

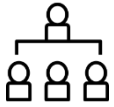
Water and Sewer Board

Regular Meeting

City Council Chambers – City Center South

1001 11th Avenue – Greeley, Colorado

February 21, 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 11th Avenue, Greeley, Colorado.



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 11th Avenue, 2nd Floor, Greeley,



CO 80631 or emailed to 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



February 21, 2024 at 2:00 PM
1001 11th Avenue, City Center South, Greeley, CO 80631

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. Manual Sisneros _____ Mayor John Gates
 _____ Mr. Raymond Lee _____ Ms. Debbie Reid
2. Approval of Minutes
3. Approval of the Agenda
4. Welcome New Employees and Promotions
5. Colorado River Update
6. Recommend City Council Approve IGA Regarding Certain Aspects of the Halligan Water Supply Project
7. Approve Grazing and Farm Lease Agreement (A&A Farming)
8. Adopt Amendment to 2024 Rates and Fees Resolution
9. Recommend to City Council Establishment of Westgate Non-Potable LID
10. Approve Second Amendment to Water Agreement (Carestream Health)
11. Annual Water Conservation Report
12. 2023 Financial Report
13. Bi-Annual CIP Report
14. Legal Report
15. Director's Report
16. Such Other Business That May Be Brought Before the Board Added to This Agenda by Motion of the Board.
17. 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 at 970-350-9801 or wsadmin@greeleygov.com

**City of Greeley
Water and Sewer Board
Minutes of January 17, 2024
Regular Board Meeting**

Chairman Harold Evans called the Water and Sewer Board meeting to order at 2:00 p.m. on Wednesday, January 17, 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, Mayor John Gates

Water and Sewer Department staff:

Director Sean Chambers, Deputy Director Water Resources Ty Bereskie, Deputy Director of Utility Finance and Customer Service Erik Dial, Chief Engineer Adam Prior, Office Manager Gigi Allen, Water Enterprise Financial Analyst Crystal Sanchez, Water Resource Planning Manager Kelen Dowdy, Water Conservation Manager Dena Egenhoff, Utility Finance Manager Virgil Pierce, Civil Engineer IV Jim Paulson, Water Resource Administrator III Matt Sparacino, Water Resource Administrator II Sam Harshbarger, Water Resource Operations Manager Leah Hubbard, Plans Examiner Derek Hannon

Legal Counsel:

Supervising Senior Environmental and Water Resources Attorney Jerrae Swanson, Senior Environmental and Water Resources Attorney Dan Biwer, Environmental and Water Resources Attorney I Arthur Sayre, Counsel to Water & Sewer Board Attorney Carolyn Burr

Guests:

Council Member Deb Deboutez, James Sutherland from Wingfoot, PC Specialist Alik Cummins

2. Approval of Minutes

Mr. Murphy made a motion, seconded by Mr. Sisneros to approve the December 2023 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. Election of Officers

Mr. Miller nominated Harold Evans as Chairman of the Water and Sewer Board for 2024 and also nominated Mick Todd as Vice Chairman of the Water and Sewer Board for 2024. The motion was seconded by Mr. Otis. The motion carried 7-0.

6. Recommend City Council Adopt an Ordinance Amending the Municipal Code regarding Water and Sewer Service

Over the last several months, staff have presented to the Water and Sewer Board proposed changes to Title 20 of the Municipal Code. Most of the changes to the city code were aligning code with current practices and procedures but staff did propose a limited number of changes to fees and tap configuration that needed Board input. Staff has incorporated the Board's feedback within the code changes and fee modifications and is seeking Board approval.

Vice Chairman Todd moved that the Board recommend City Council adopt revisions to Title 20, Chapters 2, 3, and 5 of the Greeley Municipal Code regarding water and sewer service, substantially in the form of the draft ordinance included in the January 2024 Board packet. Seconded by Mr. Murphy. Motion carried 7-0.

7. Recommend City Council Adopt an Ordinance Amending the Municipal Code Regarding Domestic and Agricultural Wells

In 2020 the Colorado Division of Water Quality proposed changing the Poudre River Segment 12 classifications from recreational use to a Water Supply classification. This reclassification of the river segment below the Wastewater Treatment and Reclamation Facility (WTRF) could have required significant upgrades to the WTRF facilities and processes to meet the stringent water quality requirements. The Division said that there were 152 wells that utilized water for domestic purposes. Greeley refuted these facts and found that only one well was allowed for domestic purposes and the owner did not use it for such purposes. Greeley and Colorado Division of Water Quality agreed to resegment Segment 12 at the Hwy 85 Bridge in Greeley with only Segment 12a having the Water Supply classifications. Greeley's commitment to work closely with landowners to ensure that any future development with the LREGA will be connected to potable supply from a municipality or a water district. The proposed amended ordinance supports Greeley's commitment for development to connect to potable supplies.

Vice Chairman Todd moved that the Board recommend City Council adopt revisions to Title 20, Chapters 3 of the Greeley Municipal Code regarding domestic and agricultural wells, substantially in the form of the draft ordinance included in the January 2024 Board packet. It was seconded by Ms. Witt-Brown. The motion carried 7-0.

8. Terry Ranch Project Update

Mayor John Gates left the meeting at 2:53 pm

Jim Paulson discussed that the City of Greeley Water and Sewer Department (W&S) is constructing the Terry Ranch pipeline to connect the eventual Terry Ranch groundwater wellfield to the water supply system. The pipeline is to be built over the course of the next 10 years depending on available funding. Segment 1 is the first approximately 7 miles from the connection with the Bellvue 60" to about one-mile past Highway 14. To date, approximately 50% of this segment has been installed. The W&S department is also evaluating the groundwater resource beneath State Land Board sections located adjacent to the Terry Ranch parcels from which water rights have been purchased.

The Board asked how many wells would have to be drilled. The City stated 1 well per parcel for a total of 16.

9. Annual Water Court Update

Sam Harshbarger presented that the City of Greeley Water and Sewer Department is active in numerous Water Court matters to develop additional water supply and to protect existing water rights. In the third trimester, Greeley filed seven statements of opposition and stipulated out of three cases. During 2023, water court legal costs equaled \$378,751 and engineering costs equaled \$208,721 for a total annual cost of \$587,472

10. Legal Report

Carolyn Burr provided the Legal Report. Based on review of the November 2023 Water Division 1 Resume, staff and water counsel recommend that the Water and Sewer Board file no statements of opposition this month.

