

2025

Lower Platte North NRD Basin Coalition IMP Report



Annual Report

Lower Platte North Natural Resources District

1/1/2025

2025 Lower Platte North Natural Resources District Lower Platte Basin River Plan Report

Introduction

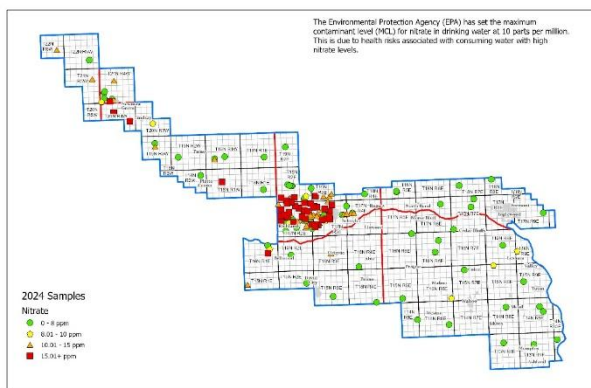
The report period is from January 1, 2024 to December 31, 2024.

Water Quality Activities

The Lower Platte North (LPN) District implemented a Phase 4 water quality management area within the Richland-Schuyler Phase 3 management area. This Phase 4 area shows nitrate levels over 15 ppm or uranium contamination over 30 ppb in 50 percent of the sampled wells. This new area will require water flow meters on all high-capacity irrigation wells, nitrogen recommendations and an 80 pound maximum application of nitrogen fertilizer prior to May 1. No nitrogen can be applied before March 1.

The District received a WSF grant to conduct cost-share practices in the Schuyler-Richland Management Area. Some of the practices include gravity to pivot/SDI conversions, water flow meters and cover crops. Some cost-share programs work jointly with NRCS cost-share practices. Lower Loup NRD and Lower Platte North completed an age-dating project with USGS in the same vicinity of the management area.

Staff have done extensive drinking water sampling within this area and encouraged producers to apply for RO cost share through the state program, when samples exceeded 10 ppm. LPN implemented a drinking water filtering program for domestic wells that are over 8 ppm or for other contaminants.



2024 LPNNRD Nitrate Sampling



The map shows the nitrate results from 2024 with emphasis in the management areas and Shell Creek.

Water Quantity Activities

The LPNNRD Board in December voted to continue the allocation of 30 inches over 3 years in the LPN SQS #2 north of Columbus. The Water Committee also discussed boundary considerations and rule changes.

The three Lower Platte Basin NRDs along with NeDNR continue working on a basin wide groundwater modeling project. This project is planned to be completed in 2025-26.

Well Permits Issued Approved, Cancelled or Denied

The Lower Platte North issued 41 wells permits in 2024. There were 40 irrigation wells, of which 21 were replacements and 1 other/wildlife/wetlands.

Water Use Information for Irrigation Wells

Total Number of Flow Meters – 1420 which 1263 are on irrigation systems.

Water Use from the Special Quantity Subareas (Allocated areas)

Overall Average: (Inches per acre)

SQS#1 – 3.51" in/ac

SQS#2 – 4.46" in/ac.

Rest of the District: 5.08

Groundwater Management Plan Update

The District is in the process of completing the update to the Groundwater Management Plan. Some of the items that was recommended for the Board to review were nitrate and water level triggers, variance scoring sheet and locations for new monitoring wells. The updated plan includes new assessment and aquifer sub-area maps.

Drought Management Plan

The Lower Platte North NRD is currently developing a district-wide Drought Management Plan. The Drought Management Plan will help to reduce district-wide impacts during drought events and aid the NRD in water resource management. This project will include establishing drought monitoring and forecasting protocol, identifying potential best management practices, creating educational and awareness materials, and identifying future actions to reduce drought impacts.

A significant part of the planning process will focus on local communities and their public water systems to evaluate their drought vulnerabilities and understand available community drought ordinances. The plan will include the development of drought mitigation strategies and other

recommendations based on the outcomes of the drought risk analysis and meetings with communities. Also included with the plan will be a community engagement materials kit and sample drought ordinances for communities to utilize and update to fit their needs. The outcome will be a more sustainable and stable water supply for all uses across the district.

Public Outreach

The District conducted 6 nitrogen/irrigation certification meetings for producers with 200-300 in attendance. The NRD also conducted an open house in the Schuyler-Richland Nitrogen Management Area to discuss the nitrate and uranium concerns. The District conducted open houses discussing the Groundwater Management Plan updates. The NRD has been involved with numerous school events with one event with NeDNR involvement. The District publishes a newsletter that goes into the local newspapers with emphasis on the new water quality management area, drought concerns and nitrates.

