

Water Committee Meeting  
Thursday, May 29, 2025 9:30 AM  
Lower Platte North NRD Office  
P.O. Box 126  
Wahoo, NE 68066

1. UNFINISHED BUSINESS

2. REGULATORY

2.A. GROUND WATER MANAGEMENT AREA

2.A.1. De-certification of irrigated acres in the Restricted Development Areas  
Roma Hutton is requesting to decertify irrigated acres in the NW NW S13-15N-6E, Saunders County. It was certified for irrigated acres in 2014 for 26.38 acres. She said the well has been dry for a few years and is planning on decommissioning the existing irrigation well G-045421. This tract of land is located in the Restricted Development Area.

2.A.2. Well Permit Program

2.A.3. Special Quantity Subareas

Tim Foltz contacted NRD staff on 5/12/2025. He was irrigating to activate the chemicals and overnight a pipe burst in the irrigation system. He reported a new reading the next day, which changed his water use from 4.73 to 5.29 inches in 2024.

2.A.4. Cost Share Programs

2.B. CHEMIGATION

For 2025, we have 427 renewals and 10 new permit applications for a current total of 437. No inspections for renewal permits have been completed.

3. GROUND WATER PROGRAMS

3.A. DECOMMISSIONED WELL PROGRAM

3.A.1. Well Estimates

One new well has been reviewed and approved for decommissioning since the last Committee meeting.

Well Owner	Type of Well	Cost Share Estimate	County
Roma Hutton	Irrigation	1,025.62	Saunders

### 3.A.2. Plugged Wells

One well has been plugged, reviewed, and ready for cost share payment approval this month.

Well Owner	Type of Well	Cost Share Estimate	Shell Creek Cost Share	County
Beverly Benson	Irrigation	\$744.09	\$1,072.92	Boone

### 3.B. LOWER PLATTE NORTH NRD GROUND WATER STUDIES

#### 3.B.1. Phase Area Update

Cost share Invoices are coming in for our Schuyler-Richland Cost Share

Name	Number or Meters	Total Amount
Allen Svatora	1	\$ 1,000.00
Kevin Koliha	5	\$ 5,000.00
Josh Faltys	4	\$ 4,000.00

We do have an invoice for Skytown Properties. We are waiting for acre verification.

#### 3.C. Email News Release

On May 20, 2025 we sent out the first "Healthy Water, Healthy Future" email blast to all producer emails we had on file, plus directors. The email included a welcome as to what information will be in the quarterly newsletter; an explanation of chemigation and reminder for the June 1 deadline for chemigation permits; an update of the Groundwater Management Plan; and an update for the spring groundwater levels.

The email was sent to 1,485 users, with an 82% delivery rate. Here are some of the reasons for emails not going through: connection issue with the internet service provider, email user's mailbox is full or inactive, the domain or IP has been blocked, and other unknown reasons. 42% of users opened the email, with 19 users clicking on links that were provided in the newsletter to different portions of the LPNNRD website. Unfortunately, we did have 6 users unsubscribe from the newsletter. Attached is a copy of the newsletter.

#### 3.D. Groundwater Modeling Project

Two years ago, the Lower Platte North along with LPS, Papio and NeDNR started the process of developing a Lower Platte Basin Groundwater Model by contracting with JEO, HDR and Longspring on a 3-year contract.

Attached is updated information and the 2nd year invoice of \$23,697.22 for this project. This project is on schedule to be completed in late 2025 with reviews done in early 2026.

3.E. SOURCE WATER

Installation of a transducer into Abie municipal well has been delayed due to repairs needed on the well.

The Source Water Protection Grant finally released their deadline for September 1st, 2025. The LPNNRD is helping Mead with the grant to update their Wellhead Protection Area.

3.F. Groundwater Management Plan

Jon Mohr and Dave Hume will explain the recommendations and costs that were shown at last month's committee meeting. Attached are the recommended projects and an invoice for \$1,121.50 for updating the Groundwater Management Plan.

Jon and Dave discussed the recommendations to the committee and staff. The Committee felt that re-examining the SQS areas with the new data after 10 years would be appropriate. They decided to look at the variance scoring sheet along with water quantity triggers. Staff will be budgeting \$75,000 for these studies for next fiscal year. Another option would be to use the groundwater sinking fund.

4. SURFACE WATER PROGRAMS

4.A. STATE LAKES, FOR THE WEEK OF

This week's beach Bacteria and Harmful Algal Bloom results are now posted on the NDEE web page ([Current Health Alerts and Sampling Results For This Week](#)).

There are no lakes on Health Alert this week!

However, with the thunderstorms in central and eastern Nebraska this past week we are seeing higher *E. coli* counts. Carter, Fremont No. 20, Holmes, Johnson, and Swan Creek (5A) Lakes all tested above 235 colonies/100 mL. Bacteria is everywhere in our environment and fallen rain water will pick it up as it runs off the landscape and finds its way into our streams, rivers, and lakes. The good news is that sunlight is a great disinfectant on *E.coli*. So, when the sun shines those bacteria numbers will drop very quickly.

There are **0** beaches on Health Alert this week.

<b>Current Lakes on Health Alert</b>			
<b>Lake</b>	<b>County</b>	<b>Microcystin (ppb)</b>	<b>Sample Date</b>
<b>None! ??</b>			

When a lake exceeds 8 ppb of microcystin it will be placed on Health Alert. If a lake is under a Health Alert, signs will be posted recommending people avoid full body contact activities such as swimming, wading, skiing, jet

skiing, etc.

There are **5** beaches with *E.coli* testing above 235 colonies/100 mL.