On Nov. 30, 2023, an application for diligence was filed on behalf of the City of Greeley in Case No. 23CW3158. Greeley is seeking a finding of diligence for ground water rights associated with seven wells used on park or school grounds, as well as the ground water rights associated with the Flatirons gravel pit reservoirs 3, 4 and 5. Greeley is also seeking a finding of diligence for the appropriate rights of exchange associated with the augmentation plan for these ground water rights, which allows fully consumable water to be exchanged to the reaches of the Poudre that are depleted by the ground water rights. No new claims of absolute are being filed, the remaining rights are conditional. Statements of opposition are due by the end of January.

11. Director's Report

Sean Chambers provided the Water & Sewer Board and staff with a brief update on the following

items of water utilities policy interest;

1. City of Greeley and Colorado Water Industry Education and Advocacy Events Calendar
 - a. **Colorado Farm Show** – January 23 – 25th at Island Grove Regional Park, Greeley
<https://coloradofarmshow.com/> Presentation on Ag Water Transfers and Leaseback Program
 - b. **Colorado Water Congress Annual Meeting & Legislative Breakfast** – Jan. 31-Feb 2nd at Aurora-Denver Conference Center
<https://www.cowatercongress.org/advocacy/>
 - c. **Subsurface Water Storage Symposium by CSU Water Center** – Feb. 22nd and 23rd, 2024 at CSU Spur Campus Confluence Theater, Denver
<https://watercenter.colostate.edu/ssws/>
Presentation on Terry Ranch Aquifer Storage & Recovery (ASR)
 - d. **AWWA and WEF have established The Utility Management Conference™**
- February 13 – 16th,
<https://www.awwa.org/Events-Education/Utility-Management>
2. South Platte Basin Roundtable Update
 - a. 2024 Election of Officers, Vacant Positions, CWCB Board Rep from South Platte Basin
3. F-Street Property Update and New Operations and Maintenance Facility Planning Overview
4. February W&S Board Agenda Preview

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

13. Adjournment

The meeting ended at 3:29 p.m.

Harold Evans, Chairman

Raymond Lee, Board Secretary



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

Title:

Welcome New Employees and Promotions

Summary:

New Hires: Chase Bryant – Water Quality Analyst
Tony Lawry – I and C Technician
Lucas Lane – Water Quality Technician
Dana Ortiz – Administrative Assistant II
Lisa Van Vorous - Administrative Assistant III
Lucy Garcia – Clerical Assistant II, Food Tax Rebate & Utility Assistance
Zuijeidy Sotelo – Customer Service Representative

Promotions: Tia Miller – Water Inventory Coordinator to Cross Connection Technician
Virgil Pierce – Rates and Budget Analyst
Rebecca Andrus – Engineer IV to Deputy Director of Water and Wastewater Operations and Maintenance

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

None



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

Title:

Colorado River Update

Summary:

Background:

The Colorado River flows for approximately 1,450 miles and provides water to seven states in the Western U.S. that are part of the Colorado River Basin. Divided into two regions; the Upper Basin includes Colorado, New Mexico, Utah, and Wyoming; and the Lower Basin includes Arizona, California, and Nevada. It also provides water to Mexico. Colorado receives 40% of its water supply from the Colorado River. It runs through the Rocky Mountains and into the deserts of the Southwest and provides a critical natural resource for agriculture, municipalities, outdoor recreation, hydropower generation, Tribal Nations, and drinking water for most of Northern Colorado, including the City of Greeley, along with several of the country's largest cities including Denver, Phoenix, Las Vegas, and Los Angeles. Approximately 45% of Greeley's source water originates in the Upper Colorado River Basin via the Colorado-Big Thompson Project, the Windy Gap Project, and smaller transmountain diversions under the Water Supply and Storage Company.

As the Southwestern U.S. continues to face compounded severe drought years, leading to less water available to use, Colorado and the other Basin states are working together to create solutions to our water supply and demand challenges proactively. This includes negotiating a post-2026 river operations agreement while working within the existing legal framework and investigating new tools to better prepare for any future uncertainties.

Colorado's Commissioner to the Upper Colorado River Commission, Becky Mitchell said "The Colorado River Basin is facing unprecedented challenges, and the 40 million people who rely on this critical resource are depending on the Basin states and federal government to develop inclusive, sustainable solutions that protect the system and its infrastructure now and into the future. I am proud to say that the Upper Division States are meeting the moment with our 5 Point Plan (opens in new window), and our focus now turns to implementation, including additional conservation efforts to maximize efficiency in all sectors. However, this plan is ineffective without action in the Lower Basin. This will require leadership from the U.S. Department of the Interior through the U.S. Bureau of Reclamation, and bold action across the Basin. Downstream of Lake Mead and Lake Powell, depletions must come into balance with available supply. Colorado stands ready to work with our partners in the Lower Basin, the U.S. Bureau of Reclamation, and the U.S. Secretary of the Interior as they make the difficult decisions that are necessary to sustain the system."

The CWCB and Commissioner Mitchell are committed to negotiating sustainable operations at Lake Powell and Lake Mead with the Basin States, federal government, and the Tribal Nations. To help

inform Commissioner Mitchell's work, she and CWCB Section Chief, Amy Ostdiek invites all Coloradans to provide comments at Engage CWCB. They are seeking solutions that recognize climate change, respect the equal apportionments to the River held by the Upper and Lower Division States, include a full accounting of all depletions, and provide for reservoir operations that are based on actual hydrology and that restore and protect storage.

Ms. Amy Ostdiek, has a deep history in Western water issues, and she is the Section Chief of Interstate, Federal, and Water Information Section of the Colorado Water Conservation Board. Her resume includes a JD from University of Colorado Law School, three years with the Colorado Attorney General's Office and thereafter, five years of service with the Water Conservation Board's Interstate and Federal team.

