portal and are available for download.

NeDNR continues to update the current INSIGHT analysis, adding other basins to the web portal

as new data become available. At this time, NeDNR has compiled data for the Lower Platte River, from North Bend, NE, to Louisville, NE, covering a large portion of the LPSNRD IMP area. INSIGHT data has been updated for the Upper Platte and Lower Platte River Basins and Subbasins within the last two years.

Education/Outreach

NeDNR Activities

Events

NeDNR's statewide public outreach activities are broadly focused and intended to provide all interested citizens with a better understanding of how integrated water management affects them in their daily lives. In 2024, NeDNR participated in Husker Harvest Days and the Nebraska State Fair. Volunteers from NeDNR also participated in outreach to children at Family Nature Nights hosted by LPSNRD at area elementary schools.

LPSNRD Activities

Each February, LPSNRD compiles a Groundwater Management Plan Review, a report of all groundwater activities completed in the previous calendar year. The report includes results of well sampling and measuring, progress made in ongoing groundwater programs, the status of each groundwater management area, and more. The review is presented as a summary to the LPSNRD Board of Directors, and the complete review is posted on LPSNRD's website, http://www.lpsnrd.org. The posted review is promoted on the LPSNRD website home page and in LPSNRD's newsletter.

As noted on the following page under Collaboration with Other Entities, LPSNRD continues hydrogeologic assessment activities with the Eastern Nebraska Water Resources Assessment (ENWRA).

The NRD continues to host "Test Your Well Nights" events for specific areas and plans one or two each year. Private well owners can bring water samples for nitrates testing. LPSNRD collaborated with local FFA chapters and science students to test the water. There was one "Test Your Well Night" event held in calendar year 2024 in Malcolm on October 24th.

LPSNRD promotes its groundwater activities through social media platforms Instagram and Facebook. Information is shared about groundwater levels, samples, data loggers, and monitoring wells.

LPSNRD continually seeks to maintain public awareness of information about groundwater levels, available cost-sharing, and conservation best management practices through its publications, website, and LPSNRD media.

LPSNRD, in conjunction with NeDNR, held quarterly coordination meetings to discuss IMP and related action items. In 2024, meetings were held on March 29, July 10, and September 12.

Collaboration with Other Entities

Eastern Nebraska Water Resources Assessment

Both LPSNRD and NeDNR participated in the Eastern Nebraska Water Resources Assessment (ENWRA) program in 2024, a cooperative endeavor for hydrogeologic data research and modeling. LPSNRD continued financial and administrative handling in FY 2024 of ENWRA, which is organized through an interlocal cooperative agreement with the six NRDs in eastern Nebraska. In FY 2024 ENWRA concluded the Groundwater Recharge Mapping and Focus Area Assessments Water Sustainability Fund contract #5312, a collaborative effort with the Conservation and Survey Division, School of Natural Resources, University of Nebraska-Lincoln (UNL CSD) and the U.S. Geological Survey (USGS) in order to better understand and map aquifer recharge in Eastern Nebraska. ENWRA partners also held planning meetings for a 2025 follow-up grant application scope for the ENWRA region plus six specific community areas in each ENWRA NRD. Additionally, LPSNRD continues to collaborate with UNL CSD on the test hole drilling program (2024 actions included planning agreement renewals with added geophysical and other hydrogeologic services) and with the 10 NRDs in the Interlocal for the Nebraska GeoCloud Project through cooperation with ENWRA.

Lower Platte River Basin Coalition

LPSNRD and NeDNR are active participants in the Lower Platte River Basin Coalition (LPRBC), a group comprised of the seven Lower Platte River Basin NRDs and NeDNR. The group's purpose is to develop and implement a voluntary water management plan for the Lower Platte River Basin. Plan components will be subsequently incorporated into individual IMPs to provide consistency in water management actions across NRD boundaries. Both NeDNR and LPSNRD have representatives that serve on the Coalition's managers and technical committees and Board. The second 5-year increment of the voluntary water management plan will end in December 2026. For more information about the Coalition, please see https://lprbc.nebraska.gov/.

Lower Platte River Consortium

LPSNRD and NeDNR are committed and participating members of the Lower Platte River Drought Consortium (LPDC). The LPDC was formed through an interlocal agreement in 2016 and also includes Lower Platte North NRD, Papio-Missouri River NRD, Omaha's Metropolitan Utilities District (M.U.D.), and Lincoln Water System (LWS) as members. The Consortium is working together to develop regional solutions for the Lower Platte River to improve water supply reliability and drought resiliency.