<b>Lakes with High <i>E.coli</i> Bacteria</b>			
<b>Lake</b>	<b>County</b>	<b><i>E.coli</i> (MPN)</b>	<b>Sample Date</b>
<b>Carter Lake</b>	<b>Douglas</b>	<b>&gt;2419</b>	<b>5/20/2025</b>
<b>Fremont Lake No. 20 (SRA)</b>	<b>Dodge</b>	<b>240</b>	<b>5/20/2025</b>
<b>Holmes Lake</b>	<b>Lancaster</b>	<b>866</b>	<b>5/19/2025</b>
<b>Johnson Lake</b>	<b>Gosper</b>	<b>1,203</b>	<b>5/19/2025</b>
<b>Swan Creek Lake (5A)</b>	<b>Saline</b>	<b>1,986</b>	<b>5/19/2025</b>

When *E. coli* bacteria levels test above 235 colonies/100 mL a Health Alert is not issued. However, conditions are at a higher risk to human health when swimming. Considering the more rapid changes in bacteria conditions, signs are not posted with these higher levels. Although, we want people to be aware of beach conditions and use their own judgment as to whether they use a listed water body.

Have a great Memorial Day weekend!

Justin Haas

**State Lakes Coordinator**

**Nebraska Department of Environment and Energy**

**245 Fallbrook Blvd., Suite 100**

**Lincoln, NE 68509-8922**

**Direct: 402-471-4224 | Main Office: 402-471-2186**

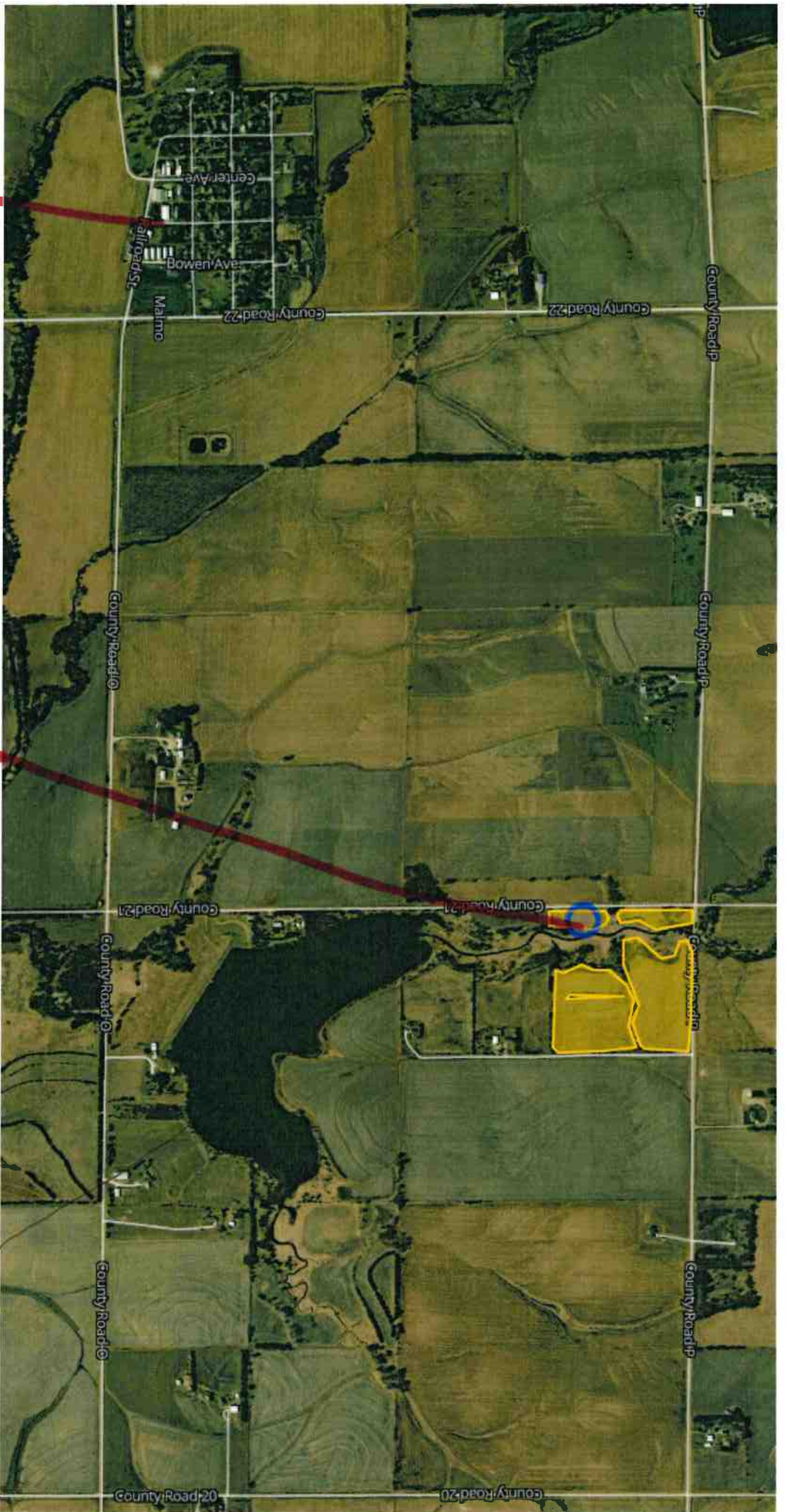
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5. GMDA Conference

Attached is information about the GMDA conference to be held in Idaho Falls, Idaho, July 21-23, 2025.