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

1. Colorado River Updates_Greeley Water Board_February 2024

Colorado River Updates

Amy Ostdiek

Section Chief

Interstate, Federal, and Water Information Section

February 21, 2024
Greeley Water Board



COLORADO
Colorado Water
Conservation Board

Department of Natural Resources
Page 11 of 190

The Colorado River Compact (1922)

Article II(a): Defines Colorado River System – includes tributaries

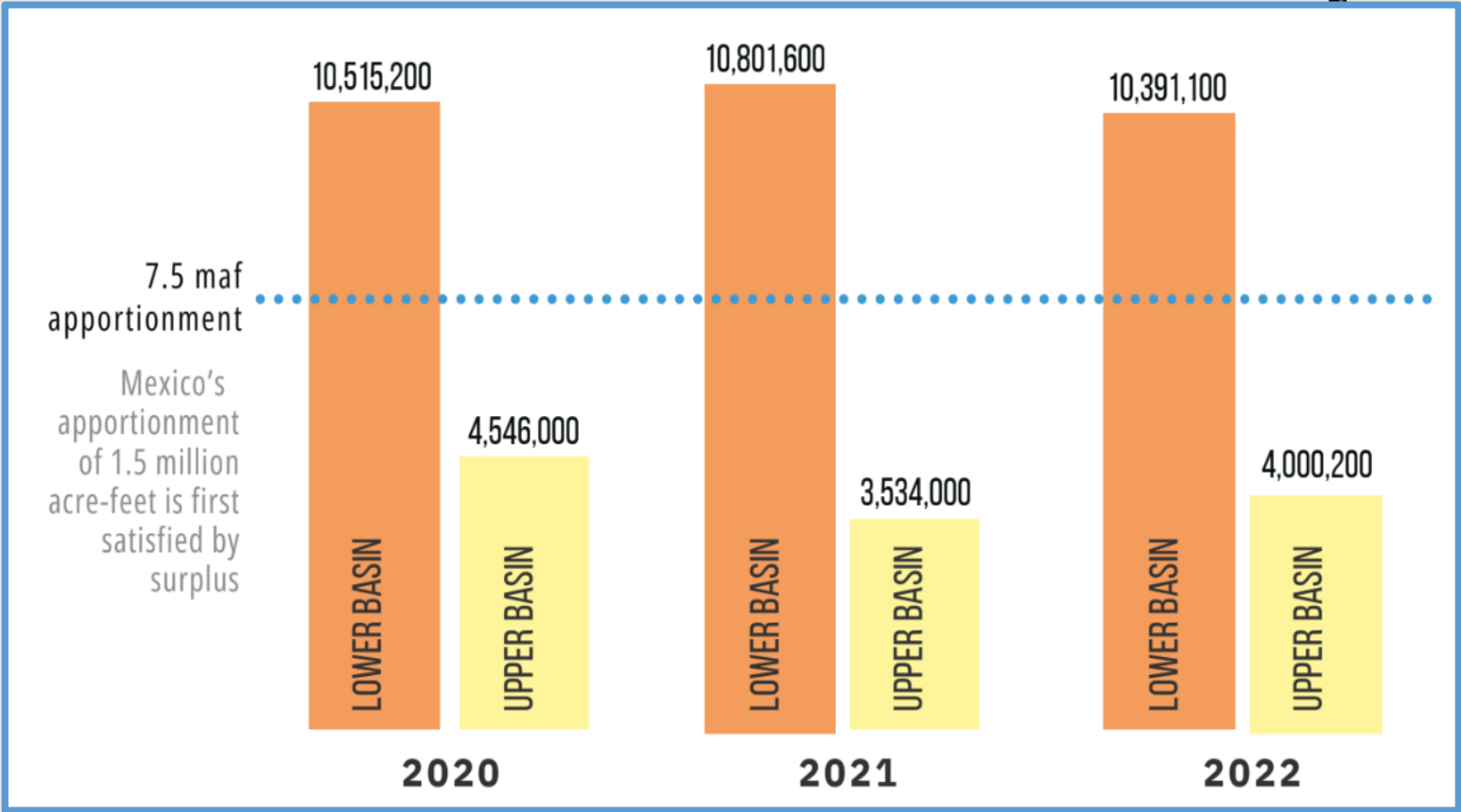
Article III(a): Apportions to Upper Basin and Lower Basin 7.5 million acre-feet per year in perpetuity (no priority)

Article III(b): Lower Basin may develop additional one million acre-feet annually

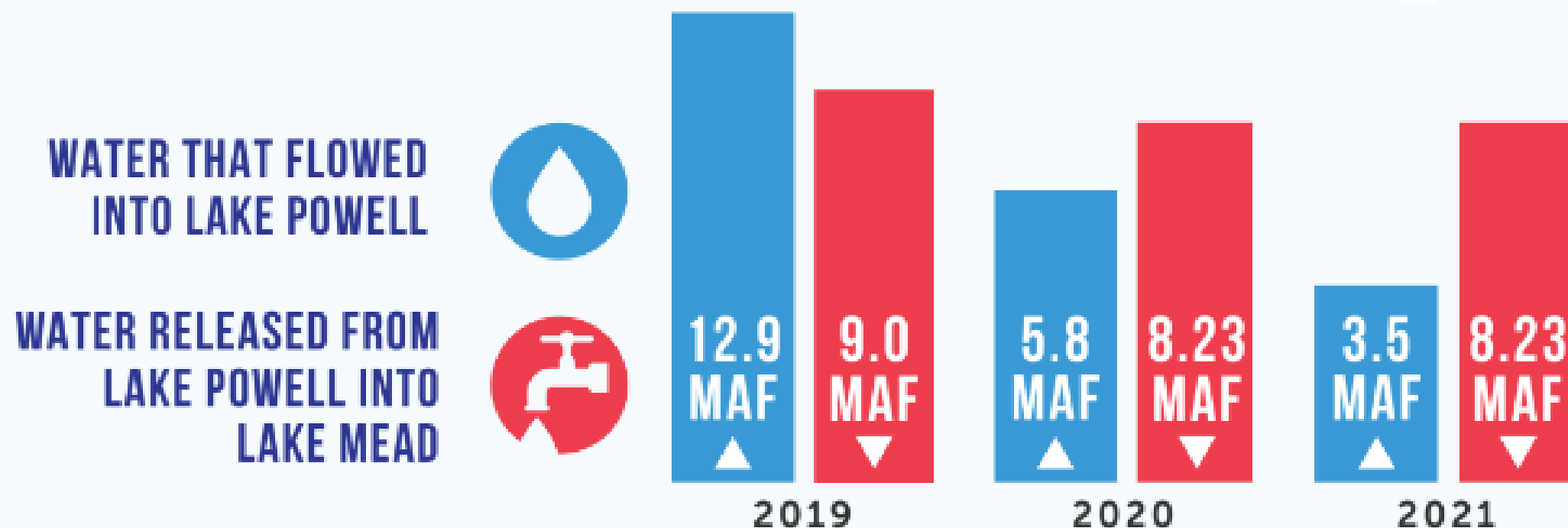
Article III(d): Upper Division States will not cause flow to be depleted below aggregate of 75 million acre-feet over ten-year period



Current Uses by Basin



Operations under the 2007 Guidelines



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

Unregulated Inflow, 24-Month Study, Bureau of Reclamation

Recent Events

June 2022

Reclamation announces need to conserve 2 to 4 million acre-feet per year in Colorado River System

