

Upper Loup Natural Resources District

Basin Water Management Plan Annual Report

Report Year: January 1, 2025 – December 31, 2025

Produced February 2026



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INTRODUCTION

The Upper Loup NRD Board of Directors adopted the original Lower Platte River Basin Water Management Plan (LPBWMP), December 2017 and adopted the revised plan April 2022. The revised plan includes the second increment depletions for the next five years (2022-2026) in addition to a new objective to address drought effects in the basin.

This report is intended to satisfy the Lower Platte River Basin Coalition annual data collection and reporting requirements as described in section 5.0 Plan Review and Monitoring. The information in this report covers those activities required to be tracked for the period January 1, 2025 to December 31, 2025.

The below table lists the allowable depletions for each Natural Resources District.

SECOND INCREMENT ALLOWABLE NEW DEVELOPMENT (ACRE-FEET DEPLETIONS) BY NRD			
NRD	New 2nd Increment	Carry over from 1st Increment	Total
Upper LoupNRD	3,369	2,065	5,435
Lower Loup NRD	7,160	4,750	11,910
Upper Elkhorn NRD	1,831	1,134	2,965
Lower Elkhorn NRD	5,493	2,853	8,346
Papio-Missouri River NRD	1,058	768	1,826
Lower Platte South NRD	1,209	890	2,098
Lower Platte North NRD	2,770	966	3,736
Total	22,889	13,427	36,316

CERTIFIED IRRIGATED ACRES

The Upper Loup Natural Resources District (ULNRD) completed certifying ground water irrigated acres in 2008. We have not certified any surface water acres and do not have any co-mingled certified acres. The ULNRD has two types of certified acres; active and inactive. Inactive acres are any certified acres associated with wells that do not contain a pump and therefore are not watering any land with ground water. Active acres are all certified acres that are being irrigated or watering land and have a flow meter installed.

Total number of certified agricultural irrigated acres for 2025 was 84,629 and of that total 73,145 were considered active.

County	Certified Acres	Active Acres
Blaine	16,093	13,525
Brown	7,113	3,640
Cherry	8,763	7,078
Grant	1,964	1,472
Hooker	4,221	3,520
Logan	35,736	34,056
McPherson	7,023	6,535
Thomas	3,716	3,319
Total	84,629	73,145

AGRICULTURAL USES

Since 2009 the ULNRD has had agricultural ground water users submit annual ground water use amounts under the District's Groundwater Management Area Rules and Regulations. Meters have been installed on all high-capacity wells in the entire District since May 2021. ** 29 meters across district had stopped working in the 2025 growing season.

County	# of wells used	Acres watered in 2025	Average inches pumped	Mode inches pumped	# of non-working meters	Primary crop
Blaine	103	12,647	12	12	2	Grass
Brown	31	3,606	10	13	2	Grass
Cherry	51	6,740	12	9	0	Grass
Grant	9	1,306	11	8	1	Grass
Hooker	24	2,784	11	10	4	Grass
Logan	257	31,342	9	10	15	Corn
McPherson	50	6,535	9	9	4	Grass
Thomas	31	3,548	11	8	1	Grass
TOTALS	556	68,508	10.6	10	29	Grass

MUNICIPAL, COMMERCIAL / INDUSTRIAL USES2

All high-capacity wells associated with municipal and commercial / industrial ground water uses have flowmeters installed. Use includes residential, businesses and schools.

Municipal Well Summary:

Municipality	2025 Population	2025 gallons	2025 AFD	2024 Population	2024 AFD
Dunning	94	26,817,500	82	94	79
Hyannis	165	66,315,800	204	165	209
Mullen	500	85,559,300	263	449	258
Stapleton	267	30,985,000	95	267	107
Theford	211	57,388,000	176	211	160
TOTALS	1,237	267,065,600	813	1,186	813

Commercial/Industrial Well Summary:

County	Well Reg #	Use	2025 gallons	2025 AFD	2024 AFD
Grant	G-170722	Community Golf Course Irrigation	16,655,800	19	36
Hooker	G-078662	Golf Course Irrigation	42,349,000	130	100
Hooker	G-076336	Golf Course Irrigation	23,728,500	73	54
Hooker	G-111905	Community Golf Course Irrigation	15,466,800	47.5	48
Hooker	G-141320	Golf Course – lawn / domestic / fire supp	63,015,400	194	186
Hooker	NR-9352	Golf Course – portable water	12,420,000	.03	.04
Hooker	G-162940	Golf Course Irrigation – Doak	65,759,700	202	286
Hooker	G-135198	Golf Course Irrigation - Nickalus	34,424,400	106	206
Hooker	G-137707	Driving Range Irrigation	17,254,800	53	57
Hooker	G-141035	Turf Nursery	40,100	.12	NA
Hooker	G-140590	Golf Course Air Strip	6,084,400	19	24
Logan	G-127099	Community Golf Course Irrigation	Meter not working		
Thomas	G-104962	Community Golf Course Irrigation	15,240,100	47	40
Thomas	G-014205	Tree, shrub & cover crop irrigation	2,406,900	7	10
Thomas	G-014206	Tree, shrub & cover crop irrigation	11,730,600	36	41
Thomas	G-014204	Tree, shrub & cover crop irrigation	3,312,600	10	8
Thomas	G-059745	Tree, shrub & cover crop irrigation	12,660,200	14	45
Thomas	G-021694	Tree, shrub & cover crop irrigation	7,648,900	23	28
TOTALS			350,198,200	981	1,169