6. OTHER

6.A. COMMENTS FROM THE PUBLIC



Maine

22A

G-045421

Section 13-15N-6E

26.38 Acres cert. Fire &

July 8, 2014

Parcel 001049000

# CHEMIGATION - May 2025

## TOTAL CHEMIGATION APPLICATIONS IN 2024 (712)

### NEW CHEMIGATION APPLICATIONS - 10

(0) Boone (3) Butler (1) Colfax (3) Dodge (0) Madison (1) Platte (2) Saunders

### RENEWALS: 427

BOONE COUNTY - 43  
BUTLER COUNTY - 32  
COLFAX COUNTY - 35  
DODGE COUNTY - 56  
MADISON COUNTY - 7  
PLATTE COUNTY - 64  
SAUNDERS COUNTY - 190

### RENEWAL INSPECTIONS: 0

(0) Boone (0) Butler (0) Colfax (0) Dodge (0) Madison (0) Platte (0) Saunders

### NEW INSPECTIONS: 1

(0) Boone (1) Butler (0) Colfax (0) Dodge (0) Madison (0) Platte (0) Saunders

### NEW CANCELLATIONS: 3

(0) Boone (3) Butler (0) Colfax (0) Dodge (0) Madison (0) Platte (0) Saunders

### EMERGENCY: 0



## Welcome

The Lower Platte North Natural Resources District (LPNND) is pleased to announce the launch of this new quarterly newsletter, intended to keep you, our area's producers, knowledgeable about the latest developments, trends, and initiatives concerning water quality and quantity within the district. As the Lower Platte North Natural Resources District remains steadfast in its commitment to protecting Nebraska's groundwater for future generations, this newsletter will provide you with straightforward, informative updates, relevant data, and valuable insights into the vital work being done to manage this critical resource.

### **Why should I consider chemigation?**

Chemigation, also known as fertigation, allows producers to apply nitrogen fertilizer onto a crop during the peak uptake of nitrogen into the plant. By applying nitrogen at the correct time as shown through research, yields have increased which in turn increases profits for the producer. Naturally, when applying nitrogen to a growing crop it can potentially decrease leaching into the groundwater.

Chemigation is the practice of applying agrichemicals to your crops and soil by means of your irrigation system. This is commonly done using an injection pump that mixes the chemicals into your irrigation water between the well or water source and the irrigation conveyance system. Chemigation is done through gated pipe gravity systems, center pivots, and even subsurface drip systems. A permit and inspection are required by the local NRD before chemigation can begin.

Whether it being nitrogen, fungicide, herbicide, or insecticide, chemigation is a great practice to apply chemicals when they are truly needed by the crop. This will decrease pollution (if done properly) and increase efficiency of chemical use resulting in more profitability. If you are interested in learning more about chemigation or remote sensing for nitrogen, please contact the Lower Platte North NRD at (402) 443-4675, or visit [lpnnrd.org](http://lpnnrd.org).

## Chemigation Permits are due June 1

[Download a chemigation permit here](#)

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## Beneath Our Feet: the Future of Groundwater

How does the LPNNRD ensure sustainable groundwater for generations to come? The answer lies in a carefully crafted document called the Groundwater Management Plan. The first plan was developed in 1987 with the most recent update completed in 1995. Over the last 30 years the LPNNRD has completed more studies, research projects and updated maps on quality and quantity.

Over the last year, the LPNNRD has been updating the Groundwater Management Plan with current and previous information. This plan will serve as a guideline for how the district will manage groundwater for future generations. The plan includes but is not limited to new aquifer sub-area maps, updated geological information and revised goals and objectives that are vital to water quality and water quantity. The NRD utilized data from Airborne Electromagnetic Survey (AEM), hydrogeological assessments, groundwater levels and water sampling results to update the plan.

Over the course of reviewing and updating the plan, The LPNNRD has held stakeholder and public meetings as well as frequent meetings with the LPNNRD Water Committee board members to finalize the plan. A final public hearing will be held after all comments are addressed. The public

can review the plan by contacting the NRD office for a draft copy. After the plan is finalized, the Groundwater Rules and Regulation can be reviewed and updated if necessary.

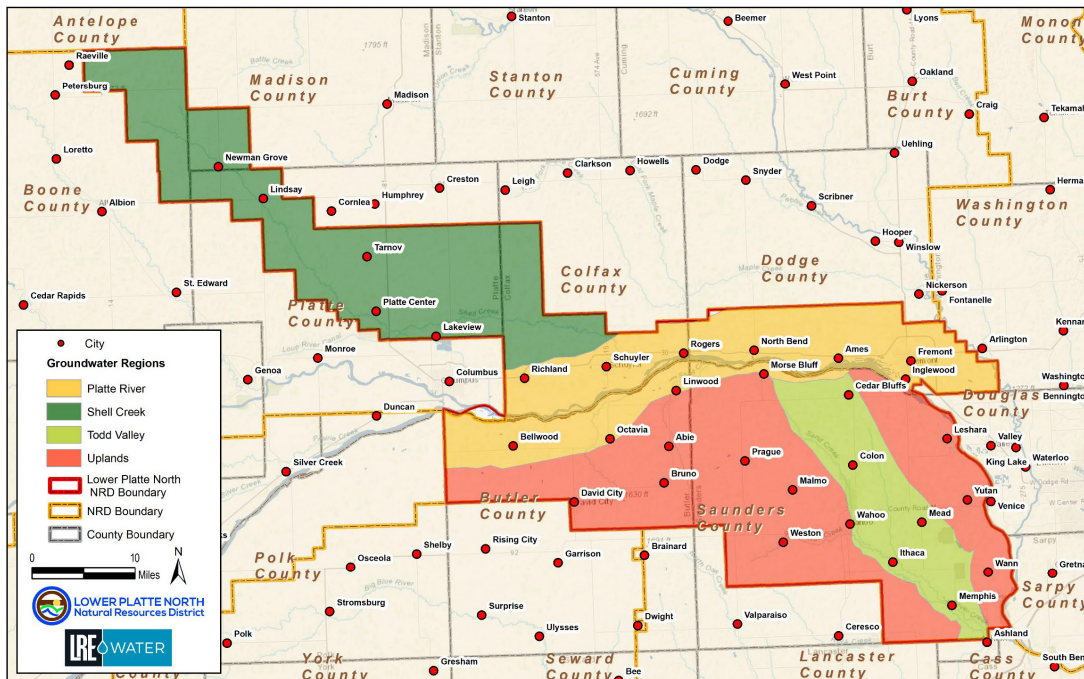
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## Groundwater Levels

One of the responsibilities of the Lower Platte North NRD is conducting water level measurements of groundwater. These levels are invaluable to monitoring so that groundwater remains available for future generations. Groundwater is used by 85% of the Nebraskans for human and livestock consumption, irrigation and industrial use.

