

# Water and Sewer Board

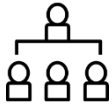
## Regular Meeting

City Council Chambers – City Center South

1001 11<sup>th</sup> Avenue – Greeley, Colorado

March 20, 2024 at 2:00 p.m.

Regular meetings of the Water and Sewer Board are held **in person** on the 3rd Wednesday of each month in the City Council Chambers, 1001 11<sup>th</sup> Avenue, Greeley, Colorado.



If you choose to join virtually please use this Zoom link:

<https://greeleygov.zoom.us/j/84218093588>



Members of the public may attend and provide comment during public hearings.



Written comments may be submitted by US mail or dropped off at the Water and Sewer office located at 1001 11<sup>th</sup> Avenue, 2nd Floor, Greeley, CO 80631 or emailed to [wsadmin@greeleygov.com](mailto:wsadmin@greeleygov.com). All written



comments must be received by 10:00 a.m. on the date of the meeting.

Meeting agendas and minutes are available on the City's meeting portal at [Greeley-co.municodemeetings.com/](https://greeley-co.municodemeetings.com/)

### IMPORTANT – PLEASE NOTE

This meeting is scheduled as an **in-person session only**. If COVID, weather, or other conditions beyond the control of the City dictate, the meeting will be conducted virtually and notice will be posted on the City's MuniCode meeting portal by 10:00 a.m. on the date of the meeting (<https://greeley-co.municodemeetings.com/>).

In the event it becomes necessary for a meeting to be held virtually, use the link below to join the meeting. Virtual meetings are also livestreamed on YouTube at <https://www.youtube.com/CityofGreeley>.

For more information about this meeting or to request reasonable accommodations, contact the administrative team at 970-350-9801 or by email at [wsadmin@greeleygov.com](mailto:wsadmin@greeleygov.com)



**March 20, 2024 at 2:00 PM**  
**1001 11th Avenue, City Center South, Greeley, CO 80631**

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### Agenda

1. Roll Call:                      \_\_\_\_\_ Chairman Harold Evans                      \_\_\_\_\_ Vice Chairman Mick Todd  
                                         \_\_\_\_\_ Ms. Cheri Witt-Brown                      \_\_\_\_\_ Mr. Fred Otis  
                                         \_\_\_\_\_ Mr. Joe Murphy                      \_\_\_\_\_ Mr. Tony Miller  
                                         \_\_\_\_\_ Mr. Manuel Sisneros                      \_\_\_\_\_ Mayor John Gates  
                                         \_\_\_\_\_ Mr. Raymond Lee                      \_\_\_\_\_ Ms. Tyra Litzau
2. Approval of Minutes
3. Approval of the Agenda
4. Welcome New Employees and Promotions
5. Colorado Drinking Water Revolving Fund Loan for the Lead Service Identification and Replacement Project
6. WTRF – Nitrification Phase 2 Performance Update
7. Legal Report
8. Director's Report
9. Such Other Business That May Be Brought Before the Board Added to This Agenda by Motion of the Board.
10. Executive Session
  - a. Bi-Annual Water Market Report
11. Adjournment



If, to effectively and fully participate in this meeting, you require an auxiliary aid or other assistance related to a disability, please contact the Water and Sewer Department administrative staff at 970-350-9801 or [wsadmin@greeleygov.com](mailto:wsadmin@greeleygov.com)

**City of Greeley  
Water and Sewer Board  
Minutes of February 21, 2024  
Regular Board Meeting**

Chairman Harold Evans called the Water and Sewer Board meeting to order at 2:01 p.m. on Wednesday, February 21, 2024.

**1. Roll Call**

The Clerk called the roll and those present included:

**Board Members:**

Chairman Harold Evans, Vice Chairman Mick Todd, Fred Otis, Tony Miller, Joseph Murphy, Manuel Sisneros, Cheri Witt-Brown, Division Treasurer Robert Miller on behalf of Interim Director of Finance Debbie Reid

**Water and Sewer Department staff:**

Director Sean Chambers, Deputy Director of Utility Finance and Customer Service Erik Dial, Chief Engineer Adam Prior, Office Manager Gigi Allen, Water Enterprise Financial Analyst Crystal Sanchez, Administrative Assistant III Lisa Van Vorous, Water Resource Planning Manager Kelen Dowdy, Water Conservation Manager Dena Egenhoff, Utility Finance Manager Virgil Pierce, Water Resource Operations Manager Leah Hubbard, Plans Examiner Derek Hannon, Water Efficiency Resource Coordinator Margarita Padilla-Pizarro, W&S Intern I Adam Schoefield, Water Resource Administrator II Megan Kramer, W&S Engineer IV Ryan Duve, Water Conservation Coordinator Ruth Quade, Water Resource Administrator II Alex Tennant, Water Conservation Specialist II Rita Jokerst, Water Conservation Specialist II Ben Schaffer, Communication Specialist II Cory Channell,

**Legal Counsel:**

Senior Environmental and Water Resources Attorney Dan Biwer, Environmental and Water Resources Attorney I Arthur Sayre, Counsel to Water & Sewer Board Attorney James Noble

**Guests:**

Emeritus Bob Ruyle, James Sutherland from Wingfoot, Section Chief of Interstate, Federal, and Water Information Section Amy Ostdiek, City Clerk Administrative Assistant II Ashton Reinhardt

**2. Approval of Minutes**

Mr. Miller made a motion, seconded by Mr. Otis to approve the January 2024 Water and Sewer Board meeting minutes. The motion carried 7-0.

**3. Approval of Agenda**

There were no changes to the agenda.

**4. Welcome New Employees and Promotions**

Director Sean Chambers provided an introduction of new Water and Sewer Department employees starting this month.

**5. Colorado River Update**

Amy Ostdiek provided the Board an update on the 1922 Colorado River Compact (1922 Compact) and discussed how current operation of the 1922 Compact affects the states in the Upper and Lower Basins. She also discussed how the current operations of the 1922 Compact affects the levels of Lake Mead and Lake Powell, and efforts currently underway to revise existing guidelines for operation of those reservoirs.

**6. Recommend City Council Approve IGA Regarding Certain Aspects of the Halligan Water Supply Project**

Kelen Dowdy discussed that the City of Fort Collins and the City of Greeley are engaging in discussions regarding the Halligan Water Supply Project, aimed at enlarging the Halligan Reservoir on the North Fork of the Poudre River. These discussions include efforts to address potential water quality impacts resulting from operational changes to the river and potential adjustments to operations and reservoir releases at Milton Seaman Reservoir. Greeley is concurrently undertaking a critical capital infrastructure project to replace the reservoir release gate at Milton Seaman, prompted by long-standing concerns and evolving state standards.

To address mutual concerns and objectives, the parties propose entering into an intergovernmental agreement to share the costs of engaging a consultant. The consultant will evaluate water quality mitigation options and gate design alternatives, based on an agreed-upon scope of work. The findings will inform the development of an implementation plan, including assessing future impacts, identifying appropriate mitigation measures, and evaluating preliminary gate designs.

Vice Chairman Todd moved that the Board recommend to City Council approve the Intergovernmental Agreement between the City of Greeley and the City of Fort Collins Regarding Certain Aspects of the Halligan Water Supply Project, in the form enclosed, and delegate authority to the Director of Water and Sewer to make minor revisions to the agreement before execution, provided the material substance remains unchanged. Ms. Witt-Brown seconded the motion. Motion carried 7-0.

Jim Paulson joined the meeting at 2:30 pm.  
Amy Ostdiek left the meeting at 2:46 pm.

**7. Approve Grazing Lease (A&A)**

Alex Tennant presented to the Board the Lowell Property Grazing and Farm Lease that will continue through December 31, 2024. The Lowell property, acquired in November 2021, consists of approximately 136 acres spanning five parcels of land north of Greeley. The parcels are all adjacent to F Street between 35th and 59th Avenues. In addition to the land, the acquisition included 13.4 shares of the Greeley Irrigation Company (GIC) and a two-year obligation after closing to purchase one (1) additional share of GIC. In March of 2022, Greeley entered a grazing and farm lease agreement with Mr. Adams of A&A Farming LLC for 86 acres on 4 of the 5 total parcels including the 14.4 shares of GIC.

Mr. Miller moved that the Board approve the Grazing and Farm Lease Agreement with A&A Farming in the form enclosed, and delegate authority to the Director of Water and Sewer to make minor revisions to the agreement before execution, provided the material substance remains unchanged. Vice Chairman Todd seconded the motion. Motion carried 7-0.

**8. Adopt Amendment to 2024 Rates and Fees Resolution**

Virgil Pierce recommended the adoption of an amendment to the 2024 Water and Sewer Rates and Fees Resolution passed in the December 20, 2023 meeting. The amendment creates graduated Plant Investment Fees for Water Service. The proposal is that fees for residential development be dependent on water meter size, lot size, and source of irrigation water.

The amendment also corrects the non-potable monthly service charge to be a flat rate regardless of meter size.

Vice Chairman Todd moved that the Board adopt the proposed resolution to amend Resolution 2, 2023 concerning residential plant investment fees and non-potable service charges. Mr. Murphy seconded the motion. Motion carried 7-0.

**9. Recommend to City Council Establishment of Westgate Non-Potable LID**

Ryan Duve discussed that the Water and Sewer Department (W&S) is proposing the creation of a Local Improvement District (LID) for the construction of a non-potable water irrigation pump station.

The pump station can also serve existing developments by providing them with an option to convert from potable to non-potable irrigation.

W&S will cover all the up-front cost of the pump station construction and with approval of the LID will recover a portion of the cost of the improvements at the time of future property development. W&S will be responsible for the portion of the cost of the pump station associated with developed properties and all consulting fees.

Vice Chairman Todd moved that the Board recommend to City Council adoption of an ordinance in the form enclosed to establish a local improvement district for the construction of the Westgate non-potable pump station. Mr. Miller seconded the motion. Motion carried 7-0.

**10. Approve Second Amendment to Water Agreement (Carestream Health)**

Water Resources staff with support from the City Attorney's Office have negotiated the Second Amendment to the Water Agreement with Carestream for the mutual benefit of the parties. The Second Amendment would provide Greeley with more raw water than the Carestream site will require annually, for a limited and defined duration. The rates and operating costs for providing this limited term treated water service, intended not to exceed 300 AF annually, will continue to be paid for under the terms of the Kodak agreements. Appropriate protections are in place to ensure that Carestream should not exceed the 300 AF of raw water and agreement limitations, and to ensure that the City is adequately compensated in the event it does. Lastly, the Second Amendment clarifies the notice provisions for transfer or assignment of the limited-term service and clearly states the requirements for termination of service and infrastructure that accompany the termination of contractual obligations between City of Greeley and Carestream.

Vice Chairman Todd moved that the Board approve the Second Amendment to Water Agreement with Carestream Health in the form enclosed, and delegate authority to the Director of Water and Sewer to make minor revisions to the agreement before execution, provided the material substance remains unchanged. Mr. Sisneros seconded the motion. Motion carried 7-0.

Sean Chambers left the meeting at 3:35 pm

**11. Annual Water Conservation Report**

The Conservation team presented the 2022 Water Efficiency Plan. The 2022 Water Efficiency Plan (WEP) introduced a comprehensive strategy incorporating a triple bottom line approach, prioritizing water efficiency for a sustainable future. It emphasized three key pillars: community welfare, economic prosperity, and effective water conservation management. Staff will outline the outcomes of the 2023 Water Conservation initiatives, detailing the projected water savings for that year. Furthermore, to ensure ongoing monitoring and transparency, annual scorecards for 2024 have been developed to track progress and maintain accountability. Staff will provide a summary of the achievements and future water conservation insights.

Ashton Reinhardt left the meeting at 3:18 pm.

Margarita Padilla-Pizarro, Adam Schoefield, Ryan Duve, Ruth Quade, Rita Jokerst left the meeting at 3:46 pm.

**12. 2023 Financial Report**

Virgil Pierce reported on the 2023 Revenue and Expenditures for the Water and Sewer Department.

Ben Schaffer left the meeting at 4:08 pm.