July 2022

Colorado, New Mexico, Utah, and Wyoming create the 5 Point Plan

November 2022

Reclamation initiates process to revise 2007 Guidelines to respond to depleted storage

2023-2024

Upper Division States implement System Conservation Pilot Program

June 2023

Department of Interior initiates formal process to develop post-2026 operational guidelines for Powell and Mead



COLORADO
Colorado Water
Conservation Board

Department of Natural Resources

Colorado's Priorities

- 1 Acknowledging that climate change is real.** We must anticipate a drier, but also a more variable, hydrologic future. Upper Basin water users live on the front lines of climate change and for the last twenty plus years regularly have experienced significant cuts to their water supplies.
- 2 Recognizing that water users in the Lower Basin are not more important than water users in the Upper Basin.** The Upper and Lower Basins have equal apportionments to the River in perpetuity, established by the 1922 Colorado River Compact. The 1922 Compact promises certainty and security of water supplies for both the Upper and Lower Basins.
- 3 Preventing overuse in the Lower Basin.** Water use in the Lower Basin cannot continue to exceed available supplies and operations of Lake Powell and Lake Mead must better respond to actual hydrology. The Lower Basin must account for all depletions, including evaporation and transit losses. The Lower Basin's overuse poses risks to the entire Basin.
- 4 Defending against attempts at Compact curtailment in the Upper Basin States.** The Upper Division States are in full compliance with the 1922 Colorado River Compact; therefore, Upper Basin water uses must not be curtailed.
- 5 Operating Lake Powell and Lake Mead to respond to actual hydrology and protect storage.** Balancing releases from Lake Powell and the tier structure in the 2007 Guidelines depend on conditions at Lake Mead. This has led to depleted storage, and has driven both reservoirs and System into crisis. Lake Powell releases must be determined by actual hydrology and protecting storage rather than by Lake Mead conditions.
- 6 Preserving federal reserved water rights for Tribal Nations.** The Tribal Nations have water rights that they are entitled to use. Solutions for overuse in the Lower Basin cannot continue to depend on Tribes' undeveloped federal reserved water rights.



share your input with us:

COLORADO RIVER

engagecwcb.org/colorado-river



"As Colorado River Commissioner, it is my goal to ensure Colorado's priorities are represented throughout the negotiations for future operations of Lake Powell and Lake Mead and to protect Colorado River water users and our state's diverse needs"

- Colorado Commissioner Rebecca Mitchell,
Upper Colorado River Commission



COLORADO
Colorado Water
Conservation Board

Department of Natural Resources



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Kelen Dowdy, Water Resource Planning Manager, Adam Prior, Chief Engineer

Title:

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

Summary:

The Halligan Water Supply Project is a project that City of Fort Collins is pursuing to enlarge the Halligan Reservoir on the North Fork of the Poudre River up stream of the City of Greeley's Milton Seaman Reservoir. The two entities have been in discussions regarding efforts to mitigate possible water quality impacts caused by operational changes to the river due to the project and potential operational and reservoir release changes at Milton Seaman necessary to accommodate environmental mitigation and enhancement commitments on behalf of Fort Collins. Concurrently, Greeley is in the process of an urgent capital infrastructure project to replace the reservoir release gate at Milton Seaman Reservoir. The need to replace the gates was identified years ago and has evolved into a pressing matter due to state standards.

To address the two parties' concerns and objectives, the parties wish to enter into an intergovernmental agreement to cost share the efforts of a consultant to evaluate water quality mitigation options and gate design alternatives. The parties have developed an agreed upon scope of work and intend to use the findings as a basis for developing a plan for implementation that includes establishing potential future impacts, identifying appropriate mitigation measures and evaluating preliminary gate design.

Recommended Action:

Recommend to City Council.

Recommended Motion:

"I move that the Board recommend 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."

Attachments:

1. IGA- Halligan Water Supply Project Study
2. 2023.10.13. AECOM Scope - Milton Seaman WQ Study
3. 2024.02.05 Cost Share Agmt - Mitigation and Gate Design (FTC - Greeley)

IGA regarding Halligan Water Supply Project Study with the City of Fort Collins

Water and Sewer Board| February 21st, 2024





IGA – the Drivers

- Halligan Water Supply Project
 - Possible impact water quality at Milton Seaman Reservoir & Greeley Bellvue WTP
- Greeley CIP
 - Urgent need for infrastructure work to replace the Milton Seaman Reservoir release gate
- Fort Collins is motivated by environmental mitigation and enhancement commitments

IGA – the Need

- Retain a consultant to evaluate water quality concerns and gate design objectives within a study
 - Water quality evaluation and comparison of mitigation measures
 - Gate design that would accommodate smaller releases for Fort Collins
- Utilize the study as a basis for developing an implementation plan

Goals of IGA and Cost Sharing

- Establish potential future impacts, identify appropriate mitigation measures and evaluate preliminary gate design
- Equally share costs associated with the study



Staff Recommendation

- **Staff Recommends that the Board recommend City Council approve the Cost Share IGA with the City of Fort Collins and delegation of authority to the Director to make minor, non-substantive amendments thereto**



Questions?



October 13, 2023

***** Sent via Email *****

Mr. Adam Prior, PE
Chief Engineer
Greeley Water and Sewer
1001 11th Avenue, 2nd Floor
Greeley, CO 80631

**Subject: Water Quality Analysis and Outlet Tower Feasibility Study,
Milton Seaman Reservoir**

Dear Mr. Prior,

Enclosed as requested is AECOM Technical Services, Inc. (AECOM)'s proposed scope, schedule, and fee for the following:

1. Water quality analysis of the City of Greeley's (Greeley) Milton Seaman Reservoir with changes due to the planned Halligan Water Supply Project (HWSP) and enlargement of Halligan Reservoir located upstream.
2. Management and infrastructure recommendations for water quality issues on the North Fork of the Poudre River and in Milton Seaman Reservoir, including a comparison of options, such as a multi-level outlet tower and supporting systems and an oxygenation/aeration system.
3. If deemed to be the best option, continuation of the engineering feasibility study of a multi-level outlet tower and supporting systems that would allow Greeley to better manage water quality of releases from Milton Seaman Reservoir.
4. Progress preliminary design of Milton Seaman slide gates from 30 to 60 %, and re-select the jet flow gate valve equipment. The design should include a range of smaller releases that includes flows in the 1 to 5 cfs range.