The Lower Platte North NRD has completed its 2025 spring water levels and have analyzed the district levels. Four aquifer areas exist within the NRD boundaries: Uplands, Platte Valley, Todd Valley and Shell Creek. The water level analysis looks at these areas separately for a better representation of that area. Visit [lpnnrd.org](https://lpnnrd.org) to view the current information.

The district actively monitors the drought map and maintains close communication with communities and state agencies to proactively address concerns if the drought continues. Currently, LPNNRD is collaborating with agencies to develop a drought plan to assist communities. If you would like information on basin-wide planning efforts, please visit: <https://dnr.nebraska.gov/water-planning/lower-platte-river-basin>.



How did I get this? The Lower Platte North NRD Water Resources Department is working to ensure landowners and producers across our district are able to receive current news and updates as much as possible! We are testing a new email marketing system to assist in our communications. Stay subscribed for more updates coming soon!



**Lower Platte North Natural Resources District**

511 Commercial Park Road  
 P.O. Box 126  
 Wahoo, NE 68066  
 402-443-4675  
 lpnrd@lpnrd.org

[Privacy](#)  
[Imprint](#)  
[Unsubscribe](#)

**PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT**

**INVOICE**



Papio-Missouri River NRD  
 8901 S. 154th Street  
 Omaha, NE 68138  
 (402) 444-6222

INVOICE NUMBER **LPGW20252**  
 INVOICE DATE **April 30, 2025**

TO: **Lower Platte North Natural Resources District**  
**PO Box 126**  
**Wahoo, NE 68066**

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	Lower Platte River Sub-Regional Groundwater Modeling	23,697.22	\$23,697.22
		SUBTOTAL	\$23,697.22
		TAX	\$0.00
		FREIGHT	
			<b>\$23,697.22</b>
			<b>PLEASE PAY THIS AMOUNT</b>

**DIRECT ALL INQUIRIES TO:**  
 Philip Paitz  
 402 444-6222  
 email: ppaitz@papiord.org

**MAKE ALL CHECKS PAYABLE TO:**  
**Papio-Missouri River NRD**  
 8901 S. 154th Street  
 Omaha, NE 68138

Payment is due by 6/30/24



# Lower Platte River Sub-Regional Groundwater Modeling Coordination Meeting Agenda

**DATE AND TIME** | May 15, 2025; 10:00 a.m. – 11:30 a.m.

**PROJECT** | Lower Platte River Sub-Regional Groundwater Modeling

**JEO PROJECT NO.** | 221004.00

**LOCATION** | LPS NRD and Teams

**Primary goals of the meeting:**

- **Discuss progress updates**

## 1. Model Progress Update

- a. Documentation
  - i. Chapter 1 and 2 (Intro and Watershed Model): Draft complete, under internal review.
  - ii. Chapter 3 (Model construction): Incorporating collective review comments. Discuss any follow-ups on comments.
    1. Model Naming
    2. Others
  - iii. Chapter 4 and 5 (Calibration and Conclusion/Discussion): progress underway, awaiting results of the calibration.
  - iv. Task 200 Documentation: Draft complete. Finalizing internal comments, to provide to Collective.
- b. Calibration
  - i. Review calibration results
- c. QC/Review
  - i. Review of model development and documentation ongoing

## 2. Other Project Discussion

- a. Data Needs Review (all items complete)
- b. Action Item Review (attached)

## 3. Budget and Schedule

- a. Budget: \$442,451.13/ \$612,823.00 (including work in progress).
- b. Review revised schedule: when the schedule was revised, it was squeezed to expedite the process.

## 4. Next Steps

- Technical Coordination in June to follow-up on calibration?
- Once calibration is finalized, plan for additional model use training.
  - o Structure and organization of parent child model.
  - o Training on parent-child coupling of this model to other models.
  - o Training on how to run this developed calibrated groundwater model.
- Finalize model documentation/testing and QC documentation