**13. Bi-Annual CIP Report**

Adam Prior provided an update on some CIP projects that are in progress or completed since the last Bi-Annual CIP Report. The CIP projects discussed included:

- Lead service line inventory and replacement project
- Non-potable expansion project with discussion Westgate non-potable pump station
- Terry Ranch Water pipeline construction project
- Stormwater Department 12<sup>th</sup> Street outfall project and infrastructure installed for Water & Sewer system
- 47<sup>th</sup> Ave Highlands Hill sewer capacity improvements project

**14. Legal Report**

James Noble, outside counsel for the Greeley Water & Sewer Board discussed the below updates and recommended filing statements of opposition in three different cases.

- A. **Update on Division 1 Case No. 20CW3011:** Mr. Noble provided a brief overview of this case, which is an application by the Town of Johnstown to change water rights on the Big Thompson River. Mr. Noble explained that Greeley is working toward a potential settlement, but this case is set for trial to begin March 18, 2024.
- B. **Update on Varra Well Settlement Agreement:** Mr. Noble provided an overview of a settlement agreement between Greeley and Varra Companies, Inc., which was executed on January 19, 2024.
- C. **Proposed Statements of Opposition:** Based on counsel and staff's review of the December, 2023 Water Division 1 Resume, Mr. Noble recommended that the Water and Sewer Board file statements of opposition to the following water court applications that would be due at the end of February, 2024:

- 1. **Case No. 23CW3169:** Applicants, GWIP, LLC, GWIP Land Company, LLC, Great

Western Railway of CO, LLC, Windsor Renewal I, LLC, and Great Western Metropolitan District, are developing lands near Windsor. They are seeking a finding of reasonable diligence and to make water rights absolute several wells, surface diversions, and gravel pits near the Cache la Poudre River. Mr. Noble recommended participating in this case to ensure that the claimed absolute amounts are properly quantified and to protect Greeley's water rights from injury.

2. **Case No. 23CW3171:** Applicants, the Colorado Division of Parks and Wildlife and Parks and Wildlife Commission, seek a decree for absolute water rights on George Creek, a tributary to the North Fork of the Cache la Poudre River, upstream of Halligan Reservoir for the Cherokee State Wildlife Area. The water rights will be used for irrigation, in combination with a separate water right that was previously decreed. Mr. Noble recommended participating in this case to ensure that appropriate terms and conditions are included and to protect Greeley's water rights from injury.
3. **Case No. 23CW3181:** Applicants, the Central Colorado Water Conservancy District, and its Groundwater Management Subdistrict and Well Augmentation Subdistrict, seek a decree for new conditional storage water rights for three reservoirs, totaling 8,000 acre feet of storage plus refill rights. The reservoirs would be filled from the Farmers Independent Ditch, the Platte Valley Irrigation Company Ditch, and from a new diversion on the South Platte River. Mr. Noble recommended participating in this case to ensure that appropriate terms and conditions are included and to protect Greeley's water rights from injury.

Mr. Miller moved that the Board authorize filing statements of opposition in Case Nos. 23CW3169, 23CW3171, and 23CW3181, and for staff and legal counsel to seek resolution of issues raised by these cases consistent with Water and Sewer Board Resolution No. 3-15. Mr. Murphy seconded the motion. The motion carried 7-0.

## 15. Director's Report

Director Sean Chambers provided the Water & Sewer Board and staff with a brief update on the following items of water utilities policy interest;

City of Greeley and Colorado Water Industry Education and Advocacy Events Calendar

**Subsurface Water Storage Symposium by CSU Water Center** – Feb. 22<sup>nd</sup> and 23<sup>rd</sup>, 2024 at CSU Spur Campus Confluence Theater, Denver

<https://watercenter.colostate.edu/ssws/>

Presentation on Terry Ranch Aquifer Storage & Recovery (ASR)

**Interbasin Compact Committee (IBCC)** quarterly meeting w/ Colorado River Commissioner Mitchell leading as the new IBCC chair

<https://cwcb.colorado.gov/about-us/interbasin-compact-committee> February 27<sup>th</sup> 9 am – 4 pm Golden, CO

**Colorado Water Wise Webinar:** Key Findings from CWCB's *Urban Landscape Conservation Taskforce Report* – Feb. 27<sup>th</sup>

<https://coloradowaterwise.org/event-5603205/Registration>

**Poudre River Forum** – March 1<sup>st</sup> at Aims Welcome Center

<https://poudreheritage.org/poudre-river-forum/>

**Colorado River Negotiations Update Webinar** - Tuesday, March 19, 2024 from 11:30am to 12:30 pm

<https://cwcb.colorado.gov/events>

**CSU Water Center Water Workforce Summit** – April 1st and 2nd at Auraria Campus / CSU Spur

<https://watercenter.colostate.edu/event/colorado-water-center-water-workforce-summit/>

**Colorado Water Conservation Board Annual all basins summit (C-9 Summit)** – Oct. 1-2, 2024, in Crested Butte

<https://cwcb.colorado.gov/events/c9-summit>

Private Water System Notices required under Revised Lead & Copper Rule  
Key accounts support, follow up and data collection from private systems

**16. Such Other Business That May Be Brought Before the Board Added to This Agenda by Motion of the Board**

**17. Adjournment**

The meeting ended at 4:25 p.m.

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Harold Evans, Chairman

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Raymond Lee, Board Secretary



## Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

### Title:

Welcome New Employees and Promotions

### Summary:

New Hires: Janet Timko – Water Inventory Coordinator  
Deepanjana Roy-Choudhury – Data Analyst and Entry Clerk

Promotions: None

### Recommended Action:

Informational Only

### Recommended Motion:

N/A

### Attachments:

None



# Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Virgil Pierce, Utility Finance Manager

## **Title:**

Colorado Drinking Water Revolving Fund Loan for the Lead Service Identification and Replacement Project

## **Summary:**

On March 8, 2024 the Colorado Water Resources and Power Development Authority approved the City of Greeley's loan application for the Drinking Water Revolving Fund Loan Program. The low interest loan will cover \$21M of the Lead Service Identification and Replacement Project in the most at-risk areas of the city. The approval includes \$10M in loan principal forgiveness.

This update will review the scope of the project funded by the loan and update board on the project.

## **Recommended Action:**

Informational Only

## **Recommended Motion:**

N/A

## **Attachments:**

1. 2\_CO CDWRF Loan



# **Colorado Drinking Water Revolving Fund Loan – Lead Service Replacement and Identification**

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**Water & Sewer Board  
March 20, 2024**

# Drinking Water Revolving Fund Loan

DWRF uses seed money from the US EPA to make low interest loans to Public Drinking Water Systems in the state. Payments on the loans are then leveraged for further loans.

- Applications reviewed and approved by the Colorado Water Resources and Power Development Authority;
- Administered by Colorado Department of Public Health and Environment;
- Credit reviews by the Colorado Department of Local Affairs.

The 2021 Bipartisan Infrastructure Law added additional funding to states' revolving funds (\$11.7B) and funded loan forgiveness of Lead Replacement projects (\$15B).

# Drinking Water Revolving Fund Loan

Our loan application for the Lead Service Identification and Replacement project was approved:

- \$20,910,725 loan at 3.5% interest rate for up to 30 years.
- \$10,000,000 in principal forgiveness from the BIL funding.

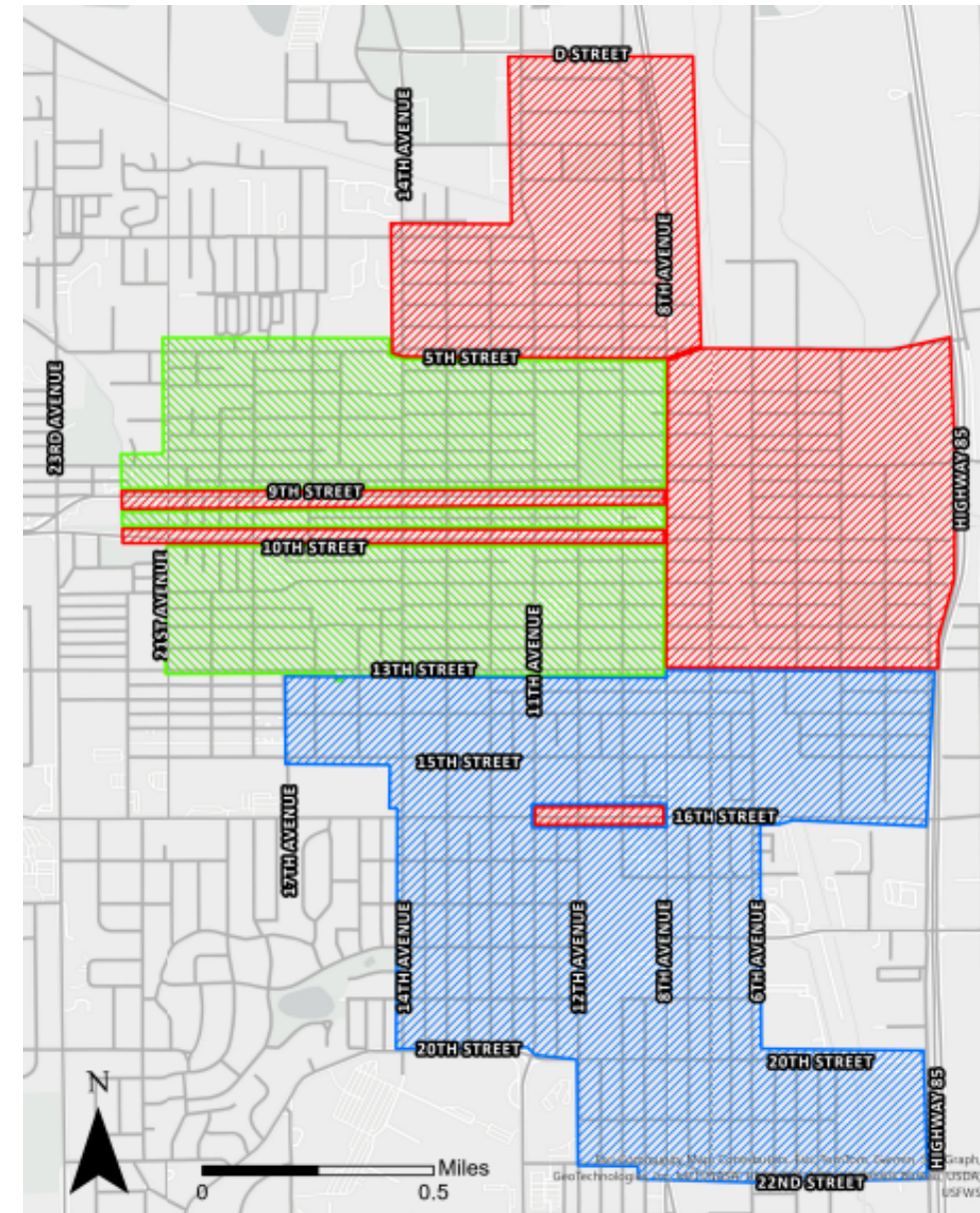
Federal Funding Requirements:

- Davis Bacon Wages, Disadvantaged Enterprises Six Good Faith Efforts, Buy America-Build America, and
- **State Historical Preservation Office Review**

We separately have received a \$250,000 grant from the WQCD for Lead Service Identifications.

# SHPO Region

- Estimate for total project cost for Lead Service Identification and Replacement and associated work citywide is \$27M (2023 – 2026+).
- Phase 1 (not pictured) and Phase 2 Potholing work being done prior to funding.
- Phase 2 (Replacements) – 4 SHPO Review Region: \$21M costs for the loan represents the At-Risk Region not already done. Area of the city considered most at risk for service lines needing replacement.
- Phase 5: outside the at-risk region and not included in funding.
- Additional project components such as the Pipe Loop Study were deemed not eligible by the CDPHE.



# Thank you

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Thanks to:

- CDM Smith – Consultants for the SRF funding searches
- Keri Fishlock – Project Manager for Lead Service Line Inventory and Replacement
- Michaela Jackson, Patrick Turn, Sophie Glaubius – Water Quality and Asset Management for assistance with loan application.
- Robert Miller, Debbie Reid, and the City's Finance Team for help answering questions for the credit review.
- Staff in CDPHE, DOLA, and CWRPA.





## Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Tyler Eldridge, Wastewater Treatment Superintendent

### *Title:*

WTRF – Nitrification Phase 2 Performance Update

### *Summary:*

The Wastewater Treatment and Reclamation Facility (WTRF) Nitrification Phase 2 (NP2) Project (2019-2023) successfully implemented process upgrades to the WTRF; enhanced nutrient removal to meet CDPHE Regulation 85 nutrient discharge limits, an increase to the facility's organic loading capacity, and provided a more redundant and resilient flow path to meet regulatory requirements more consistently. This presentation highlights key parameters of interest and the impact the project has had on them thus far.