Water Demand Inventory

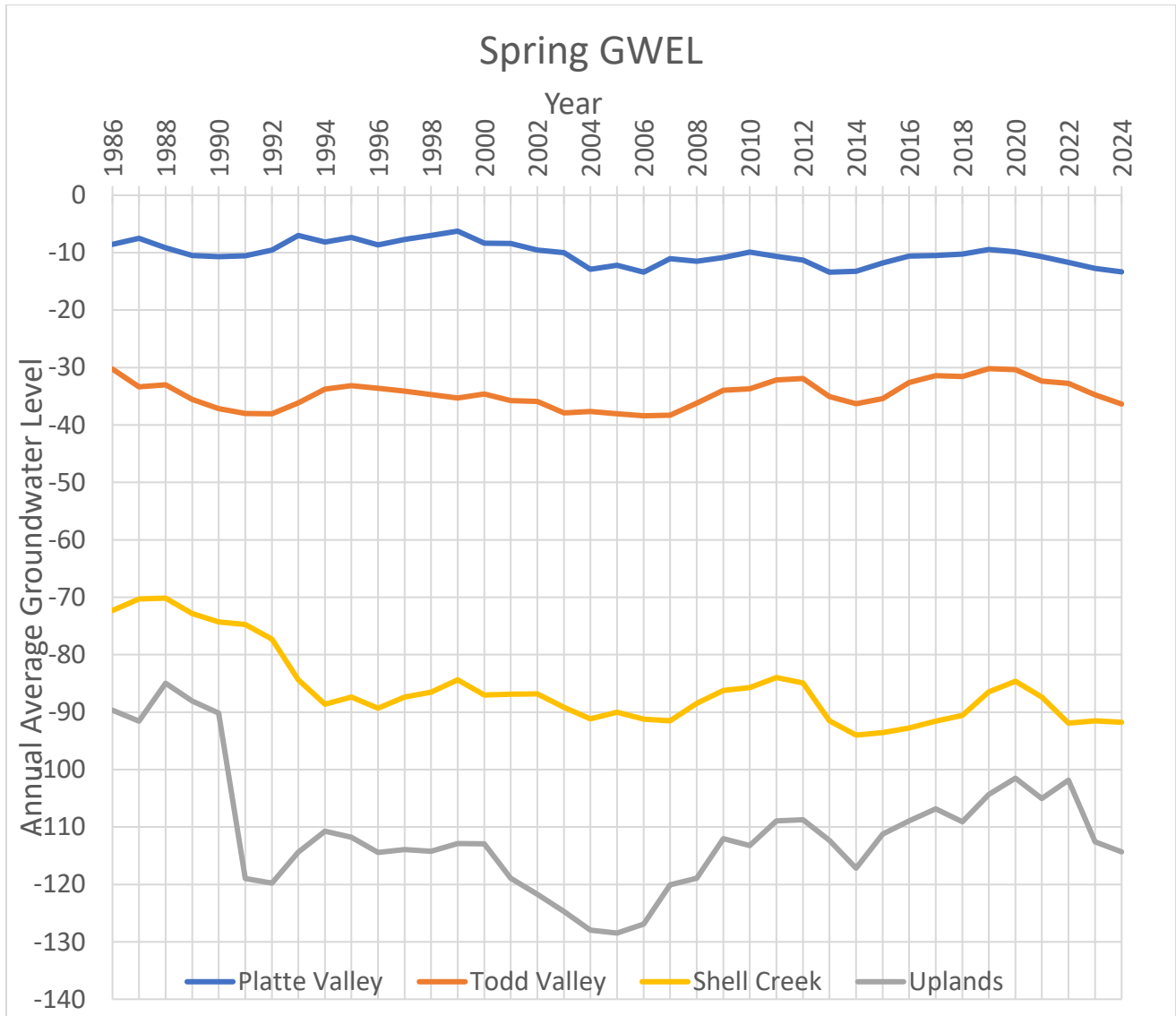
The District is in the eighth year to obtain required water use reports for municipalities. Industrial and other high-capacity wells report voluntarily, unless they are drilled after 2012.