## 5. Questions/Action Items



## Lower Platte River Sub-Regional Groundwater Modeling Coordination Meeting Agenda

### Minutes:

- Documentation
  - Drafts of Chapters 1 & 2 are under internal review.
  - Chapter 3 (Model Construction) is in progress with ongoing comment incorporation.
  - Agreed to name the model Lower Platte 3 District Groundwater Model (LP3D).
  - Geological description will be added to Chapter 1. The NeDNR requested a paragraph or so to discuss the model's geologic setting and the justification/need for use of AEM data.
- Calibration
  - Developed calibration framework with preprocessing and postprocessing steps.
  - Have performed a few calibration iterations.
  - Pumping layers adjusted for formation accuracy and proximity to rivers.
  - Calibration targets refined:
    - 69 outlier wells excluded.
    - Soft targets and headwater controls added.
  - Baseflow simulation underrepresents seasonal variations. Modeling team will continue investigating and refining during calibration to address this.
  - Problems in western region due to boundary and stratigraphy errors from regional model.
  - 90% of wells show improvement over LPMT model.
  - Discussed confined aquifers. Michael explained that the model can accurately handle confined aquifers based on head in cells.
  - Plan to understand/address major issues and unknowns over the next month.
  - Mahesh discussed considering focusing calibration on changes in groundwater levels rather than absolute elevations.
    - Feedback was re-weighting rather than dropping targets.
- Scenario Testing
  - Plan to test:
    - $\pm 20\text{--}30\%$  changes in recharge, ET, and pumping (intervals).
    - Test wells in aquifer poor regions.
  - Michael will draft a scenario test plan for group feedback.
- External Validation Data
  - Justin to provide NAIP imagery analysis data for stream wetness. Mahesh/Michael to evaluate including this in the calibration or as a separate post-calibration validation dataset.
  - Justin found 8% of SFR cells with upstream flow to higher elevation cells.
    - Plans to share Excel and shapefiles for QA/QC.
- Schedule & Timeline
  - Calibration to be completed by mid to late July 2025.
  - Stress testing, model use training, documentation wrap-up, and calibration QC in August–September 2025.
  - Final delivery targeted for October 1, 2025.
  - Coalition update extended by one year.
- Next Meeting
  - Scheduled for June 17, 2025, at 10:00 AM (Virtual).

## Lower Platte River Sub-Regional Groundwater Modeling - Action Items

Through 15 May 2025

Item No.	Action Item	Origination Date	Responsible Party	Task Notes	Status
36	Look back at area of large discrepancy with observed during transient calibration and evaluate a need for changes in LMPT model.	16-Jan-25	Modeling Team		Ongoing
37	Compare wells to model in the Omaha area to get a sense of accuracy in transient calibration.	16-Jan-25	Modeling Team		Ongoing
43	Add paragraph description of geologic setting, project need in Chapter 1 of reporting.	5/15/2025	Modeling Team		Tracking
44	Justin to send data related to NAIP and SFR review discussed in 5/15/2025 meeting.	5/15/2025	NeDNR		Tracking
45	Michael to provide list of stress testing scenarios.	5/15/2025	Modeling Team		Tracking



## **Scenarios for Model Stress Testing**

### **• New Pumping Wells**

Each Natural Resources District (NRD) may propose up to five potential locations for new pumping wells. The modeling team will develop individual simulations incorporating these proposed well locations to evaluate the resulting hydrologic impacts. These analyses will assess changes in groundwater levels, stream depletion, and groundwater storage associated with the new pumping activities.

### **• Climate Change Scenarios**

To assess the model's sensitivity to potential climate-driven changes, the following scenario types will be evaluated:

- **Groundwater Recharge Variability**

Scenarios will be generated by adjusting the groundwater recharge rates by  $\pm 5\%$ ,  $\pm 10\%$ , and  $\pm 20\%$ .

- **Groundwater Evapotranspiration (ET) Variability**

Scenarios will be created by modifying potential groundwater ET rates by  $\pm 5\%$ ,  $\pm 10\%$ , and  $\pm 20\%$ .

- **Surface Water Inflow Variability**

Scenarios will involve altering inflow volumes to the Elkhorn River, Platte River, and Missouri River by  $\pm 5\%$ ,  $\pm 10\%$ , and  $\pm 20\%$ .

These scenarios are designed to test the robustness of the model under a range of plausible future conditions and to identify potential vulnerabilities in regional water resources.

## Memorandum

**To:** Daryl Andersen, LPNNRD

**From:** Jonathan Mohr, LRE Water & Roscoe Sopiwnik, PG, LRE Water

**Copy to:** Eric Gottschalk & Ryan Chapman, LPNNRD; Dave Hume, PG, LRE Water

**Date:** April 30, 2025

**Project:** Groundwater Management Plan Update

**Subject:** Key Recommendations Summary and Budgeting Cost Estimate

The Groundwater Management Plan (GWMP) Update (current version 7.0) included several recommendations for the LPNNRD to enhance their methods of groundwater management. These recommendations were presented and discussed with staff and the Board of Directors during a retreat on February 7, 2025. Overall, the staff and Board expressed support for the proposed recommendations.

This document provides budget-level cost estimates for each recommendation outlined below. **Please note that these cost estimates are intended for budgeting purposes only. LRE Water can provide a detailed scope of work and refined cost estimates upon request.** LRE Water can also assist with grant applications to support the implementation of these key recommendations.

### Recommendations:

1. Adoption of Groundwater Management Subareas
2. Expansion of the Observation Well Network
3. Updating the Variance Scoring Sheet
4. Quantity Trigger Adjustments
5. Clarification of Terminology
6. Re-evaluation of Special Quantity Subareas
7. Enhancement of Data Transparency and Communication
8. Reassessment of Water Quality Triggers

## 1. Adoption of Groundwater Management Subareas

During the GWMP update process, LRE Water refined the existing subareas and thoroughly discussed the boundaries with staff and the Board of Directors. The Board has given initial approval for the use of subareas. No additional work by LRE Water is expected aside from assisting with the incorporation of subareas into the rules and regulations. The final subareas have been provided to LPNNRD.

**Preliminary Cost Range:** Not Applicable

## 2. Expansion of the Observation Well Network

The LPNNRD has already begun expanding the observation well network by obtaining funding from NeDNR to purchase several pressure transducers with loggers for use in observation wells within Wellhead Protection (WHP) areas. Additionally, a grant application for the Water Sustainability Fund (WSF) was submitted in March 2025 to secure funding for 29 additional observation wells with loggers and telemetry near Public Water Supply systems.