### *Recommended Action:*

Informational Only

### *Recommended Motion:*

N/A

### *Attachments:*

1. WTRF NP2 Update



# WTRF – Nitrification Phase 2 Performance Update

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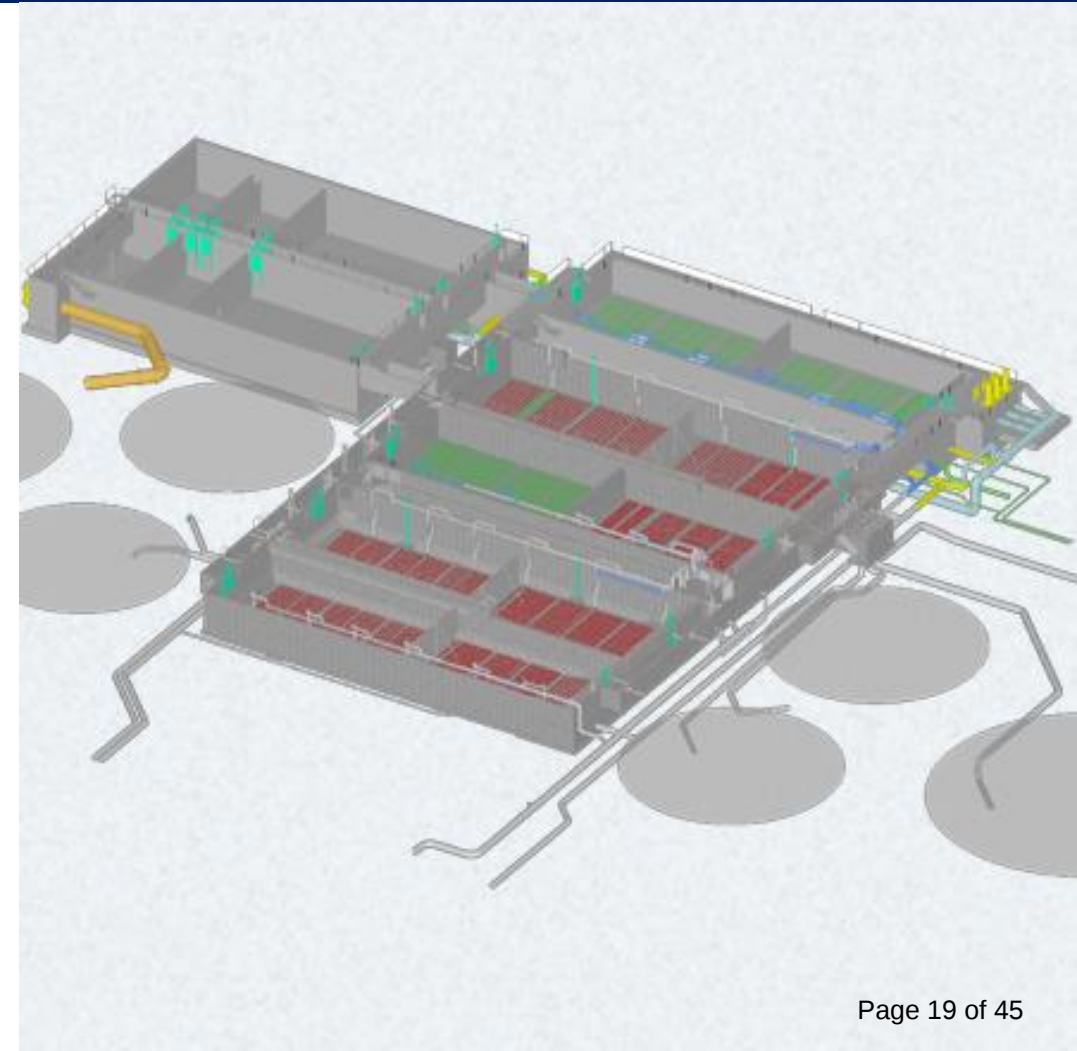
Prepared for March 2024 Water and Sewer Board Meeting

Cadee Oakleaf – Civil Engineer III – NP2 Project PM

Tyler Eldridge – WTRF Superintendent

# Background

- Plant upgrades necessary
  - Regulation 85 nutrient limits
- 2018 Master Plan
  - Framework for NP2 Project and future phases
- Design began 2019
  - Topped 80% organic loading capacity  
November 2019
- Construction began March 2021
- New process online February 2023
- Construction Complete October 2023





April 2020



August 2023

# Project Goals



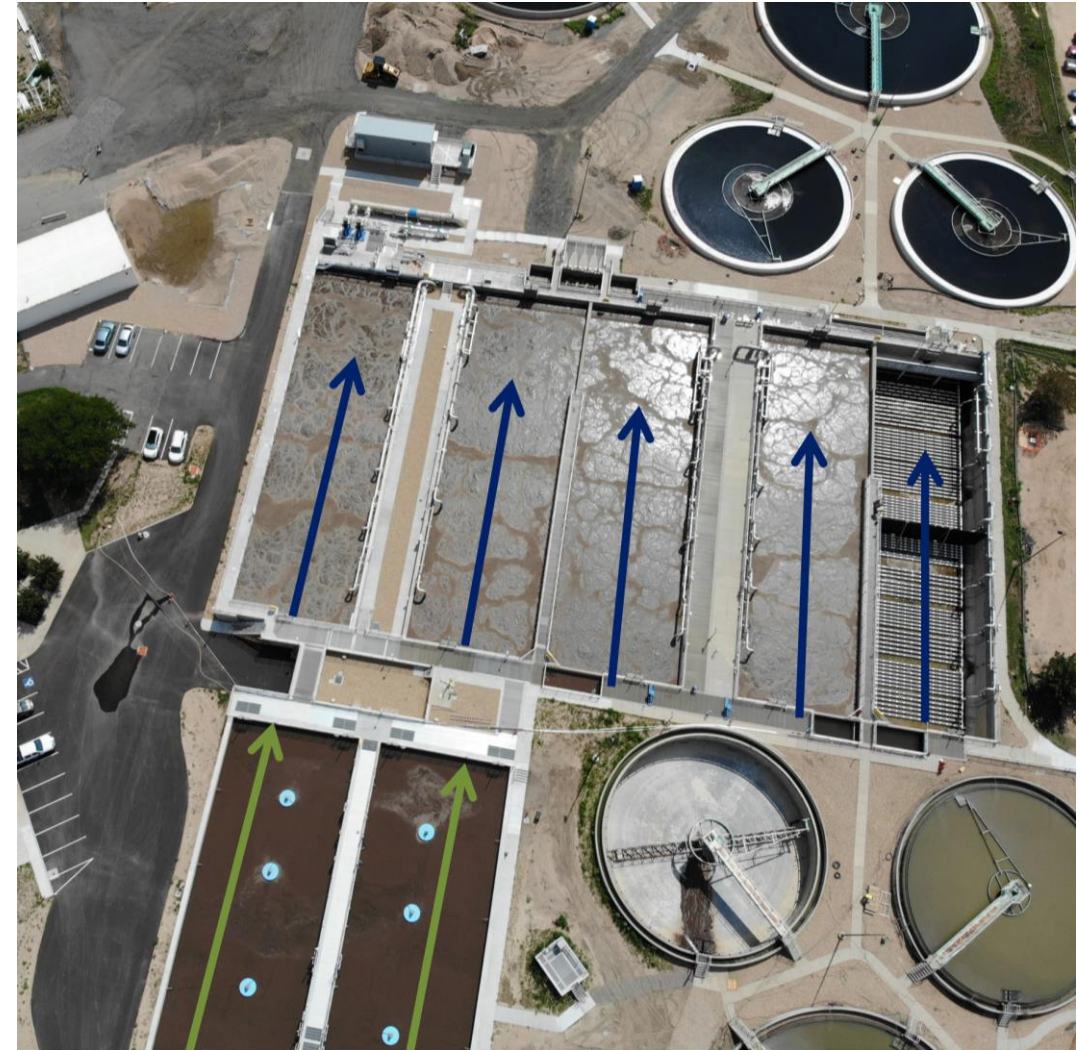
- Improve process redundancy and resiliency
- Increase organic loading capacity
  - Colorado Law requires expansion initiation at 80% loading
- Meet Regulation 85 Nutrient Criteria
  - Improved Phosphorus and Total Inorganic Nitrogen (TIN) Removal
  - Voluntary Incentive Program (VIP) Credits

# Redundancy and Resiliency



← Pre-NP2

Post-NP2 →



# Organic Loading Capacity

| Organic Loading Capacity (2019-2024) |      |      |      |      |      |      |
|--------------------------------------|------|------|------|------|------|------|
| Date                                 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Jan                                  | 66.7 | 64.4 | 62.6 | 69.5 | 65.4 | 56.3 |
| Feb                                  | 73.7 | 71.7 | 62.1 | 68.7 | 64.3 | 60.0 |
| Mar                                  | 65.7 | 65.3 | 67.0 | 68.3 | 66.3 |      |
| Apr                                  | 67.2 | 58.3 | 78.0 | 68.7 | 65.8 |      |
| May                                  | 73.3 | 60.6 | 65.5 | 65.1 | 63.7 |      |
| Jun                                  | 73.4 | 64.5 | 66.3 | 63.8 | 63.0 |      |
| Jul                                  | 71.8 | 65.2 | 67.5 | 62.0 | 60.1 |      |
| Aug                                  | 75.6 | 63.4 | 57.6 | 64.0 | 60.3 |      |
| Sep                                  | 72.3 | 61.5 | 58.5 | 58.7 | 64.5 |      |
| Oct                                  | 73.9 | 59.5 | 61.7 | 63.2 | 55.2 |      |
| Nov                                  | 80.4 | 62.4 | 60.8 | 64.7 | 54.5 |      |
| Dec                                  | 71.8 | 60.4 | 63.0 | 62.8 | 54.5 |      |
| Minimum                              | 65.7 | 58.3 | 57.6 | 58.7 | 54.5 | 56.3 |
| Maximum                              | 80.4 | 71.7 | 78.0 | 69.5 | 66.3 | 60.0 |
| Average                              | 72.2 | 63.1 | 64.2 | 65.0 | 61.5 | 58.2 |

- Organic loading capacity
  - Ability of the plant to treat organic matter coming in
  - One of two loading capacities in permit (flow not addressed in this project)
- NP2 project adds 6,000 pounds
  - New capacity: 45,000 pounds (BOD<sub>5</sub>)

# Reg 85 and VIP Credits

## Reg 85

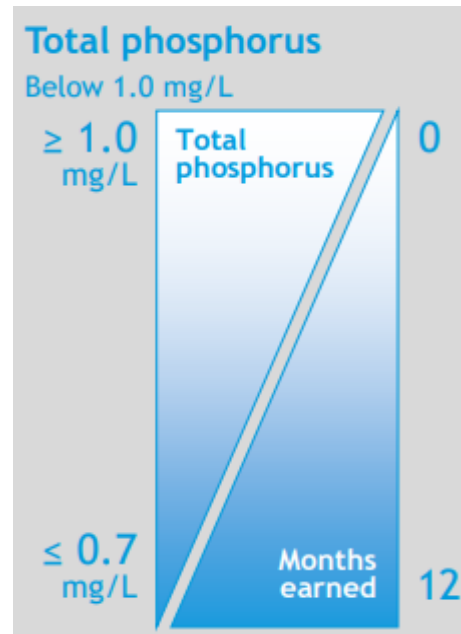
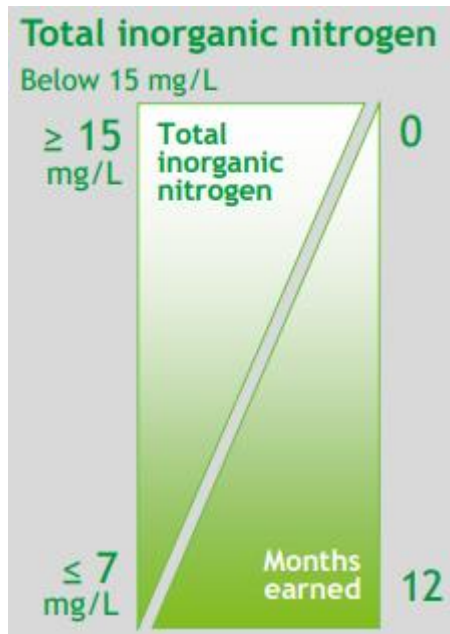
- Nutrient limitations for phosphorus and TIN
  - Total phosphorus (TP) limit:
    - Annual median <1.0 mg/L
    - 95<sup>th</sup> Percentile <2.5 mg/L
    - Current discharge limit: None
  - TIN limit:
    - Annual median <15.0 mg/L
    - 95<sup>th</sup> Percentile <20 mg/L
    - Current discharge limit: Ammonia nitrogen only (variable, minimum of 7 mg/L)