NEW GROUNDWATER CONSUMPTIVE USES & NEW DEPLETIONS

For the 2025 expansion of irrigated acres the ULNRD received 9 applications with 9 being approved and of those approved 1 choose not to expand acres due to the cost. 984 acres were permitted and 844 acres were certified with an estimated groundwater depletion of 74-acre feet.

Use	County	Sec	Twn	Rng	Well Reg #	New Well	Acres Appr.	SDF	NIR	AF Depletions
Crop	Blaine	11	22	24	G-202614	Yes	94	.82	0.97	22.43
Crop	Blaine	24	22	21	G-089827	No	127	.77	0.97	28.46
Crop	Cherry	3	27	39	G-203029	No	140	.13	1.04	5.68
Crop	Cherry	6	27	39	G-020205	No	100	.09	1.04	2.81
Crop	Logan	2	17	26	G-200113	No	15	.54	1.075	2.49
Crop	Logan	12	17	29	G-201962	Yes	153	.04	1.075	1.88
Crop	McPherson	15	17	31	G-203134	Yes	135	.02	1.075	0.87
Crop	Brown	32	28	23	G-204203	Yes	80	.42	0.93	9.77
					TOTALS		844			74.39

TRANSFERS

No water transfer and no certified acre transfer permits were granted, cancelled or denied in 2025.

WELL CONSTRUCTION PERMITS

NRD Permit No.	County	Use	Status	Replacement	DNR Reg. No.
UL 214– 25	Logan	Irrigation - 2025	Approved	No	Never drilled

RETIREMENT OF GROUND WATER CONSUMPTIVE USES

No retirement of ground water acres in 2025.

WATER BANKING ACTIVITIES

To date the ULNRD does not have an established water banking system.

STREAM FLOW ACCRETIONS ACTIVITIES

At the time of this report there are no new projects or conjunctive management projects in any stages of development.

STREAM GAGE MEASUREMENTS

The ULNRD, along with USGS, operates 4 stream gauges within the District.

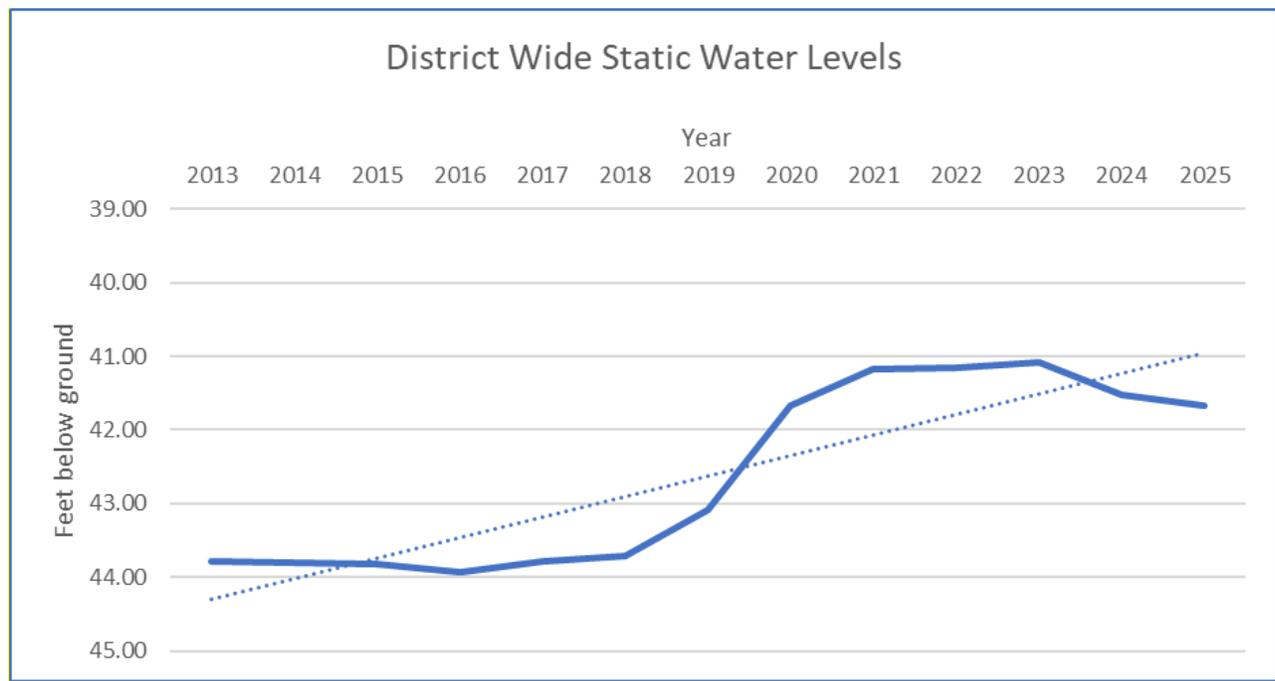
Station 06775500 Middle Loup at Dunning
 Station 06781600 South Loup at Arnold