Following the Hydrogeologic Assessment in 2024, LRE Water identified several data gaps outside WHP areas. To address these, LRE Water can conduct a detailed observation well siting assessment that includes:

1. **Defining Objectives:** Determine the purpose of observation wells, such as monitoring water levels, quality, or both. Collaborate with LPNNRD staff to identify priority areas.
2. **Site Selection:** Choose locations based on hydrogeologic conditions, proximity to high-capacity wells, and accessibility.
3. **Design Specifications:** Select appropriate depths, screen intervals, and types to ensure functionality and support decision-making.

This assumes there is no field work and no equipment cost have been included.

**Preliminary Cost Range:** \$15,000 - \$20,000

## 3. Updating the Variance Scoring Sheet

During the GWMP update process, LRE Water reviewed the variance scoring sheet and recommended significant modifications, including the creation of separate sheets for confined and unconfined aquifers. Additional criteria, such as the Resource Development Risk Map, updated ranges of new consumptive uses, well density, water level trends, and nitrate concentrations, were suggested.

LRE Water will develop two scoring sheets (confined and unconfined aquifer setting) and work with LPNNRD staff to test each sheet against past scoring sheet evaluations and Board recommendations for variance actions.

**Preliminary Cost Range:** \$10,000 - \$12,000

#### **4. Rules and Regulation Update**

Implementation of several of the recommendations would require an update to the rules and regulations. LRE Water will provide technical assistance and input to LPNNRD staff as the District updates their rules and regulations. This would include at least further review and recommendations for altering water quantity triggers, incorporating subareas, and making suggestions on clarification of key terminology.

The focus would be on quantity triggers. Although quantity triggers have been in place since 1987, they have yet to be used by LPNNRD to implement a Groundwater Management Area. Revising the quantity triggers methodology could likely be completed immediately before or during an official update of the rules and regulations.

Key tasks include:

1. **Clarification of terminology** - Revising rules and regulations to ensure terminology and definitions are clear and consistent. Examples include terms such as "Trigger Level," "Control Areas," "Subareas," and "Groundwater Management Areas."
2. **Quantity Triggers** – Working with staff and the Board to create an updated methodology to evaluate areas with declining water levels. Incorporate the new method.
3. **Subareas** - Incorporating language that describes the purpose and intent of the subareas.
4. **Document Formatting:** Provide support in updating and refining the format of the existing documents.

**Preliminary Cost Range:** \$25,000 - \$30,000

If the LPNNRD requests assistance with other aspects of the rules and regulation update, LRE Water will update the preliminary cost range.

#### **5. Clarification of Terminology**

Clarification of terminology is included as part of the rules and regulation update outlined above.



## 6. Reevaluation of Special Quantity Subarea Boundaries

The Special Quantity Subareas (SQS) established in 2016 aim to address aquifer level declines during peak irrigation periods that risk water shortages in shallower wells. Periodic boundary reevaluations are essential for monitoring and effective management. This study proposes a hydrogeologic reassessment of Butler/Saunders SQS #1 and Platte/Colfax SQS #2, leveraging existing data, Airborne Electromagnetic (AEM) surveys, and hydrogeologic insights. The proposed tasks include:

- Conducting a desktop review of water levels within and around the SQS areas, incorporating data from neighboring NRDs.
- Integrating Hydrogeologic Assessment the 3D AEM Framework data to characterize project-area hydrogeology.
- Obtain and review historic metered well pumping volumes.
- Developing a Geographic Information System (GIS) model to visualize historic groundwater changes, including an animated representation.
- Producing a detailed report with findings, data gaps, and recommendations for potential boundary modifications.

**Preliminary Cost Range:** \$30,000 - \$35,000

NOTE: The Lower Platte River Basin Sub-Regional Groundwater Model is under construction as of May 2025. If available, LRE Water can use this groundwater model to review potential changes in water levels given a variety of water management scenarios, such as pumping allocations. If groundwater modeling is desired, LRE Water can provide an update to this preliminary cost range.

## 7. Enhancement of Data Transparency and Communication

Improved real-time data collection and web-based visualization tools can enhance transparency and public communication. Recommendations include:

- Developing an online data visualization tool to display recent nitrate concentrations, water level trends, and related information.
- Sharing maps and data from the Hydrogeologic Assessment, GWMP, and rules and regulations.
- Establishing a system for public notifications through text messaging or email about upcoming events, meetings, and policy changes.

In April 2025, LRE Water significantly updated the Nitrate Risk Tool (Tool) to cover the Shell Creek Watershed down to the Schuyler/Richland GWMA. There are many expanded features of the new Tool that could be leveraged and expanded to the remainder of the District:

- Rapid display of additional well data such as status, depth, nitrate concentrations, and depth to water.
- Integration and public sharing of Hydrogeologic Assessment data like transmissivity and saturated sand thickness.
- Incorporation of LPNNRD's real-time water level data, spring/fall water levels, and other data sources.

Note: The Nitrate Risk Tool feature itself would not be expanded to the remainder of the District, only the additional basic features of the Tool.

**Preliminary Cost Range:** \$40,000 - \$45,000

#### **8. Water Quality Trigger Update**

There were many discussions related to changes to the current water quality trigger and questions on how to justify a change. LRE Water would not be involved in providing input related to potential changes to the water quality trigger update, unless requested.