## VIP Credits

- Up to 10 years added to compliance period for early nutrient reductions
  - 2018-2027 reporting period
- Compliance period addition applies to first permit issued after 2027
- 1 year per parameter, per year (TP/TIN)
- Credits granted on a gradient scale
- Maximum 7.5 years per parameter

# Reg 85 and VIP Credits

## VIP Credit Gradients



Images from CDPHE Voluntary Incentive Program Fact Sheet

## Current VIP Credit Status

| Regulation 85 Incentive Credits Tracking* |                     |      |                          |       |        |
|-------------------------------------------|---------------------|------|--------------------------|-------|--------|
|                                           | Annual Median Conc. |      | Incentive Credits Earned |       |        |
|                                           | TIN                 | TP   | TIN                      | TP    | TIN+TP |
|                                           | mg/L                | mg/L | Month                    | Month | Month  |
| 2018                                      | 11.01               | 0.82 | 5.99                     | 7.40  | 13.39  |
| 2019                                      | 11.89               | 1.08 | 4.67                     | 0.00  | 4.67   |
| 2020                                      | 14.92               | 3.72 | 0.13                     | 0.00  | 0.13   |
| 2021                                      | 13.87               | 4.50 | 1.70                     | 0.00  | 1.70   |
| 2022                                      | 14.41               | 4.59 | 0.89                     | 0.00  | 0.89   |
| 2023                                      | 10.53               | 1.92 | 6.71                     | 0.00  | 6.71   |
| 2024                                      | 10.00               | 0.43 | 7.50                     | 12.00 | 19.50  |
| 2025                                      |                     |      |                          |       |        |
| 2026                                      |                     |      |                          |       |        |
| 2027                                      |                     |      |                          |       |        |
| <b>Total Months</b>                       |                     |      | 27.57                    | 19.40 | 46.97  |
| <b>Eligible Months</b>                    |                     |      | 27.00                    | 19.00 | 46.00  |
| <b>Eligible Years</b>                     |                     |      | 2.25                     | 1.58  | 3.83   |

# Reg 85 and VIP Credits

## Current Track Estimate

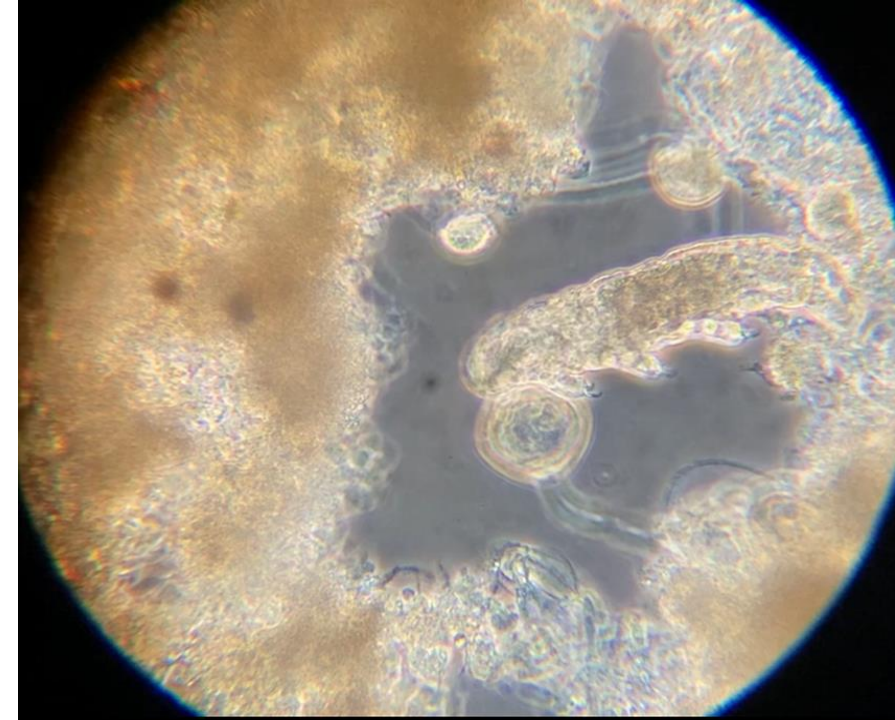
|                 | Annual median concentrations |      | Incentive credits earned |       |        |
|-----------------|------------------------------|------|--------------------------|-------|--------|
|                 | TIN                          | TP   | TIN                      | TP    | TIN+TP |
|                 | mg/L                         | mg/L | Month                    | Month | Month  |
| 2018            | 11.01                        | 0.82 | 5.985                    | 7.2   |        |
| 2019            | 11.89                        | 1.08 | 4.665                    | 0     |        |
| 2020            | 14.92                        | 3.72 | 0.12                     | 0     |        |
| 2021            | 13.87                        | 4.5  | 1.695                    | 0     |        |
| 2022            | 14.41                        | 4.59 | 0.885                    | 0     |        |
| 2023            | 10.53                        | 1.92 | 6.705                    | 0     |        |
| 2024            | 10                           | 0.43 | 7.5                      | 12    |        |
| 2025            | 10                           | 0.43 | 7.5                      | 12    |        |
| 2026            | 10                           | 0.43 | 7.5                      | 12    |        |
| 2027            | 10                           | 0.43 | 7.5                      | 12    |        |
|                 |                              |      |                          |       |        |
| Total months    |                              |      | 50.055                   | 55.2  | 105.26 |
| Eligible Months |                              |      | 50                       | 55    | 105    |
| Eligible Years  |                              |      | 4.16                     | 4.58  | 8.75   |

## Path to 10 Years

|                 | Annual median concentrations |      | Incentive credits earned |       |        |
|-----------------|------------------------------|------|--------------------------|-------|--------|
|                 | TIN                          | TP   | TIN                      | TP    | TIN+TP |
|                 | mg/L                         | mg/L | Month                    | Month | Month  |
| 2018            | 11.01                        | 0.82 | 5.985                    | 7.2   |        |
| 2019            | 11.89                        | 1.08 | 4.665                    | 0     |        |
| 2020            | 14.92                        | 3.72 | 0.12                     | 0     |        |
| 2021            | 13.87                        | 4.5  | 1.695                    | 0     |        |
| 2022            | 14.41                        | 4.59 | 0.885                    | 0     |        |
| 2023            | 10.53                        | 1.92 | 6.705                    | 0     |        |
| 2024            | 8.5                          | 0.43 | 9.75                     | 12    |        |
| 2025            | 7.5                          | 0.43 | 11.25                    | 12    |        |
| 2026            | 7                            | 0.43 | 12                       | 12    |        |
| 2027            | 7                            | 0.43 | 12                       | 12    |        |
|                 |                              |      |                          |       |        |
| Total months    |                              |      | 65.055                   | 55.2  | 120.26 |
| Eligible Months |                              |      | 65                       | 55    | 120    |
| Eligible Years  |                              |      | 5.41                     | 4.58  | 10     |

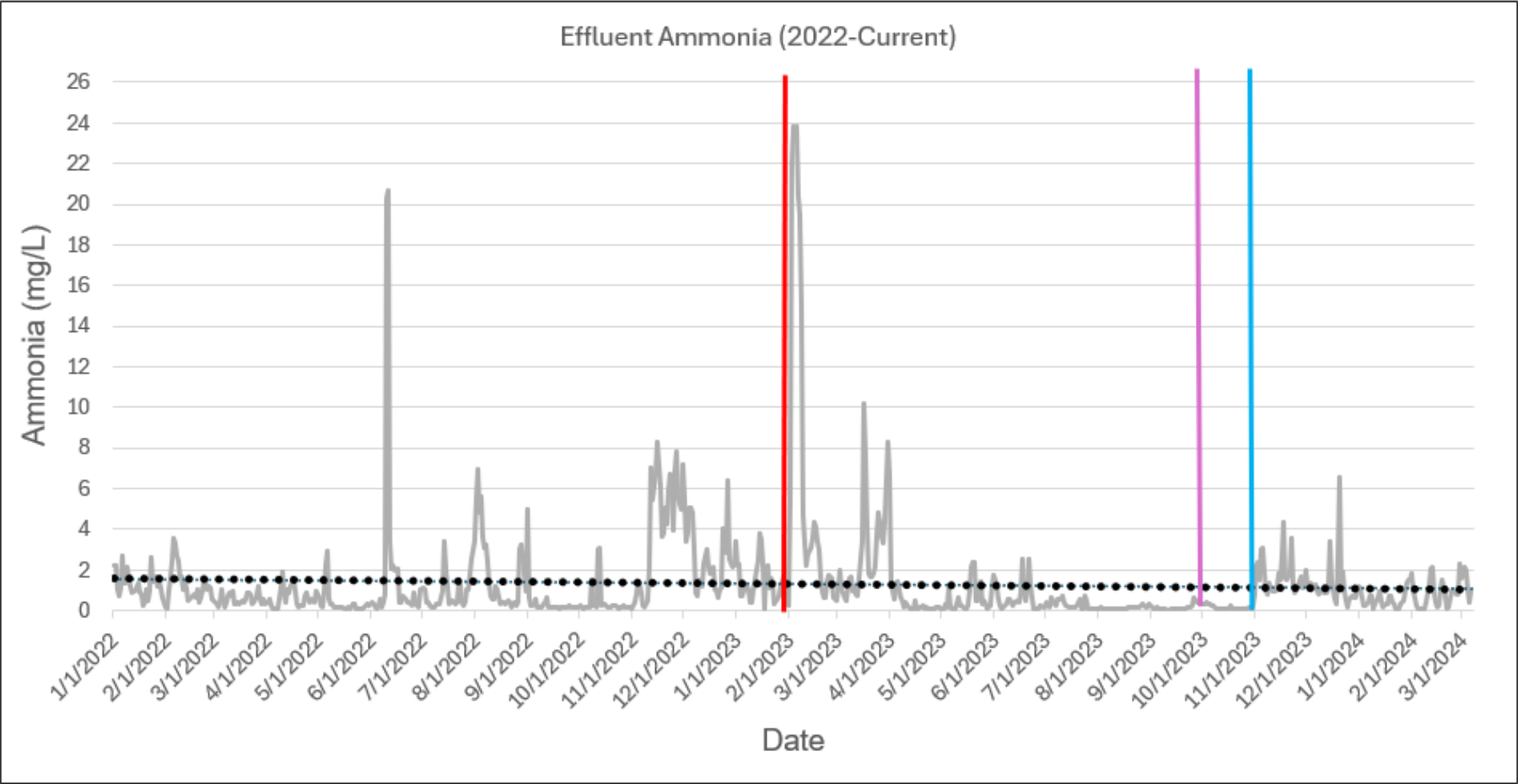
Images from CDPHE Voluntary Incentive Program Credit Calculator