Water Supply Inventory and Groundwater Elevation Data

Groundwater Level Summary Comparison of Spring 2023 to Spring 2024

Subarea	Number of Wells Measured	Median Change (Feet)	Mean Change (Feet)	Number of Wells Increased in Level	Number of Wells Unchanged (+ or - 0.3 ft)	Number of Wells Decreased in Level
Platte Valley	82	-0.41	-0.60	11	27	44
Todd Valley	23	-1.67	-1.62	0	1	22
Uplands	60	-2.02	-1.77	3	1	56
Shell Creek	46	-0.93	-0.22	10	4	32
				11.4%	15.6%	73.0%
			Spring 2022 to Spring 2023	4.0%	4.5%	91.5%

Lower Platte North static water measurements show a concerning trend like most of Eastern Nebraska.



Water Transfer Permits 2024 Granted:

None in 2024

Depletions and Groundwater Consumptive Uses Voided in 2024:

No sites were voided in 2024.

Stream gage measurements on District Maintained Gages: Lower Platte North gages are joint projects with USGS or NeDNR. LPN has 5 installed cameras on the lower part of Platte River with assistance from the USGS.

Water Banking Activities: None for 2024.

Streamflow Accretion Activities (new projects, conjunctive management projects, etc.): None for 2024

Municipal Water Uses

City-Village-Town	Total Gallons (2023)	Total Gallons (2024)	Population
Ashland	190,022,000	189,872,000	3,262
Bellwood		Waiting on Response	
Newman Grove	35,491,200	32,205,200	721
Lindsay	88,379,600	65,992,600	283
Platte Center	22,401,271	19,348,203	336
David City (Bruno included)	157,788,873	163,436,066	3,024
Wahoo (Colon Included)	(2022) 251,984,510	269,693,307	4,987
Yutan	44,848,700	49,132,000	1,446
Mead	(2022) 17,980,562	20,280,316	617
Fremont	4,699,011,000	9,458,948,000	27,230
North Bend	68,283,000	64,440,000	1,200
Schuyler	435,450,000	376,856,000	6,547
Cedar Bluffs	NA	25,147,232	620
Prague	11,420,000	9,639,000	291
Weston	(2022) 22,800,800	13,948,027	250
Malmo	NA	1,980,000	96
Ithaca	4,000,000	4,033,000	168
Abie	(2022) 3,045,800	2,576,600	60
Memphis		Waiting on meeting	
Lincoln (Within LPNNRD)	5,035,928,236	5,841,820,110	294,757
MUD West (Within LPNNRD)	10,097,525,000	10,334,804,000	656,522
Morse Bluffs	3,949,000	3,600,000	130

Lower Platte North Rural Water Systems supplies water to Bruno and Colon with David City and Wahoo supplying the water.

Certified Acres

All Irrigation	All Irrigation Ground	All Irrigation Surface	All Irrigation Comingled
Boone	28551.41	0	0
Butler	57867.65	674.85	373.27
Colfax	54694.53	238.65	1003.34
Dodge	51906	84.53	599.1
Madison	5848.86	0	0
Platte	94124.38	793.79	1090.89
Saunders	109088.9	2617.14	2050.97
Total	402081.73	4408.96	5117.57
HCA Irrigation	HCA Irrigation Ground	HCA Irrigation Surface	HCA Irrigation Comingled
Boone	28551.41	0	0
Butler	45699.18	605.15	84.45
Colfax	47794.65	202.35	1003.34
Dodge	51906	84.53	599.1
Madison	5848.86	0	0
Platte	80508.05	793.79	1090.89
Saunders	84241.05	2545.25	1819.39
Total	344549.2	4231.07	4597.17
Non-HCA Irrigation	Non-HCA Irrigation Ground	Non-HCA Irrigation Surface	Non-HCA Irrigation Comingled
Boone	0	0	0
Butler	12168.47	69.7	288.82
Colfax	6899.89	36.3	0
Dodge	0	0	0
Madison	0	0	0
Platte	13616.33	0	0
Saunders	24777.12	71.89	231.58
Total	57461.81	177.89	520.4

New Depletions and Groundwater Consumptive Uses 2024 Granted:

NRD Transaction ID	County	Township	Range	Range Direction	Section	Application Type	Change Date	Area (acres)	Use of Irrigated Acres	SDF	Acre Feet Depletion
LPN-V-024-0647	Platte	19	3	W	14	expansion	10/15/2024	4.5	Crop Production	0.24	0.24
LPN-V-024-0645	Colfax	17	2	E	6	expansion	10/15/2024	31.70	Crop Production	0.59	4.22
LPN-V-024-0651	Saunders	17	6	E	35		10/15/2024	20.00	Crop Production	0.73	3.31
LPN-V-023-0624	Boone	22	6	W	13	new	10/15/2024	135.00	Crop Production	0.11	3.31
LPN-V-024-0649	Boone	21	5	W	16	expansion	10/15/2024	68.40	Crop Production	0.11	1.68
LPN-V-023-0604	Boone	21	5	W	15	expansion	10/15/2024	75.00	Crop Production	0.09	1.46
LPN-V-024-0642	Saunders	17	6	E	32	expansion	10/15/2024	51.50	Crop Production	0.78	9.06
LPN-V-024-0643	Saunders	15	8	E	10	new	10/15/2024	80.50	Crop Production	0.56	10.15
LPN-V-023-0596	Platte	19	3	W	26	new	10/15/2024	135.00	Crop Production	0.29	8.96
LPN-V-024-0639	Platte	20	3	W	19	expansion	10/15/2024	9.40	Crop Production	0.07	0.16
LPN-V-024-0648	Saunders	16	6	E	4	expansion	10/15/2024	27.60	Crop Production	0.91	5.68
LPN-V-024-0650	Saunders	14	9	E	30	expansion	10/15/2024	103.20	Crop Production	0.59	13.79
LPN-V-021-0547	Platte	18	2	W	10	expansion	10/15/2024	34.00	Crop Production	0.70	5.36
LPN-V-024-0646	Platte	19	3	W	2	new	10/15/2024	136.60	Crop Production	0.24	7.51
LPN-V-024-0637	Boone	22	5	W	32	new	10/15/2024	137.20	Crop Production	0.08	2.60
LPN-V-023-0603	Boone	22	5	W	27	new	10/15/2024	138.00	Crop Production	0.05	1.58
LPN-V-021-0532	Madison	21	4	W	17	new	10/15/2024	133.00	Crop Production	0.04	1.09
LPN-V-023-0608	Madison	21	4	W	22	new	10/15/2024	70.00	Crop Production	0.03	0.52
LPN-V-021-0546	Platte	19	2	W	33	expansion	10/15/2024	130.00	Crop Production	0.48	13.96
LPN-V-023-0618	Platte	20	3	W	4	new	10/15/2024	145.00	Crop Production	0.03	0.91
LPN-V-023-0595	Madison	21	4	W	15	new	10/15/2024	130.00	Crop Production	0.03	0.76
LPN-V-023-0630	Saunders	13	9	E	15	new	10/15/2024	60.00	Crop Production	0.86	11.57
LPN-V-023-0606	Madison	21	4	W	17	new	10/15/2024	122.00	Crop Production	0.04	1.18
LPN-V-023-0619	Madison	21	4	W	15	new	10/15/2024	140.00	Crop Production	0.03	0.86
LPN-V-023-0612	Butler	16	2	E	32	expansion	10/15/2024	40.00	Crop Production	0.68	6.14
LPN-V-024-0638	Madison	21	3	W	6	expansion	10/15/2024	35.00	Crop Production	0.02	0.17
LPN-V-024-0640	Madison	21	4	W	35	expansion	10/15/2024	63.40	Crop Production	0.03	0.48
LPN-V-022-0570	Platte	18	2	W	8	expansion	10/15/2024	70.00	Crop Production	0.63	9.92
LPN-V-023-0613	Butler	17	4	E	32	new	10/15/2024	17.00	Crop Production	0.78	3.00
LPN-V-022-0582	Colfax	17	4	E	2	new	10/15/2024	130.00	Crop Production	0.84	24.58
LPN-V-024-0641	Butler	16	3	E	13	new	10/15/2024	61.10	Crop Production	0.55	7.59
LPN-V-021-0541	Saunders	15	9	E	34	new	10/15/2024	68.00	Crop Production	0.90	13.79
LPN-V-023-0611	Saunders	16	6	E	22	expansion	10/15/2024	35.00	Crop Production	0.89	7.02
							Total				
							Acres	2632.60		Depletion	182.57

Depletion Credits

The Lower Platte North will be taking credit for LPN-2 (G-164643) in SESW S5-19N-2E, Platte County. The tract was new expansion of acres for 30 acres, SDF-0.96, NIR-0.75 for a depletion of 6.48 AF. This tract was included in the 2019 report which is in LPN Platte - Colfax Quantity Management Area but not within the HCA area.