**Preliminary Cost Range:** Not applicable



May 1, 2025  
 Invoice No: 29927

<b>Invoice Total:</b>	<b>\$1,121.50</b>
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Daryl Andersen  
 Lower Platte North NRD  
 511 Commercial Park Road  
 Wahoo, NE 68066-0126

**Please Remit To:**  
**LRE Water**  
**1221 Auraria Pkwy**  
**Denver, CO 80204**  
**(303) 455-9589**  
**billing@LREwater.com**

Invoice Email: dandersen@lpnrd.org  
 Project No.: 5036LPN03  
 Project Name: LPNNRD GW Management Plan

**Professional Services through April 26, 2025**

Task 06 Review Spring/Fall Wells

**Professional Personnel**

	<b>Hours</b>	<b>Rate</b>	<b>Amount</b>
Libra, Jon	4.00	151.00	604.00
Mohr, Jonathan	2.50	207.00	517.50
Totals	6.50		1,121.50
<b>Total Labor</b>			<b>\$1,121.50</b>

**Total this Task \$1,121.50**

**Total this Invoice \$1,121.50**

**Outstanding Invoices**

<b>Number</b>	<b>Date</b>	<b>Balance</b>
29746	4/14/2025	2,906.75
<b>Total</b>		<b>\$2,906.75</b>

**Total Now Due \$4,028.25**

## **Special Quantity Subarea Reevaluation – DRAFT Scope**

The Special Quantity Subareas (SQS) established in 2016 aim to address aquifer level declines during peak irrigation periods that risk water shortages in shallower wells. Periodic boundary reevaluations are essential for monitoring and effective management. This study proposes a hydrogeologic reassessment of Butler/Saunders SQS #1 and Platte/Colfax SQS #2, leveraging existing data, Airborne Electromagnetic (AEM) surveys, and hydrogeologic insights. The proposed tasks include:

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- Obtain and review historic metered well pumping volumes.
- Developing a Geographic Information System (GIS) model to visualize historic groundwater changes, including an animated representation.
- Producing a detailed report with findings, data gaps, and recommendations for potential boundary modifications.

The Study Area is defined as two miles around each SQS area.

### **1. SCOPE OF SERVICES**

#### **Task 1: Data Collection and Project Management**

- Complete typical project management activities including invoicing, progress reports, coordination, and one virtual kickoff meeting.
- Complete a kickoff meeting with LPNNRD staff and revisit the reasoning and justification for establishing the SQS boundaries.
- Work with LPNNRD to identify, obtain, and review existing hydrogeologic data, reports, and studies relevant to the Project. This includes LRE Water's Hydrogeologic Assessment Report and 3D AEM Framework projects in 2019, and other sources such as the University of Nebraska Lincoln-Conservation Survey Division, NeDNR, and US Geological Survey.
- Obtain updated hydrographs from spring/fall observation wells and dedicated wells within the Study Area.
- Compile and inventory available datasets, provide a brief summary of the information from each source, and assess the quality and relevance of the data used in the Study.

## **Task 2: Desktop Review**

- Utilize the LPNNRD Assessment data to develop maps detailing AEM flight locations, aquifer thickness, transmissivity, groundwater elevation and flow direction, depth to groundwater, saturated sand thickness, and similar datasets within the Study Area.
- Create up to two additional hydrogeologic cross sections per SQS area illustrating the land surface, clay, sand/gravel aquifers, and wells. The new cross sections will include the location of spring/fall and dedicated observation wells, if adequate construction data is available.
- Using Geographic Information Systems (GIS), LRE Water will create an illustrative rendering of groundwater changes overtime using existing water level data. The animation will be used to identify areas of decline and also be used to share information with the public.
- Identify data gaps by providing a GIS layer of specific wells to be added to the water level monitoring network for future monitoring by LPNNRD staff.
- Create a map illustrating areas by section that have experienced steady water level declines since the SQS was initiated in 2016.

## **Task 3: Reporting and Presentation**

- Provide a report that summarizes the findings of the Study including the purpose, background information including all data sources, summary of hydrograph trends by section, Study Area hydrogeology, and recommendations for the location of future observation wells.
- Provide one formal presentation of all the findings to the LPNNRD Water Committee and Board of Directors.

## **2. TIME REQUIRED**

LRE Water is assuming the Project will be authorized by the LPNNRD in June 2025. The complete Project is expected to take up to four months with a presentation to the Board of Directors at the November 2025 Board Meeting. A detailed schedule will be established and shared with the LPNNRD at the kick-off meeting.

## **3. PAYMENT**

The estimated time and materials fee to complete the Project outlined below will not exceed \$29,000. The estimated distribution of compensation is outlined in the table



below. The costs include LRE Water’s labor and expenses, which includes mileage, lodging, and meals. LRE Water will begin invoicing after NNRD’s July 1, 2025, fiscal year.

<b>PROJECT TASKS</b>		<b>COST</b>
1	Data Collection and Project Management	\$5,000
2	Desktop Assessment	\$11,500
3	Report and Presentation	\$12,500
TOTAL (3 TASKS)		\$29,000

DRAFT



**TUESDAY, JULY 22**

8:00 a.m.	<p><b>MANAGING IDAHO'S GROUND WATER</b> PART 1 - A CONNECTED RESOURCE</p> <ul style="list-style-type: none"><li>• Hydrology of the ESPA, its connection with the Snake River and tributary basins</li><li>• History of conjunctive management</li></ul>
9:30 a.m.	<p><b>MANAGING IDAHO'S GROUND WATER</b> PART 2 - FINDING AGREEMENT</p> <ul style="list-style-type: none"><li>• 2024 mitigation plan, including on-the-ground implementation</li></ul>
10:15 a.m.	<p><b>BREAK</b></p>
10:45 a.m.	<p><b>MANAGING IDAHO'S GROUND WATER</b> PART 3 - LOOKING FORWARD</p> <ul style="list-style-type: none"><li>• Aquifer recharge and injection wells</li><li>• Cloud Seeding</li></ul>
12:00 p.m.	<p><b>LUNCH ON THE SNAKE RIVER</b> RIVER VIEW TERRACE</p>
1:00 p.m.	<p><b>GMDA MEMBER STATES GROUND WATER ISSUES</b></p>
4:00 p.m.	<p><b>NATIONAL UPDATE</b> LEGAL / REGULATORY UPDATE</p>
4:30 p.m.	<p><b>RECEPTION</b> RIVER VIEW TERRACE</p> <p><b>GMDA BOARD MEETING</b> PALLISADES BALLROOM - BAY A</p>