# Microbiology



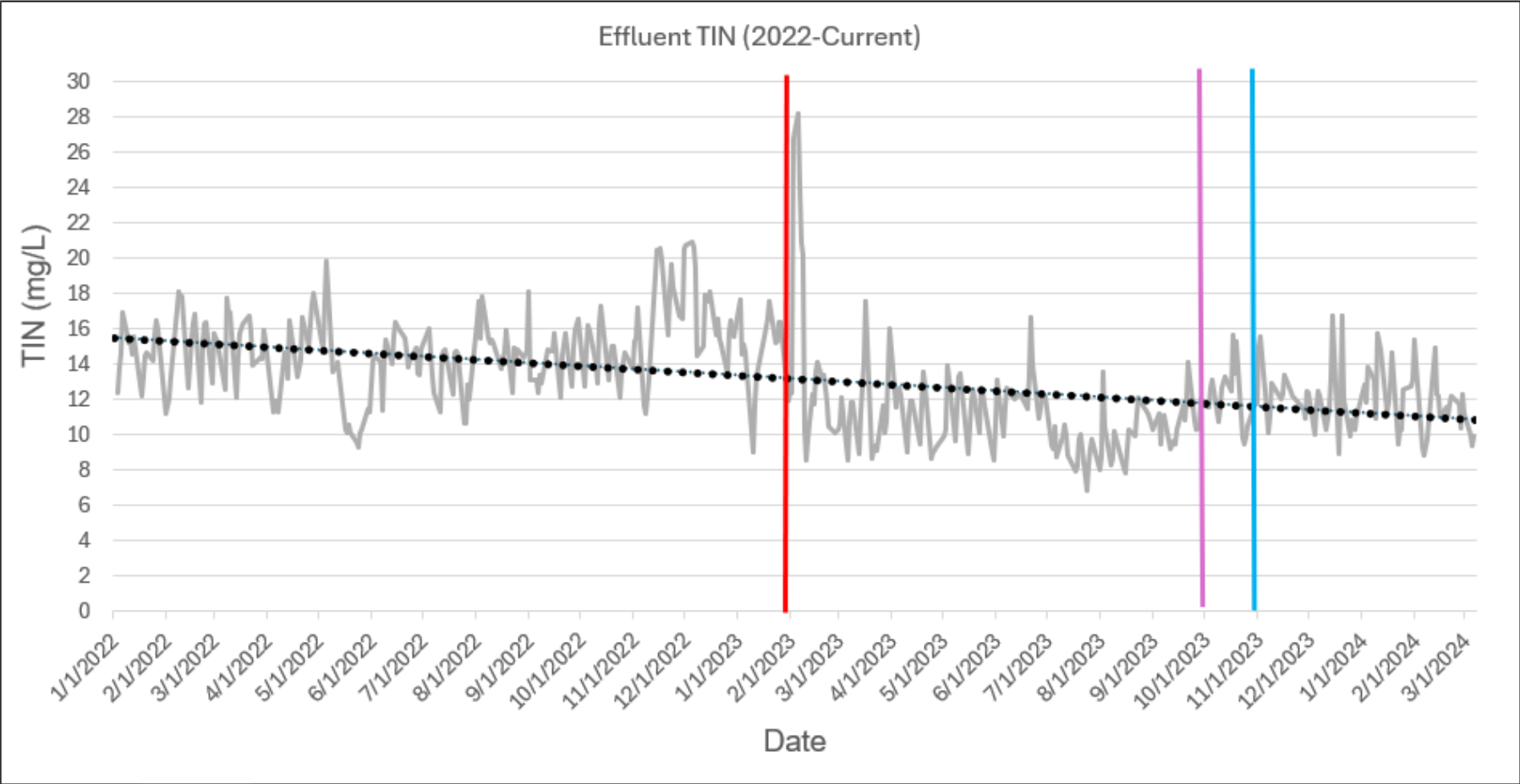
- Current microbiology – Good conditions
  - "Zoogeal mass" – bulk of treatment, bacteria in this mass constitute much of the treatment
  - Stalked Ciliates – polishers of the system, filter (eat) loose bacteria and create a clearer effluent
  - Tardigrades (Water Bears) - Indication of low levels of ammonia (good treatment and nitrification)
    - Fun to look at, only make process changes when present with other organisms

# Ammonia



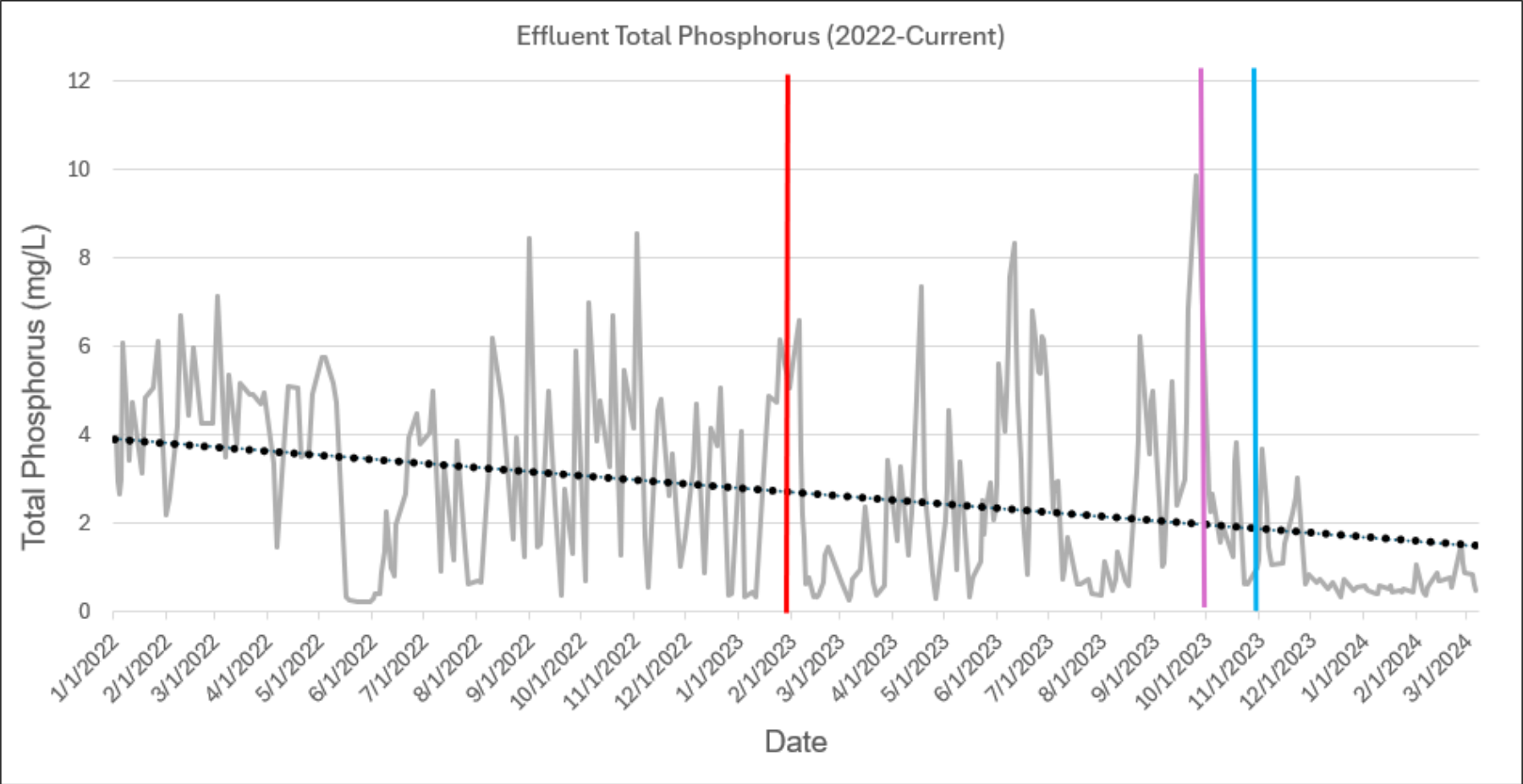
- Initial Startup of new process
- All basins online
- Basin 2 offline for winter

# Total Inorganic Nitrogen



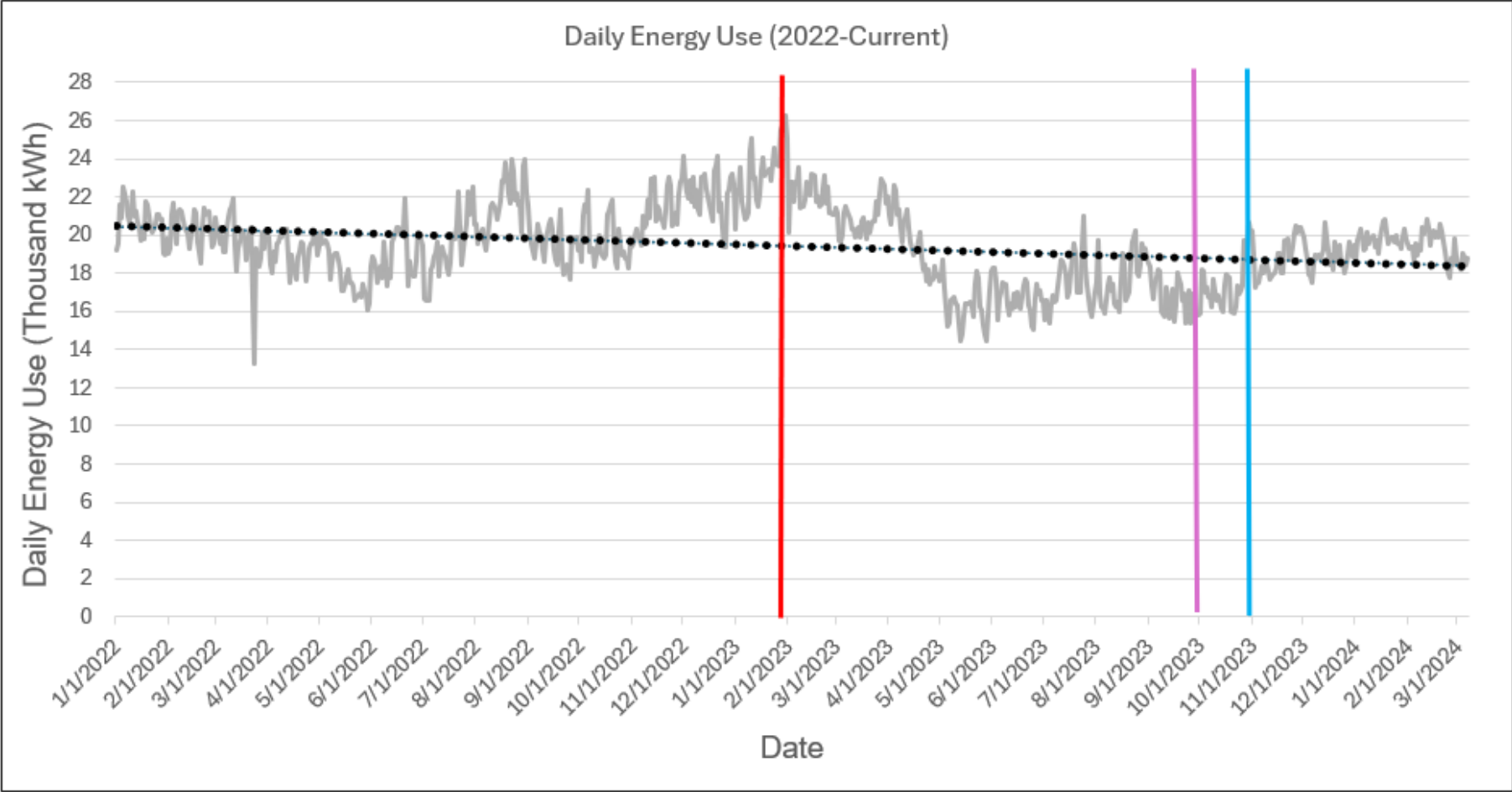
- Initial Startup of new process
- All basins online
- Basin 2 offline for winter

# Total Phosphorus



- Initial Startup of new process
- All basins online
- Basin 2 offline for winter

# Energy Use



- Initial Startup of new process
- All basins online
- Basin 2 offline for winter

# Thank you





## Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Leah Hubbard, Water Resource Operations Manager

**Title:**

Legal Report

**Summary:**

This report is provided by Carolyn Burr, outside counsel for the Greeley Water & Sewer Board.

1. Based on our review of the February 2024 Water Division 1 Resume, staff and water counsel recommend that the Water and Sewer Board file no statements of opposition this month.
2. Case No. 20CW3011 – Application of Johnstown Update.

**Recommended Action:**

None

**Recommended Motion:**

N/A

**Attachments:**

None



## Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

### Title:

Director's Report

### Summary:

The Director will not be in attendance at the meeting due to conflict with a City Manager's Office Executive Leadership Team Strategic Work Plan Retreat

This written report and the enclosed attachments are provided for the Board's information. Questions can be directed to Deputy Director of Utility Business and Finance, Erik Dial.