Station 06775900 Dismal near Thedford
 Station 06785500 North Loup at Brewster

Streamflow data can be acquired from USGS's National Water Information System at <http://waterdata.usgs.gov/>

GROUND WATER ELEVATION DATA

The ULNRD collected spring static water levels from 133 wells. 105 of those have information going back 12 + years and were the wells used in the trending graph below. The most notable decrease occurred in Grant County; down little over a foot.



County	Change from 2023 to 2024	12-year change
Cherry	Down .44 of a foot	Up 1.98 feet
Grant	Down 1.25 feet	Up .33 of a foot
Hooker	No measurable change	Up 3.42 feet
Thomas	No measurable change	Up 3.52 feet
Blaine	Up .14 of a foot	Down .53 of a foot
Brown	No measurable change	Up .21 of a foot
Logan	Up .16 of a foot	Up 3.24 feet
McPherson	Down .65 of a foot	Up 4.82 feet

GROUNDWATER QUALITY DATA

Sub-District	Year	Well Type 10% of Irrig.	Sample Count Registered wells	Sample Count Non Registered	Average Nitrate 0-10 ppm	Sample Count Manganese Min 10%	Average Manganese 0-0.5 ppm .3 mg/L EPA
1	2025	Domestic Irrigation	9 0	31	2.89	22	.065
2	2025	Domestic Irrigation	6 2	3	1.91 1.50	3	.065
3	2025	Domestic Irrigation	6 0	11	2.82	3	.009
4	2025	Domestic Irrigation	11 13	11	2.78 1.32	4	.011
* 5	2025	Domestic Irrigation	57 63	48	1.90 2.95	8	.009

A ground water analysis for nitrate-nitrogen content in all registered active domestic, 10% of active irrigation, all active industrial and any requested non-registered domestic wells are performed once within a 5-year cycle, with the exception of those wells listed on DEQs Current Statewide Ground Water Monitoring Network which are tested annually.

A minimum of 10% of all wells sampled annually are sent to a reputable lab for analysis as a quality control measure. If a sample is found to contain 100% of the Maximum Contaminant Level 10 ppm or 10 mg/l of nitrate-nitrogen, a second sample is sent to a reputable lab for verification and quantification prior to any quality phase area designation.

ULNRD groundwater quality phase area criteria is as follows:

Phase I Area – areas that are not designated as either Phase 2 or Phase 3. 0 to 5.9 mg/L

Phase 2 Area – areas where 45% percent or greater of the nitrate nitrogen samples have tested between 6 to 8.5 mg/L for 4 consecutive years beginning in 2008.

Phase 3 Area – areas where 45% percent or greater of the nitrate nitrogen samples have tested between 8.6 to 10 mg/L for 4 consecutive years beginning in 2008.

NRD REGULATIONS / MANAGEMENT ACTIVITIES

The entire ULNRD is in the same Ground Water Management Area and thus abide by the same Rules and Regulations district wide.

Management activities in the District include:

- Any user who irrigates with ground water is required to have obtained certification
- Applications for the construction of a high capacity commercial / industrial wells shall provide a hydrological evaluation as well as the permit fee to the District
- No new high-capacity wells (≥ 50 gpm) shall be drilled within 300 feet from any active domestic well or within 1,320 feet of any other high capacity well
- All active high-capacity wells, irrigation/commercial shall be equipped with a flowmeter
- Annually approving not more than 2,500 acres across the entire District
- Annually collect, track, evaluate and report of: ground water level measurements; municipal, commercial, and agricultural water use; certified irrigated acres and any changes to certifications; well water construction permits approved, cancelled or denied; variances granted, cancelled or denied; and water transfer permits granted, cancelled, or denied

NEW DATA COLLECTED OR MODEL / STUDY RESULTS

The District is not currently involved in any new studies. ULNRD, with help of a grant with DNR is adding 9 new dedicated monitoring wells with telemetry capabilities.