**WEDNESDAY, JULY 22**

8:00 a.m.	<b>DEPART FOR TOUR</b> LOAD BUSES AT 7:30 A.M.
9:30 a.m.	<b>AQUIFER RECHARGE PIT</b> <ul style="list-style-type: none"><li>• Discussion of recharge program</li><li>• Map of recharge pits along ESPA</li></ul>
10:30 a.m.	<b>POTATO PROCESSING PLANT OR ANHEUSER BUSCH FACILITY</b> <ul style="list-style-type: none"><li>• Discussion about facilities are engaging with their growers to address water challenges</li></ul>
12:30 p.m.	<b>RETURN TO HOTEL / BOX LUNCH / OPTIONAL AFTERNOON TOUR BEGINS</b>
1:15 p.m.	<b>IDAHO NATIONAL LABORATORY TOUR</b>
3:00 p.m.	<b>RETURN TO HOTEL / ADJOURN</b>



# GMDA Summer Conference

## July 21-23, 2025

### Idaho Falls, Idaho

**GMDA SUMMER CONFERENCE**  
**JULY 21-23, 2025**  
**IDAHO FALLS, IDAHO**  
**HOSTED BY**  
**ID WATER USERS ASSOCIATION**  
**YMD JOINT WATER**  
**MANAGEMENT DISTRICT**

### Conference Registration

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Spouse/Guest Name: \_\_\_\_\_

Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

For room reservations at the Hilton Garden Inn, call (208) 522-9500 and request the **GMDA Event Room Block** or by following **this [booking link](#)**. For room reservations at the TRU by Hilton, call (208) 522-8500 and request the **GMDA Event Room Block** or by following **this [booking link](#)**. **Room block rate rates expire on June 30, 2025.**

#### Conference Attendee Registration includes:

Welcome Reception Monday night - RSVP reception attendance Yes \_\_\_ No \_\_\_

Will attend Wednesday morning field trip [Recharge pit/Food Processing Plant] Yes \_\_\_ No \_\_\_

Will attend Wednesday afternoon field trip [ID Natl Lab Tour] Yes \_\_\_ No \_\_\_

All sessions Tuesday through Wednesday

Including Welcome Reception Monday, Breaks, Lunch (Tuesday & Wednesday), Tuesday Reception

Registration received before June 27, 2025: \$400.00 \_\_\_\_\_

Registration received after June 27, 2025: \$500.00 \_\_\_\_\_

#### Spouse/Guest Attendee Registration includes:

Spouse/Guest Registration fee includes Welcome Reception, Lunch (Tuesday & Wednesday), Tuesday Reception, Cooking Class (Tues a.m.), Paint & Sip (Tues p.m.).

Registration received before June 27, 2025: \$225.00 \_\_\_\_\_

Registration received after June 27, 2025: \$275.00 \_\_\_\_\_

Welcome reception Monday night - RSVP reception attendance Yes \_\_\_ No \_\_\_

Will attend Tues a.m. Cooking Class Mama Fla Italian Cooking Yes \_\_\_ No \_\_\_

Will attend Tues p.m. Paint & Sip by Linda Aman Yes \_\_\_ No \_\_\_

Will attend Wednesday a.m. field trip [Recharge pit/Food Processing Plant] Yes \_\_\_ No \_\_\_

Will attend Wednesday p.m. field trip [ID Natl Lab Tour] Yes \_\_\_ No \_\_\_

#### **Total cost:** \_\_\_\_\_

Please include a check with your registration form made payable to YMD Joint Water Management District, P.O. Box 129, Stoneville, MS 38776



**MONDAY, JULY 21**

5:30 p.m.	<p align="center"><b>WELCOME DINNER</b> SANDPIPER 750 LINDSAY BLVD, IDAHO FALLS</p>
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**TUESDAY, JULY 22**

8:00 a.m.	<p align="center"><b>GMDA CONFERENCE</b> PALISADES BALLROOM REGISTRATION OPENS AT 7:00 A.M.</p>
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9:00 a.m.	<p align="center"><b>COOKING CLASS</b> MAMA FLA ITALIAN COOKING 355 RIVER PARKWAY, IDAHO FALLS</p>
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12:00 p.m.	<p align="center"><b>LUNCH ON THE SNAKE RIVER</b> RIVER VIEW TERRACE</p>
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1:00 p.m.	<p align="center"><b>GMDA CONFERENCE</b> PALISADES BALLROOM</p>
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1:30 p.m.	<p align="center"><b>PAINT &amp; SIP</b> PROVIDED BY LOCAL ARTIST, LINDA AMAN PALISDADES BALLROOM - BAY A</p>
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4:30 p.m.	<p align="center"><b>RECEPTION</b> RIVER VIEW TERRACE</p>
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**LEGEND**

<p align="center">CONFERENCE REGISTRANT AGENDA</p>	<p align="center">SPOUSE ACTIVITY</p>	<p align="center">CONFERENCE REGISTRANT AND SPOUSE ACTIVITY</p>
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**Wednesday  
July 23**

8:00 a.m.

**MORNING GROUP TOUR**  
DEPART FROM THE HOTEL PARKING LOT

12:00 p.m.

**LUNCH**  
BOX LUNCH PROVIDED / RETURN TO HOTEL

1:00 p.m.

**AFTERNOON GROUP TOUR**  
DEPART FROM THE HOTEL PARKING LOT

4:00 p.m.

**ADJOURN**