City of Greeley and Colorado Water Industry Education and Advocacy Events Calendar

Thank you for those who attended the Poudre River Forum on March 1<sup>st</sup> to celebrate Randy Gustafson's Poudre Pioneer Award.

**CSU Water Center Water Workforce Summit** – April 1st and 2nd at Auraria Campus / CSU Spur  
<https://watercenter.colostate.edu/event/colorado-water-center-water-workforce-summit/>

**Colorado Interbasin Compact Committee – Triannual Meeting – June 18<sup>th</sup>**

**Colorado Water Conservation Board Annual all basins summit (C-9 Summit)** – Oct. 1-2, 2024, in Crested Butte  
<https://cwcb.colorado.gov/events/c9-summit>

Upper Colorado River Commission Alternative for Drought Operations Press Release and Inforgraphics  
<http://www.ucrcommission.com/wp-content/uploads/2024/03/UDS-Alternative-Submittal-Press-Release.pdf>

### Recommended Action:

Informational only

### Recommended Motion:

N/A

### Attachments:

1. UDS-Alternative-Submittal-Press-Release

## 2. Board Meeting Charts\_2024



## **Colorado River Upper Division State Representatives of Colorado, New Mexico, Utah, and Wyoming**

### **MEDIA RELEASE**

**March 5, 2024**

### **Upper Division Colorado River States Propose Alternative for Sustainable Operations of Post-2026 Operations of Lake Powell and Lake Mead**

This week, the Upper Division States of Colorado, New Mexico, Utah, and Wyoming submitted to the Bureau of Reclamation an Alternative for Post-2026 Operations of Lake Powell and Lake Mead. The UDS Alternative proposes operations for Lake Powell and Lake Mead designed to help provide water supply certainty and sustainability in the face of a drying and uncertain future.

The purpose of the Upper Division States Alternative is to provide a set of modeling assumptions and operating parameters to the Bureau of Reclamation for Post-2026 Operations of Lake Powell and Lake Mead as part of the review process required under the National Environmental Policy Act (NEPA).

Separate from this NEPA process, the Upper Division States (UDS) will also pursue Parallel Activities. Parallel Activities are other activities the Upper Division States might take under certain conditions. Examples include potential releases and recovery at the Colorado River Storage Project Act (CRSPA) Initial Units and voluntary water conservation programs that would help to protect the ability of Lake Powell to make releases.

The Upper Division States Alternative provides:

- Management of the reservoirs to address the existing imbalance between water supply and demands in the Lower Basin;
- Operations based on actual conditions—instead of unreliable forecasts—to ensure that Lake Powell and Lake Mead are operated sustainably;
- Efforts to rebuild storage at Lake Powell to protect the reservoir's ability to provide water to Lake Mead;
- Reliance on the best available science and information, including impacts caused by climate change;
- Consistency with the Law of the River;

- Accounting of Upper Basin's hydrologic shortages, which average an estimated 1.2 million acre-feet each year; and
- Acknowledgement of the settled but undeveloped Tribal water rights in the Upper Basin.

"We can no longer accept the status quo of Colorado River operations," said Becky Mitchell, Colorado's Commissioner to the Upper Colorado River Commission. "If we want to protect the system and ensure certainty for the 40 million people who rely on this water source, then we need to address the existing imbalance between supply and demand. That means using the best available science to work within reality and the actual conditions of Lake Powell and Lake Mead. We must plan for the river we have - not the river we dream for."

Estevan Lopez, New Mexico's Commissioner, said, "The Colorado River Basin is at a critical juncture. The UDS Alternative seeks to acknowledge the Upper Basin's realities, including hydrologic shortages, protect Upper Basin interests, and contribute towards future sustainability of the entire basin. We look forward to working with our sister Lower Basin States to resolve differences in approach and create a 7-state consensus alternative."

"This is a pivotal moment for Utah and the entire Upper Basin," said Gene Shawcroft, Utah's Upper Colorado River Commissioner. "Our proposal represents a balanced approach, combining immediate action with long-term planning to ensure the sustainability of both Lake Powell and Lake Mead. It's about adapting to the realities we face today and securing a water-resilient future for our region."

Wyoming's Commissioner, Brandon Gebhart, said, "Our Alternative focuses on building storage in Lake Powell to help provide a sustainable water supply into the drying future, and avoid the constant crisis of recent years. It's a response to the lessons we've learned, and acknowledges the uncertain future we face. Although our proposal can stand on its own, it was also designed to promote the development of a seven-state consensus alternative which is a goal we all still seek to achieve."

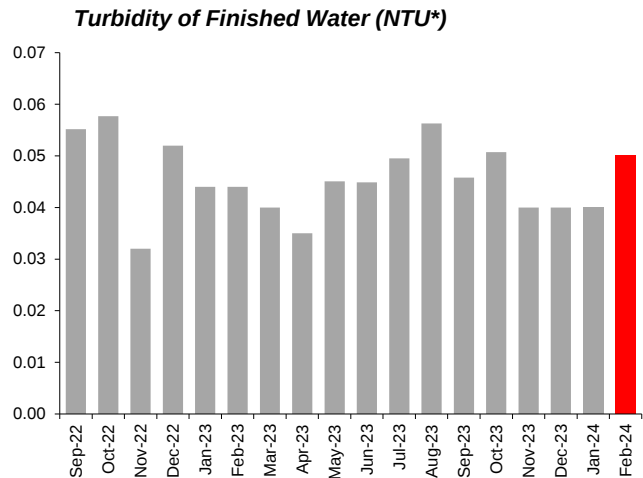
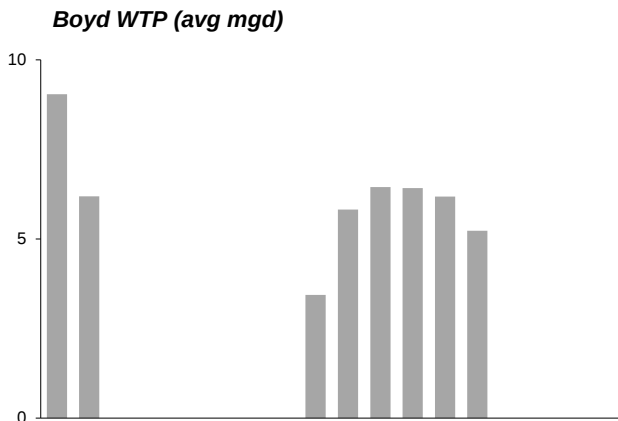
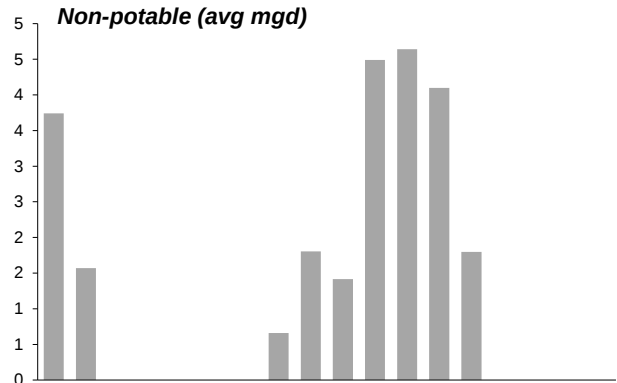
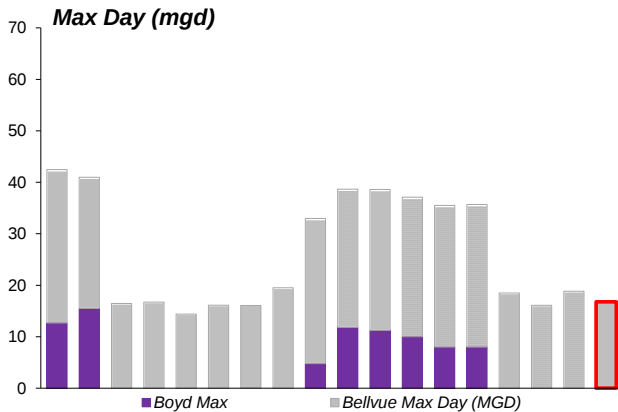
The Upper Division States are committed to working with partners in developing a preferred alternative. The UDS Alternative is available in detail on the Upper Colorado River Commission's website, along with an infographic.

## Water Treatment

Bellvue Water Treatment Plant operates year-round with a transmission capacity of 29.1 million gallons per day (mgd) (plant capacity is 32 to 35 mgd). Water sources include Poudre River direct flows, Colorado-Big Thompson (C-BT), Windy Gap, High Mountain Reservoirs, Laramie-Poudre Tunnel, and Water Supply and Storage. Average volume is 19,000 acre-feet a year (2000-2011). The plant was built in 1907, with its last treatment upgrade in 2009. Solar panels were added in 2014.

Boyd Water Treatment Plant operates normally from April to October with a plant capacity of 38 mgd (transmission capacity is 40 mgd). Water sources include Greeley-Loveland Irrigation Company, C-BT, and Windy Gap. Average Volume is 8,200 acre-feet (2000-2011). The current plant was built in 1974, with its last treatment upgrade in 1999. Solar panels were added at Boyd in 2014. In 2016, tube settlers and plate settlers were replaced in the sedimentation basins. In 2018, all old existing chemical lines were replaced with new lines and the piping was up-sized to carry more chemical. A PLC upgrade was done on the SCADA system. Sludge pumps were replaced and hooked into the Trac Vac system that pulls sludge out of the sedimentation basins.

Combined, Bellvue and Boyd can treat a maximum of 70-73 million gallons per day.



Starting May 2016 Bellvue turbidity measurements will use a new method resulting in more accurate readings.

\*Turbidity limit: 95% of samples must be below 0.3 NTU.

Turbidity is the measure of relative clarity of a liquid. Clarity is important when producing drinking water for human consumption and in many manufacturing uses. Turbidity is measured in Nephelometric Turbidity Units (NTU).

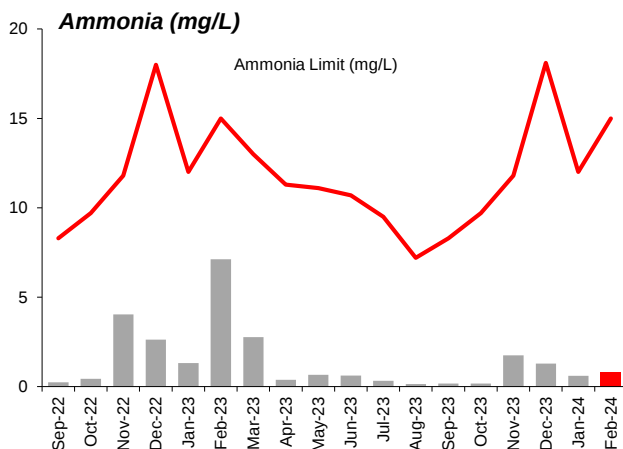
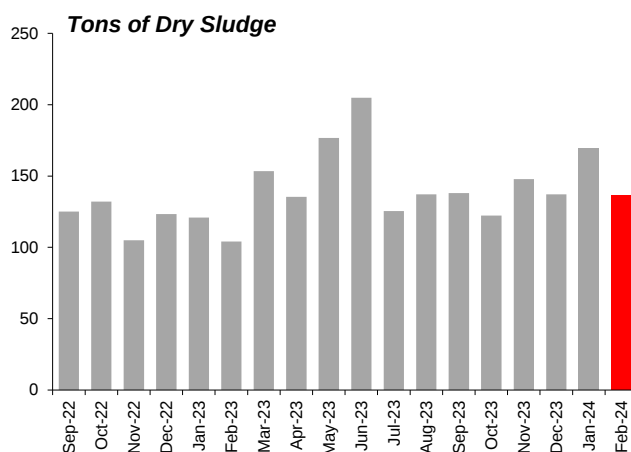
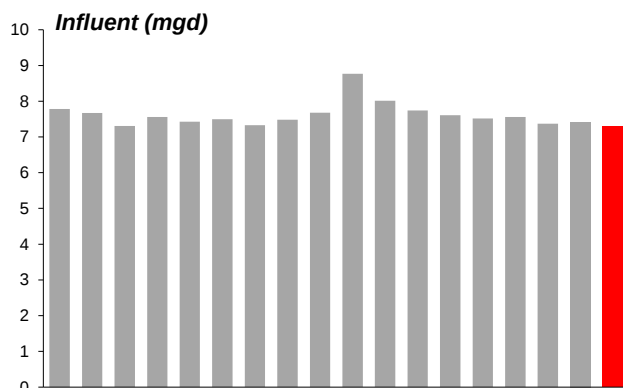
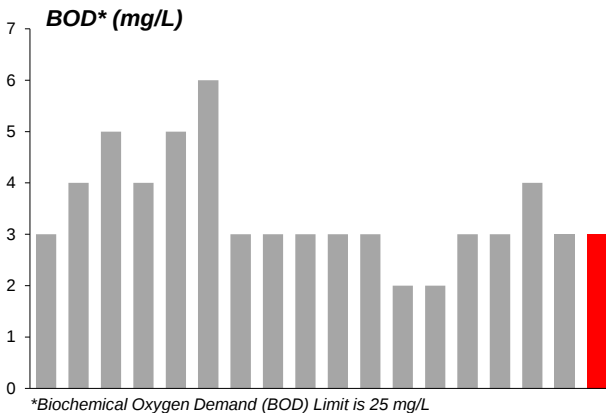
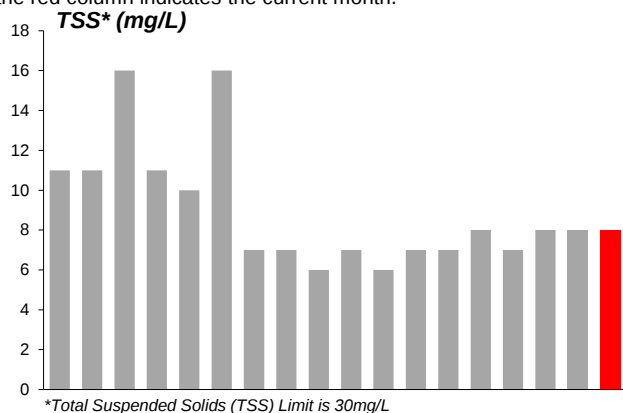