AECOM assumes all project-related documentation will be submitted to Greeley (emails, deliverables, invoices, etc.). Greeley should coordinate with Fort Collins for any input or reviews. If directed and approved by Greeley, AECOM's HWSP team can request data or other inputs from Fort Collins on an individual basis. AECOM's HWSP team will not overlap with this project team, and no information will be shared with AECOM's HWSP team without Greeley's direction and consent. A detailed description of this work is provided in the following sections.

STATEMENT OF QUALIFICATIONS

AECOM is uniquely qualified to complete this work based on our familiarity with the project conditions and technical capabilities. AECOM's proposal is conditioned on mutually acceptable contract terms and conditions similar to current and previous AECOM-Greeley work. Key AECOM team members include:

- **Nathan Walker, PE** will serve as Project Manager and has worked successfully with you to complete past projects. Mr. Walker has 23 years of experience including slide gate and similar improvements associated with dams and reservoirs.
- **Tammy Karst-Riddoch, Ph.D.** will serve as Senior Limnologist on the water quality analysis portions of the project. Dr. Karst-Riddoch is an accomplished senior aquatic scientist, bringing more than 25 years of research and consulting experience to the AECOM team. She manages, leads, and advises on complex surface water and watershed management projects for government, industry, and private stakeholders across North America.
- **Lorin Hatch, Ph.D.** will serve as Independent Technical Reviewer on the water quality analysis portions of the project. Dr. Hatch is a federal program/project manager and water quality expert with over 30 years of experience in water resources and ecosystem management.

Resumes for the key AECOM team members are attached.

PROJECT UNDERSTANDING

Water quality at the Milton Seaman Reservoir outlet will be evaluated for current conditions and for potential changes due to the HWSP. Along with this evaluation, a feasibility analysis and evaluation/comparison for water quality mitigation alternatives will be performed for oxygenation and reservoir aeration systems. Additionally, an engineer's opinion of probable costs, generally consistent with an AACE Class 4, for the selected aeration and/or oxygenation system option will be prepared. AECOM understands Greeley is willing and able to inject permanganate at the treatment plant to supplement the selected option.

AECOM understands Greeley's desire to continue the engineering feasibility study of the development of a multi-level outlet tower and associated system components. A conceptual design analysis will be prepared summarizing the details of construction along with criteria and resulting ability to meet some or all of Greeley's needs. Additionally, an engineer's opinion of probable costs, generally consistent with an AACE Class 4, for the proposed outlet tower and supporting systems will be prepared.

AECOM understands that a comparative analysis of the two water quality options and their combination should be included to understand the pros and cons of these systems.

AECOM understands Greeley's desire to continue the design of the slide gates at Milton Seaman Reservoir. This work was previously completed by AECOM to a 30% design level. AECOM will advance to a 60% design level and also re-select the jet flow gate valve equipment. The design will include a range of smaller releases that includes flows in the 1 to 5 cubic feet per second (cfs) range, be it part of the main gates or separate release gates and/or valve structure.

1. SCOPE OF WORK

Task 1: Project Management

AECOM will coordinate project management and meetings with Greeley. Under this Task a project work plan, schedule, and general administration tasks will be prepared and carried out. A site visit is included in the scope for this task.

PHASE 1

Phase 1 represents the analysis of a water quality mitigation plan for Milton Seaman Reservoir due to the HWSP.

Task 2: Water Quality Data Review and Analysis

AECOM will complete a limnological assessment of the Milton Seaman Reservoir and the North Fork of the Poudre River to characterize seasonal water quality with the changes in inflow/outflow, water levels and water quality for current conditions and potential changes anticipated due to the HWSP. The assessment will consider key water quality concerns that may impact treatment at the Bellvue Water Treatment Plant as well as recreational activities and aquatic ecology of the reservoir. AECOM's analysis will consider relevant information provided by both Fort Collins and Greeley.

It is understood that an oxygenation/aeration system could be needed to address issues with anoxia, which presently drives high concentrations of manganese and iron in the reservoir. Anoxia also contributes to an enhanced flux of nutrients from the sediments that promote algal activity, increasing the potential production of algal metabolites such as taste and odor compounds (2-Methylisoborneol (MIB), Geosmin) and cyanotoxins, as well as organic matter that leads to additional oxygen demand.

The purpose of this assessment is to identify patterns and drivers of water quality concerns to inform the selection and design of effective and feasible mitigation options to address them. This includes input for the proposed oxygenation/aeration system and the Outlet Tower Feasibility Analysis (i.e., to establish depths of the outlets to optimize the quality of water discharged downstream).

To perform the assessment, AECOM will collect and review available relevant physical, chemical, and biological data for the Milton Seaman Reservoir and for the inflow from the Halligan Reservoir under existing conditions and with the HWSP. Data that would support the assessment include, but are not limited to:

- Bathymetry
- Water levels
- Inlet/Outlet flows
- Field water quality parameters (depth profiles of temperature, dissolved oxygen, pH, conductivity, oxygen reduction potential)
- General water chemistry (alkalinity, hardness, metals, nutrients [phosphorus and nitrogen], total suspended solids, total and dissolved organic carbon, and chemical and biochemical oxygen demand)
- Chlorophyll-a (or other indicators of algal biomass and community composition)
- Taste and Odor compounds (MIB, Geosmin)
- Cyanotoxins
- Sediment quality (to assess oxygen demand, and metals and nutrient flux)

Additional information on past water quality events causing treatment or operational issues at the water treatment plant would also be beneficial to support the assessment.

AECOM recognizes that there may be missing data to fully characterize mixing and stratification patterns and water quality of the reservoir, and as input to design the aeration/oxygenation system. Where feasible, limnological theory and methods will be used to fill data gaps to inform the assessment. AECOM will notify Greeley of critical data gaps and provide recommendations to collect the missing information.

AECOM will request oxygenation/aeration designs, technical specifications, and cost estimates from up to three (3) technology suppliers. These suppliers will be given relevant data from the

limnological assessment to support their proposals for meeting the oxygen transfer requirements necessary to maintain the reservoir's water quality. Key information may include:

- Reservoir water quality (oxygen concentrations, oxygen demand)
- Area and depth of the reservoir
- Stratification depth
- Atmospheric and water temperature
- Water cycling in and out of the reservoir
- Locations and elevations of inlets and outlets

The design proposals will be compared and evaluated in Task 3. As a result from this analysis, any other mitigation options that may be suitable will be identified. Greeley could consider if adding any additional options to the scope, beyond those presented in Tasks 2 and 4, is needed.