The Lower Platte River Drought Contingency Plan (LPRDCP) is a collaborative project among these six water management agencies along with the Bureau of Reclamation. The LPRDCP was submitted to the Bureau of Reclamation for review and was finalized in October 2019. The Coalition completed the five-year Plan Review and update in 2024.

Lower Platte River Corridor Alliance

The Lower Platte River Corridor Alliance (LPRCA) is a group comprised of the eight agencies,

including the Lower Platte South NRD, Lower Platte North NRD, Papio-Missouri River NRD, NeDNR, Nebraska Department of Environment and Energy, Nebraska Game and Parks Commission, Nebraska State Military Department, and the University of Nebraska Institute of Agriculture and Natural Resources. Both LPSNRD and NeDNR are active participants. The LPRCA is dedicated to working with people to protect the long-term vitality of the Lower Platte River Corridor. The mission of the LPRCA is to foster the development and implementation of locally drawn strategies, actions, and practices to protect, enhance, and restore the vitality of the Lower Platte River's resources. Created in 1996 through an interlocal agreement, the Alliance uses a variety of tools to assist counties, communities, governments, resource management organizations, and the public to meet Lower Platte River Corridor management challenges. These tools include public awareness events, educational workshops, recreation studies, water quality studies, floodplain studies, land-use planning assistance, and a variety of other projects. For more information about the LPRCA, please see www.lowerplatte.org.

Other Collaborations

The LPSNRD and USGS cooperate to collect surface water/streamflow data. There are currently 24 USGS stream gages active in LPSNRD. The District provides funding and support for operation and maintenance of 16 of these gages. In addition, the LPSNRD has cooperatively shared groundwater data with UNL, USGS, adjoining NRDs, and NeDNR.

In mid-2021, LPSNRD applied for and received in late 2021 a Water Sustainability Fund (WSF) grant for a Three-Dimensional Hydrogeologic Framework Project. LPSNRD provided matching funds for project. A contractor was selected in early 2022, and the project was completed in December 2023. The project builds on work completed and/or underway by the Lower Elkhorn, Papio-Missouri River, and Lower Platte North NRDs.

In 2022 and 2023, LPSNRD worked with the Nebraska Department of Environment and Energy (NDEE) to obtain a Section 319 grant over three years to establish a Drinking Water Protection Specialist position. This position was filled in July 2023, and the specialist has been working with several communities, especially Waverly, or protection and management of drinking water sources.

Jointly Identified Actions for Succeeding Two Years

As the IMP states, LPSNRD and NeDNR will jointly identify action steps for the succeeding two years as a part of its annual reviews process. The following actions were identified by the LPSNRD and NeDNR as priorities for the next two years. These actions will help ensure that progress continues towards meeting the goals and objectives of the IMP.

LPSNRD

1. Continue to monitor groundwater level changes through its network of groundwater monitoring wells.
2. Continue to meter and require annual pumping reports for groundwater wells that have capacity to pump over 50 gpm, as well as public supply wells, and assimilate the data into a comprehensive dataset.
3. Continue to collect information on municipal, rural water, and non-municipal industrial water use, land use and population changes, and changes in climate.
4. Develop recommendations for the development and management of geographic areas with limited aquifers.
5. Conduct discussions with municipalities and rural water districts on coordinating services with regional systems and on water shortage action plans.
6. Update Groundwater Management Plan

NeDNR

7. Continue surface water monitoring activities including tracking surface water permit changes, pump site inspections and the voluntary surface water use reporting program.
8. Continue technical analyses and development of tools (INSIGHT) for water management, expanding the network to eastern Nebraska as data become available.
9. Continue development of the Lower Platte Missouri Tributaries models and convey progress and outcomes to LPSNRD.

LPSNRD and NeDNR

10. Continue to participate in basin-wide or regional groups such as ENWRA, the Lower Platte River Consortium, Lower Platte River Basin Coalition, and the Lower Platte River Corridor Alliance.
11. NeDNR and LPSNRD have exchanged letters agreeing to amend the IMP to achieve consistency with the Lower Platte Basin Water Management Plan, specifically with stream depletion-based limits on new groundwater and surface water uses.
12. Continue respective public outreach activities and seek additional opportunities for joint public outreach events and publications.
13. Continue to evaluate the need for modifications to the LPSNRD streamgage network.
14. Continue to conduct quarterly coordination meetings with LPSNRD and NeDNR staff to discuss IMP and related action items. Include the LPSNRD Water Resources

Subcommittee members on coordination meetings twice per year.

15. Development, testing, and further incorporation of AEM data for the LPMT-3D model.
16. Ongoing Annual reporting and tracking requirements for IMP and Basin Plan.
17. IMP language updates to better align with Basin Plan.