## Wastewater Treatment

The Water Pollution Control Facility (WPCF) staff are dedicated environmental professionals who provide quality, safe and cost-effective wastewater treatment services for the citizens of Greeley. The WPCF treats wastewater to meet or exceed Environmental Protection Agency (EPA) and Colorado Department of Public Health & Environment requirements.

In 2011, the WPCF received an Xcel Energy Custom Efficiency Achievement Award for saving 2.78 million kWh and reducing CO2 emissions by 1,584 tons. In 2012, the WPCF received the Rocky Mountain Water Environment Association's (RMWEA) Sustainability Award for Colorado demonstrating excellence in programs that enhanced the principles of sustainability. A Certificate of Achievement from the Colorado Industrial Energy Challenge program managed through the Colorado Energy Office was received in the same year. In 2013, the plant received the City of Greeley's Environmental Stewardship Award for outstanding efforts to reduce energy (watts), conserve energy and water, reduce air and water pollution, and educate and encourage others to be environmental stewards. Also, in 2013, the plant was the recipient of a Bronze Award from the Colorado Environmental Leadership Program. In 2015, after having 5 years without a plant violation, the plant received the 2015 National Association of Clean Water Agencies (NACWA) Platinum Peak Performance award for the City of Greeley Water and Sewer Department.

Note: the red column indicates the current month.



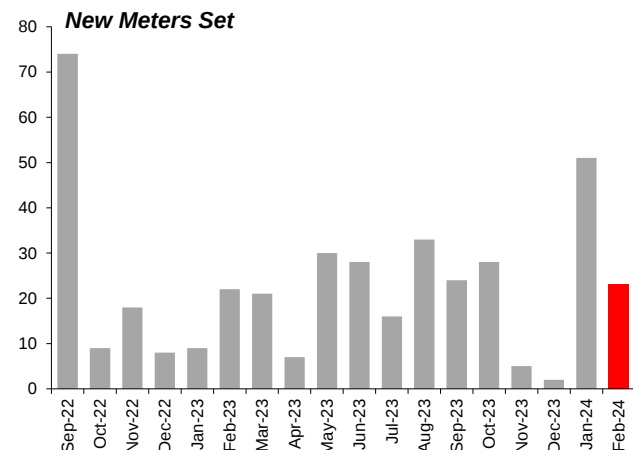
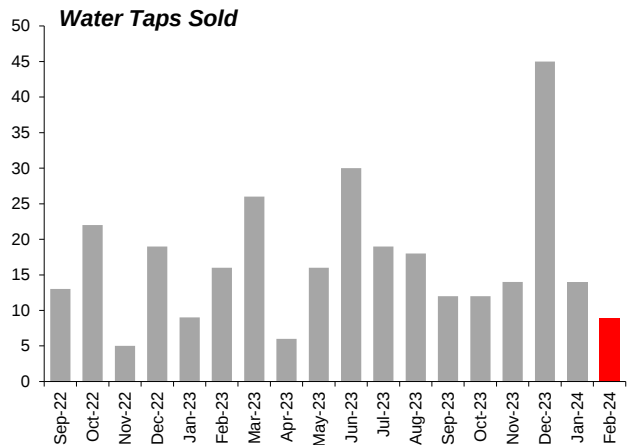
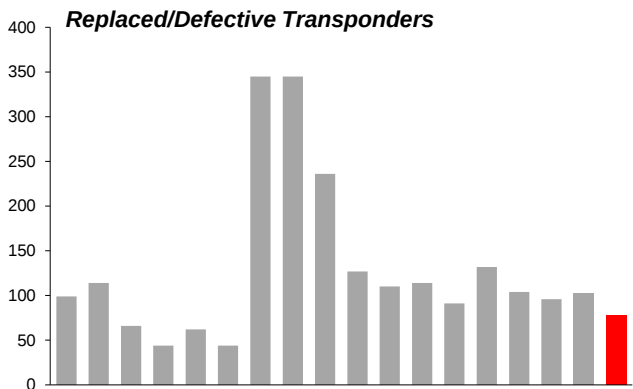
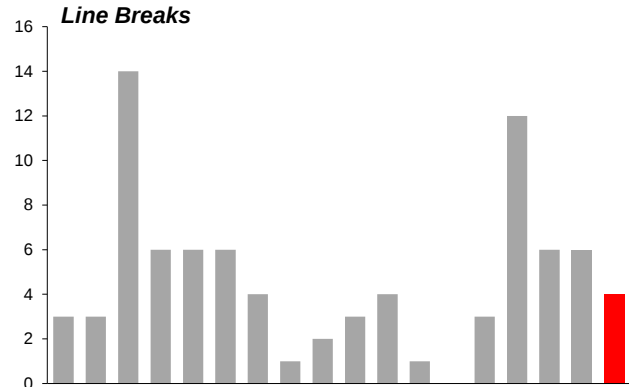
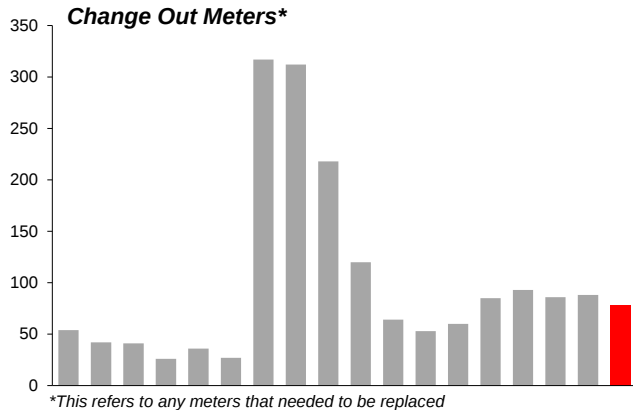
## Water Distribution

The Greeley water distribution system consists of various sizes of pipes that generally follow the streets within the City. The distribution system serves residences and businesses in Greeley, Evans and Garden City, and the system is divided into four pressure zones.

There are 69.75 million gallons of potable water storage in Greeley. The water is stored within three covered reservoirs and one elevated tank; 23rd Avenue - 37.5 million gallons, Mosier Hill - 15 million gallons, and Gold Hill - 15 million gallons. The system also has 476 miles of pipeline, 24,233 water meters and 3,378 fire hydrants.

The water pipes in the distribution system vary in size from 4" to 36". Pipe material is steel, ductile iron, cast iron, or polyvinyl chloride. The age of the pipes varies from the 1890's to new installations.

Note: the red column indicates the current month.



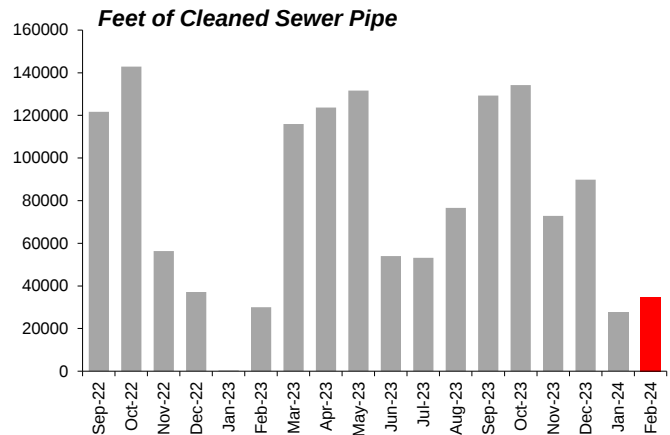
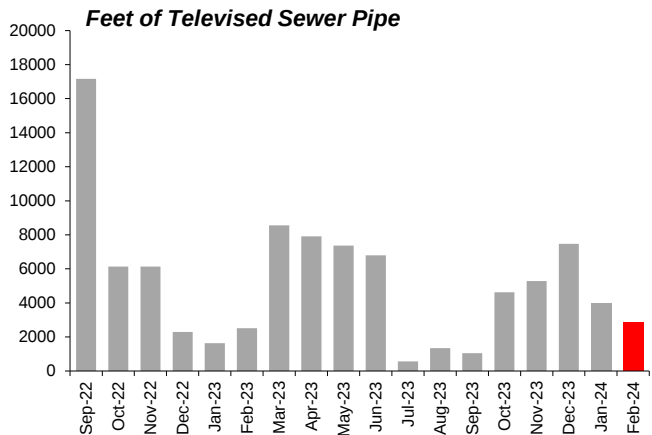
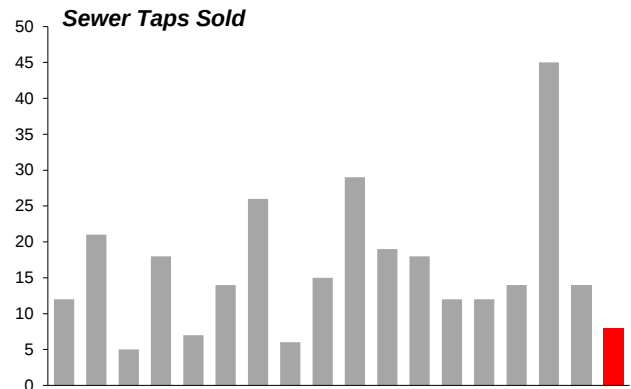
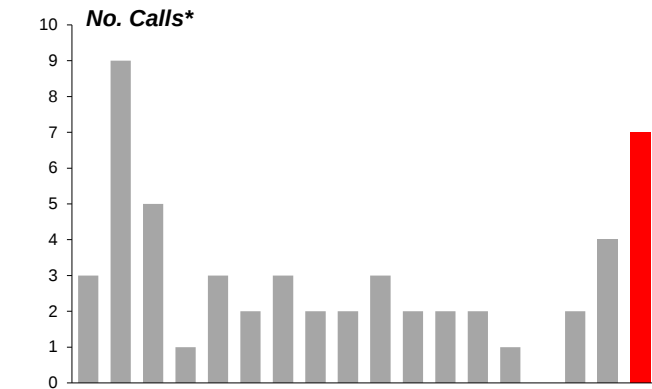
## Wastewater Collection

The mission of the Wastewater Collection Division of the Water and Sewer Department is to protect community health by transporting wastewater away from homes and businesses. This includes respecting property values and public safety by reducing the frequency of blockages in the sanitary sewer lines.

A wide variety of work is performed including routine cleaning of sewer lines, inspection of sewer lines, maintenance of the sewage pumping stations, rehabilitation of the system and responding to emergencies.

The wastewater collection system dates back to 1889. At the end of 2017, the system had a total of 364.8 miles of line and 10 sewage pumping stations. The sewer service area is approximately 51 square miles. Over the last 10 years, the system has grown by 17 miles.