DELIVERABLES

- Draft Water Quality Tech Memo, including:
 - Identification and assessment of key water quality concerns that may impact treatment at the Bellvue Water Treatment Plant as well as recreational activities and aquatic ecology of the reservoir.
 - Analysis required by vendors to complete their design proposals, as noted above.
 - Identification of any mitigation alternatives other than aeration system and multi-level outlet tower.
- Final Water Quality Tech Memo including same items noted above in the Draft Report.

ASSUMPTIONS

- Expected list of information required to complete this review as listed above. AECOM collection of data is limited to coordination with Greeley and Fort Collins to obtain available water quality data relevant to this effort and in a format suitable for use.
- Data review will be limited to the level of effort shown for this task.
- Detailed water quality modeling will not be performed as part of this task. Qualitative analysis will be used to anticipate potential changes in water quality due to the HWSP.
- No hydrologic or hydraulic model will be required at this time for analysis.
- Extent of analysis will be limited by data availability. Gap analysis may need to be performed if insufficient data is available. The AECOM team will require data through the water column to show temperature change through the water column in order to size aeration technology properly.
- Only the analysis of the aeration option and the multi-level outlet tower are included in the scope under Tasks 3 through 6. If additional mitigation options are identified during this task, additional selected option(s) could be added to the scope at Greeley's direction.

Task 3: Feasibility 15% Design for Oxygenation and Aeration Systems

AECOM will evaluate design plans received from up to three (3) aeration system vendors requested in Task 2. In the review of equipment options, oxygenation systems will be considered. A technical specialist in oxygenation systems with demonstrated experience in designing well-functioning hypolimnetic oxygenation systems will be utilized in this review. An overview description will be provided for each technology, and the technologies will be compared with respect to several evaluation criteria that may include:

- Equipment Cost
- Operational Cost
- Maintenance Burden
- Ease of Operation
- Ease of Construction
- Oxygen Transfer Efficiency
- Vendor Proof of Experience

Based on the evaluation, and in consultation with Greeley, the preferred technology will be selected.

This preferred system will be used to develop a Basis of Design Report and 15% design drawings which will include process-mechanical designs and layout, structural and electrical designs. Process Mechanical will size the compressed air system, inclusive of the compressor, dryer, air receivers, and associated line piping. A layout for all Process Mechanical equipment will be provided to the building layout team. One plan and no more than seven section views are anticipated. Total anticipated drawing generation will be four. Structural designs will include a Floor Plan sheet, a Roof Plan sheet, a section of the building, and at least one Detail sheet showing pipe encasement. Electrical will include design of lighting, receptacles, power to equipment, electrical service, grounding, lightning protection system, and associated systems. In addition, feasibility level, conceptual design will provide connections for the control system as needed. The electrical feasibility level, conceptual design anticipates site power, telemetry plan, and preliminary one-line diagram and network diagrams. Total 15% design package is expected not to exceed 20 sheets. Cost estimating will be part of Task 5.

DELIVERABLES

- Draft Oxygenation and Aeration Systems Feasibility Design Report, including:
 - Technology descriptions and evaluations
 - Comparison and selection of preferred technology
 - Basis of design for the preferred technology
 - Sections from Process-Mechanical, Structural, and Electrical design disciplines describing basis of design.
- 15% Design Package for the preferred technology:
 - Process-Mechanical: up to four drawing sheets including one plan, and no more than seven section views.
 - Structural: up to two plan sheets, one building section, one detail sheet, and one shaft elevation view.
 - Electrical: up to eight sheets including site plan, power plan, one-line and schedules, details, lightning protection system, and control schematics.
- Final Oxygenation and Aeration Systems Feasibility Design Report and 15% Design Drawings Package including same items noted above in the Draft Report.

Task 4: Feasibility Design and Engineering of Multi-Level Outlet Tower

Task 4A Data Review and Development of Study Approach

AECOM will review available and pertinent information relative to the design, construction, operation and previous analyses of the dam and associated structures. This information will include as-built drawings, construction records, previous AECOM design reports, and additional information available from Greeley.

Task 4B Civil and Structural Analysis for Alternatives

Slide Gate Analysis

In 2019, AECOM presented to the City of Greeley a Basis of Design and Preliminary Engineering Report for the rehabilitation of the five leaking slide gates located at the outlet works of the Milton Seaman Reservoir. As part of the 30% design, AECOM proposed the construction of a new tunnel bulkhead and gate structure located immediately downstream of the existing slide gates. A reinforced concrete and steel trashrack structure is located at the reservoir intake upstream of the slide gates.

With the inclusion of an outlet tower, Greeley and AECOM will evaluate the potential of replacing the existing guard gates located at the tunnel inlet along with installation of new slide gates located at multiple levels on the new outlet tower. The new tower gates would allow Greeley to better manage water quality of reservoir releases by selectively withdrawing water from one or more levels within the reservoir. Development of a concept for measuring reservoir releases and automating gate operation will also be provided.

Planned Bulkhead Considerations

A new outlet tunnel bulkhead was proposed as part of the 2019 30% Basis of Design. The concrete bulkhead structure, or plug, would be located immediately downstream of the existing slide gates. The conceptual design of the new outlet tower will consider structural, hydraulic, and operational compatibility with the planned bulkhead. The team will also evaluate whether the bulkhead would still be required with the construction of the outlet tower.

Fish Exclusion Analysis

The Feasibility Study (Study) will review alternatives to prevent fish passage through the outlet tower. The design will consider intake screen options, preliminary backwash equipment sizing, design flows, screen bar spacing, and head loss considerations.

Tower Layout Alternatives

Two Outlet Intake Tower location alternatives will be developed and evaluated as part of this Study.

Option 1: Locate tower near upstream of the tunnel intel at the existing trashrack

This alternative assumes that the existing trashrack and supporting structure will be demolished and removed, and a new outlet tower would be constructed near the upstream face of the tunnel inlet. The tower should be founded on rock and this location is anticipated to minimize foundation excavation. However, a temporary cofferdam and bypass system will be needed to convey flows around the work area and discharge over the spillway or through the existing outlet tunnel during tower construction.

Option 2: Locate tower east of the existing trashrack

This tower location alternative assumes removal of the existing trashrack and construction of a new outlet tower at a location adjacent to the existing trashrack structure. This could allow for conveyance of reservoir flows through the existing outlet tunnel during tower construction and could minimize the need for temporary cofferdam and bypass piping. Excavation for the intake tower foundation is expected to increase compared to Option 1 and will be evaluated based on estimated depth to bedrock. Results from this option will be used to evaluate constructability, risk, and whether the additional cost of tower excavation is less than the Option 1 costs for the temporary cofferdam and bypass piping.

Cofferdam and Reservoir Bypass Analysis

The use of a cofferdam and bypass system would allow for the construction of the outlet tower at the existing trashrack location. The system will need sized to divert flows from the reservoir and protect the work area. Conceptual capacity and sizing of the cofferdam and bypass system will be developed.

Foundation Excavation Analysis

AECOM will review previous geologic and seismic hazard studies performed as well as geotechnical data for the potential tower locations. Under this Task, required excavation depths to a suitable foundation for each tower location alternative will be estimated to support the alternative's development and evaluation.

Reservoir Dredging Analysis

The City of Greeley has expressed interest in the potential of dredging sediment from the Reservoir as part of the Tower Study. AECOM will evaluate alternatives for disposal and placement of the dredged material in accordance with United States Army Corps of Engineers (USACE) requirements. AECOM will also consider material properties and quantities associated with restoring the reservoir bathymetry to as-built grades based on available information and explore possible interest by others in use of this material in planned reservoir construction that could occur near the site in the near future.

Water Quality Analysis and Management Plan

Water quality management of reservoir releases is a desirable component for the proposed outlet tower design. AECOM will review available water quality data, project goals and requirements to inform recommendations for development of a reservoir water quality monitoring and management plan. Considerations for water quality during construction will also be provided. However, the development of detailed monitoring and management activities is beyond the scope of this study.

Task 4C Mechanical and Electrical Analysis for Alternatives

New Control House Analysis

The existing control house is located east of the reservoir outlet works and currently houses the hydraulic pump and fluid reservoir and is served with a 240-volt, single-phase electrical service.

A new control house is proposed to supply power and house equipment for the outlet tower system components. A preliminary location, layout, and power source of the new control house will be developed as part of this Study.

Gate Operator, Screen Backwash, and Aeration System Mechanical Equipment Analysis

As part of the new outlet tower concepts, AECOM will evaluate the feasibility of installing oxygenation, air compressor, and accumulator equipment that will be housed within the new control house for a new reservoir aeration system. Evaluation of hydraulic or electric operator options for the new gates will be developed to recommend basis of design for gate operators.

AECOM will evaluate preliminary sizing and placement of a screen backwash system as part of the outlet tower construction. The backwash equipment will be housed within the new control house. Backwash equipment sizing will consider fish exclusion requirements.

Outlet Tower Site Power System Requirements

New site power will be evaluated by connecting the proposed outlet tower and control house to the existing three-phase electrical located at the site access road. This will include correspondence with the power provider, along with review of assumed or estimated connected loads, to review feasibility and basis of cost.

DELIVERABLES

- Draft Feasibility Study Report, including:
 - Descriptions of conceptual design elements
 - Discussion of detailed design considerations
 - Conceptual drawings of outlet tower options
- Final Feasibility Report including same items noted above in the Draft Report.

Task 5: Evaluation and Cost Estimating of Water Quality Mitigation Options

AECOM will evaluate the aeration system and multi-level outlet tower mitigation options. The criteria for this evaluation may include:

- Cost
- Environmental Impact
- Resilience to extreme weather or seasonal changes in water quality
- Regulatory Compliance
- Energy Consumption
- System Reliability
- Operational Flexibility

AECOM will develop preliminary design material and equipment quantities for the construction of the proposed outlet tower and aeration system alternatives and associated work. These quantities will be used to develop a cost estimate that is generally consistent with an AACE Class 4 estimate. AECOM will develop the engineer's estimate of construction cost utilizing industry accepted methods including budgetary costs provided from manufacturers or vendors of major equipment when available.

DELIVERABLES

- Draft Water Quality Mitigation Tech Memo, including:
 - Memo summarizing mitigation evaluation methods and results, and their benefits
 - AACE Class 4 cost estimates for a single aeration system and single multi-level outlet tower mitigation options presented in Tasks 3 and 4
- Final Water Quality Mitigation Tech Memo including same items noted above in the Draft Report.

Task 6: Water Quality Mitigation Plan Recommendations and Reporting

Based on stakeholder reviews of the deliverables above, AECOM will provide a final mitigation plan. This will include a compiled report containing the conclusions from Tasks 2 through 5, summary of cost estimate provided in Task 5, and an implementation schedule.

DELIVERABLES

- Draft Water Quality Mitigation Plan Recommendations Report, including:
 - Summary of conclusions/design considerations from Tasks 2 through 5
 - Summary of cost estimate provided in Task 5
- Draft Water Quality Mitigation Plan Recommendations Report including same items noted above in the Draft Report.

PHASE 2

Phase 2 represents advancing the Tunnel Bulkhead and Gate Replacement from 30 to 60% design and incorporating the HWSP minimum release requirement of 1 cfs. Phase 2 is not anticipated to begin until Phase 1 is complete, so that any conclusions from Phase 1 can be incorporated into Phase 2.

Task 7: Outlet Gates 60% Design

AECOM will progress the Tunnel Bulkhead and Gate Replacement, Option 4 from 30% to an approximately 60% level of design, and revise the design to accommodate a 1 to 5 cfs streamflow release range requirement for the HWSP, be it part of the main gates or separate release gates and/or valve structure. The work under this task will include development of 60% design drawings, draft technical specifications, Preliminary Engineering Report (PER), and 60% cost estimate.

AECOM anticipates approximately 15 design drawings including title sheet and location map, site plan, existing outlet works plan and profile, existing slide gate sections, hydraulic conduit plans and sections, hydraulic conduit details, standard reinforcement details, bulkhead structure plan and sections, and typical reinforcement sections. AECOM does not anticipate and has not included primary power site electrical improvements in this scope of work.

Draft technical specifications will be developed for major equipment, key work activities and dam safety related activities that involve State Engineering Office (SEO) approval to provide design-build teams information to use as the basis of their proposal. The draft specifications are anticipated to follow Division 16 MasterFormat 1995 format and include Summary of Work, Environmental Standards, State Engineer Requirements, Reservoir Control, Stream Diversion, and Slide Gates. Additional technical specifications, such as Cast-In-Place Concrete, will be identified in the Specifications Table of Contents but will not be drafted in this scope and will need developed during final design by the selected design-builder.

A PER will be developed documenting the basis of design for the proposed improvements. This will include the SEO required plan approval submittal schedule, and supporting calculations and equipment catalog cut sheets. The PER can be included in the design-build solicitation and will not include the 60% cost estimate.

An AACE Class 3 cost estimate will be developed based on the 60% design drawings and draft technical specifications. However, this cost estimate will typically not be included in Greeley's design-build solicitation, and therefore, will be submitted to Greeley separately from the design drawings, specifications and PER.