Note: the red column indicates the current month.

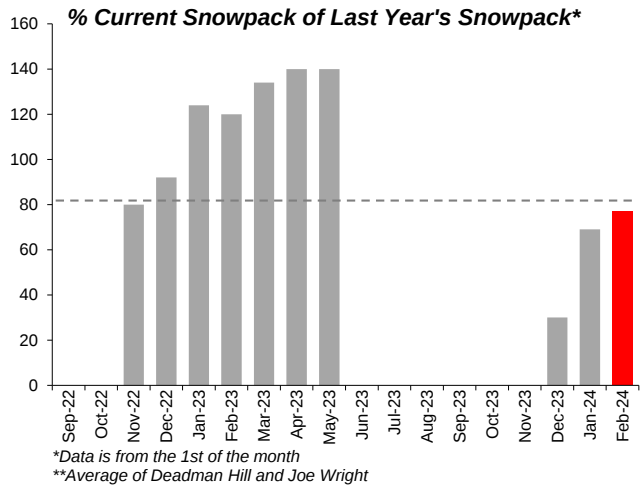
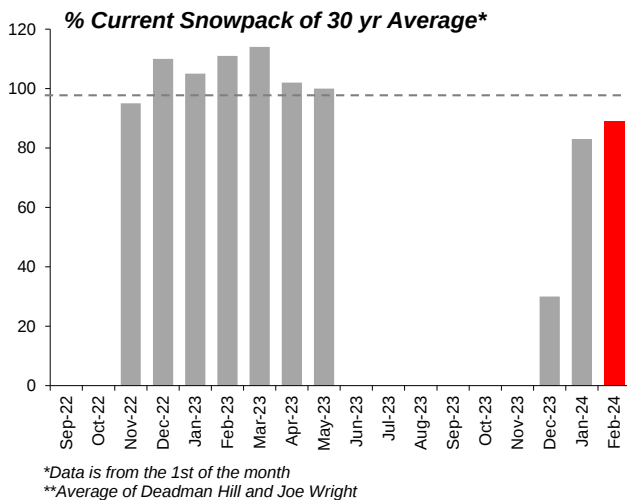
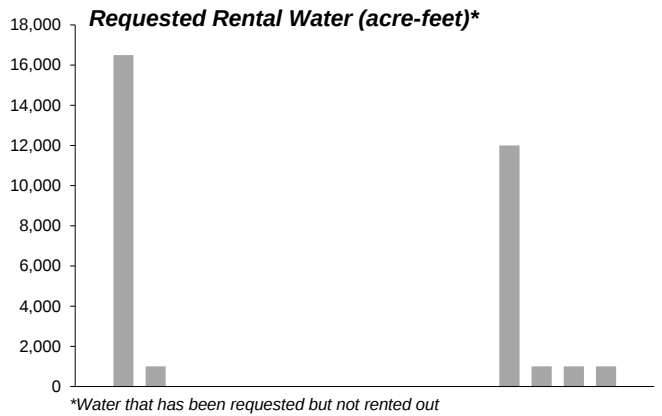
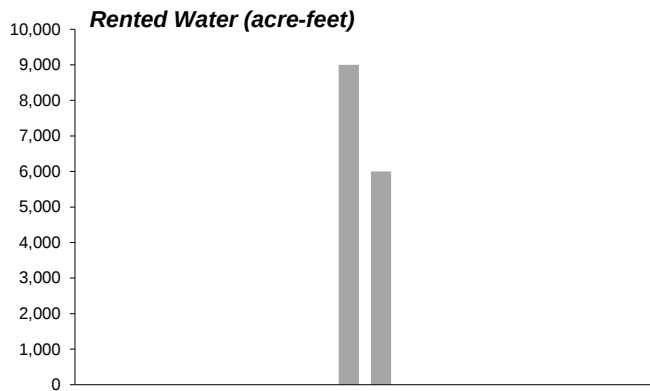
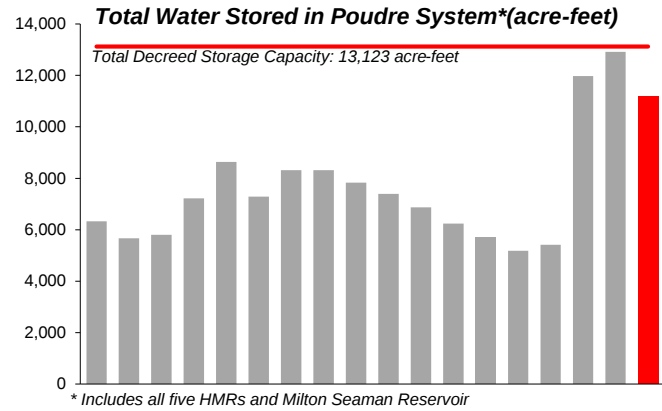
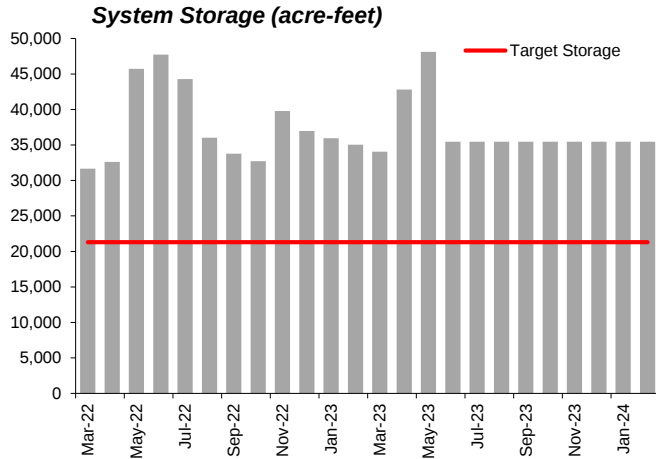


## Water Resources

Greeley has numerous water rights in four river basins; the Upper Colorado River, Cache La Poudre, Big Thompson and Laramie River. The Water Resource staff must account for all of this water and comply with the rules of the Colorado Water Court and the State Engineer's Office which is in charge of allocating all of Colorado's water resources. Approximately one-third of the City's water supply comes from agricultural water rights. These water rights must be formally changed to municipal use by a special legal process through the Water Court. In this court, Water Resource staff and attorneys also defend the City's water rights against adverse claims from other parties.

Greeley's goal is to have enough water in carry-over storage to sustain Greeley through a 50-year critical drought. Water in excess of this carry-over drought supply can be leased to agriculture, both for revenue and to support our local agricultural community. Modeling has shown that, given existing population and demand factors, Greeley will have sufficient water for citizens, if at the beginning of the 6-year long, 50-year critical drought, there is 20,000 acre-feet in storage on April 1st of the following year.

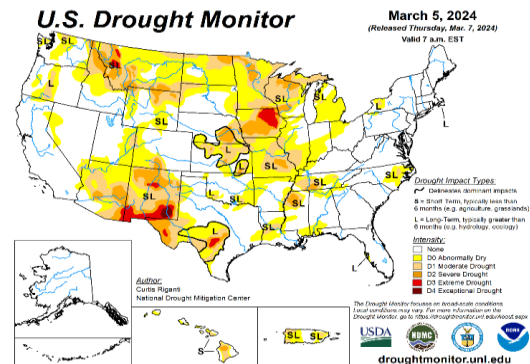
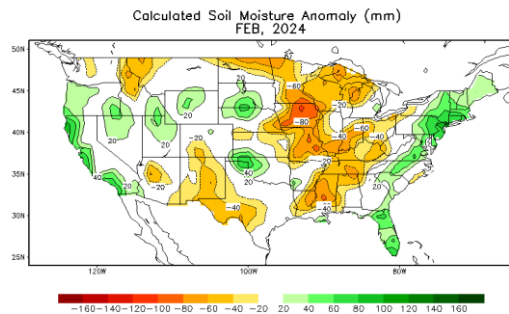
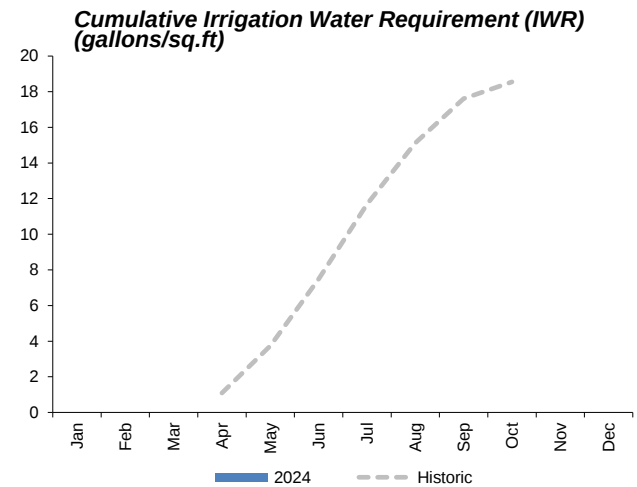
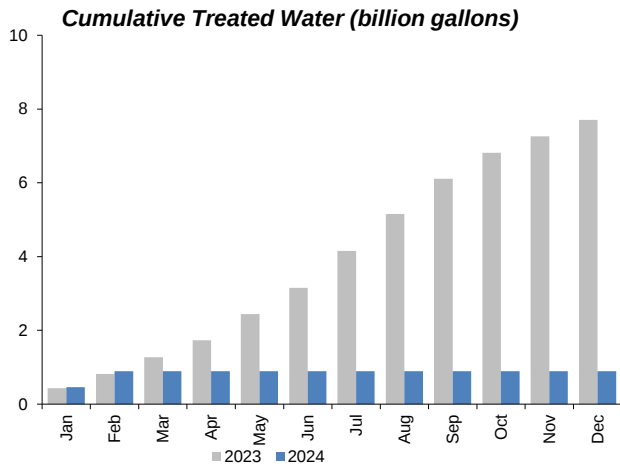
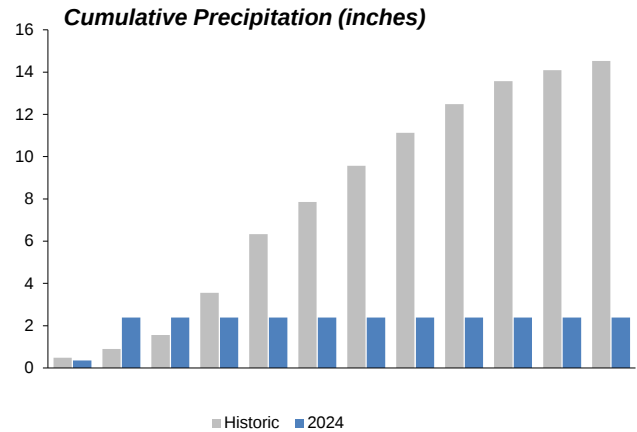
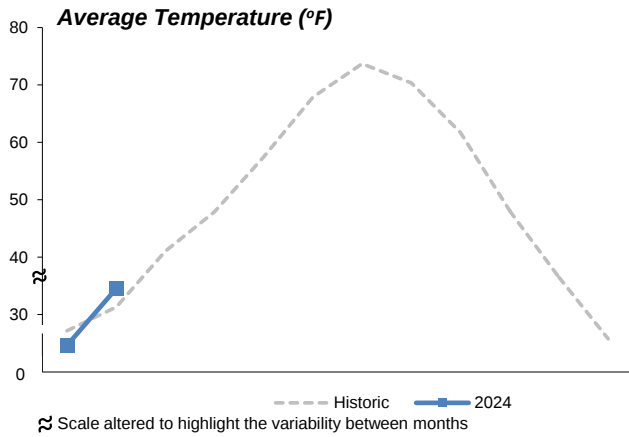
Note: the red column indicates the current month.



# Treated Water and Weather Data

January was a cold month with an average temperature of 24°F. Temperatures warmed up in February with an average temperature of 34.52°F.

Greeley received 0.35 inches of precipitation in January. A big snow storm brought 2.03 inches of precip in February.





## Water & Sewer Agenda Summary

March 20, 2024

Key Staff Contact: Cole Gustafson, Source Water Supply Manager

**Title:**

Executive Session

**Summary:**

Bi-Annual Water Market Update

**Recommended Action:**

Informational Only

**Recommended Motion:**

N/A

**Attachments:**

None