AECOM anticipates that a draft 60% design submittal should be reviewed for comments by the SEO in addition to Greeley's review and comments. This will be confirmed during the Task 1 SEO consultation, and SEO comments along with Greeley comments will be incorporated into a final 60% design submittal for Greeley's use in solicitation of design-build proposals.

Water quality management of reservoir releases is a desirable component for the proposed outlet tower design. AECOM will review available water quality data and project goals and requirements to inform recommendations for development of a reservoir water quality monitoring and management plan. Considerations for water quality during construction will also be provided. However, the development of detailed monitoring and management activities is beyond the scope of this study. This will be completed as part of Task 5, and updated as needed for consideration of this task.

DELIVERABLES

- 60% Design Drawings
- 60% Technical Specifications
- Preliminary Engineering Report
- AACE Class III Cost Estimate
- Greeley procurement documents review comments.

ASSUMPTIONS

- Electrical improvements are not required.
- Greeley will identify list of local permits for inclusion in preliminary specifications.
- State permits including SEO review and approval and SWMP will be obtained by design-builder.
- National permits such as USACE 404 Nationwide Permit for Maintenance are not required.
- Greeley will provide notification to the United States Forest Service under the Special Use Agreement or obtain a permit Amendment, if required.
- No intrusive investigations such as rock coring are required to develop the 60% design.

2. SCHEDULE

The total project duration is estimated to be approximately 17 months based on the number of conceptual design elements and the various subject matter expertise needed. Notice to Proceed (NTP) is estimated to be January 15, 2024 and project milestones and anticipated durations have been estimated as follows, and subject to verification as part of the fee estimate level of effort:

- Anticipated NTP: January 15, 2024
- Task 2 Draft Completion: February 15, 2024
- Task 2 Final Completion: March 15, 2024 (allowing 2 weeks for stakeholders to comment, 2 weeks for AECOM to finalize)
- Tasks 3 & 4 Start and Draft Completion: March 15 – June 15, 2024
- Tasks 3 & 4 Final Completion: August 5, 2024
- Task 5 Start and Draft Completion: August 5, 2024 – October 15, 2024
- Task 5 Final Completion: November 15, 2024
- Task 6 Start and Draft Completion: November 15, 2024 – January 30, 2025
- Task 6 Final Report Completion (End of Phase 1): March 1, 2025
- Phase 2 (Task 7) Completion: March 1, 2025 – July 31, 2024

3. ENGINEERING FEES

A summary of task costs is presented in Table 1. AECOM's 2023 billing rates are based on AECOM's attached proposed rates for Greeley's As Needed Services/Design and Engineering for Water & Sewer.

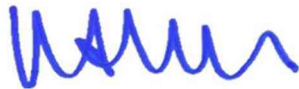
Table 1. Time & Materials Not To Exceed Fee

Task	Description	Fee Estimate
Task 1	Project Management	\$43,304
Task 2	Water Quality Data Review and Analysis	\$24,746
Task 3	Feasibility 15% Design for Oxygenation and Aeration Systems	\$76,780
Task 4	Feasibility Design and Engineering of Multi-Level Outlet Tower	\$204,069
Task 5	Evaluation and Cost Estimating of Water Quality Mitigation Options	\$27,986
Task 6	Water Quality Mitigation Plan Recommendations and Reporting	\$13,764
	PHASE 1 SUBTOTAL	\$390,649
Task 7	Outlet Gates 60% Design	\$162,841
	TOTAL	\$553,490

We look forward to the opportunity to provide engineering support to the City of Greeley for successful completion of this project. Please contact me at 303-740-2622 or nathan.walker@aecom.com if you have questions or require additional information.

Sincerely,

AECOM Technical Services, Inc.



Nathan Walker, PE
Project Manager



Kathy Schlosser, PE
Associate Vice President

enclosures: : Nathan Walker Resume
Tammy Karst-Riddoch Resume
Lorin Hatch Resume
Detailed Fee Estimate
2023 Fee Schedule

cc: :

Nathan Walker, PE

Project Manager

Education	Years of Experience	Areas of Expertise	Professional Registration
BS, Civil Engineering, University of Akron, 2001	With AECOM: 13 With Other Firms: 10	Dams & Reservoirs Civil Infrastructure Utility Engineering	Professional Engineer: Colorado, New Mexico, Washington

Summary

Mr. Walker has 22 years of planning, design, construction, and management experience as the Engineer of Record involving the preparation of studies, construction drawings, cost estimates, and technical specifications associated with site civil and utility engineering including improvements associated with more than a dozen dams and water storage reservoirs.

Project Experience

Arapahoe County Water and Wastewater Authority, Chamber Reservoir Phase II Remediation Reservoir Liner, Centennial CO. Principal Engineer and Engineer of Record for design of reservoir liner including coordination of approval with the State Engineer's Office associated with remediation of a Jurisdictional Dam including development of liner material alternatives analysis and final construction drawings and specifications. Reservoir liner involves 1.7M SF of geosynthetic liner, geotextile, anchor trenches and mechanical connections to seven dam structures.

United States Air Force Academy, Kettle Creek Dry Dam Modifications, Colorado. Principal Engineer and Engineer of Record for design of dam modifications including coordination of approval with the State Engineer's Office associated with conversion of a High Hazard Dam to an Exempt Structure involving dam breach analysis, dam hazard classification, development and evaluation of alternatives, and development of final construction drawings and specifications. Dam modifications involve removal of earthen embankment dam, coordination with CDOT, protection of utilities, drainage improvements and modifications to detention features within the dam.

United States Air Force Academy, Non-Potable Reservoir 1 Dam Repairs, Colorado. Principal Engineer and Engineer of Record for design of dam repairs including coordination of approval with the State Engineer's Office and development of final construction drawings and specifications for repair of a Significant Hazard Dam. Repairs involve two (2) 18-inch diameter CMP inlet conduits, one 18-inch diameter steel outlet conduit, reinforced concrete outlet tower, emergency spillway, toe drain, earthen embankment, and including the demolition of existing work and structures. Conduit repairs involved cured-in-place pipe (CIPP) for the two (2) inlet conduits and grouted steel pipe slip-lining of the outlet conduit.

Colorado Springs Utilities, Woodland Park, Northfield Dam Modifications Project, Colorado. Project Manager during construction management services involving improvements of a small, Significant Hazard Dam in El Paso County including the rehabilitation of the dam outlet works, new concrete spillway chute, new toe drain system, and an 8-foot raise of the earthen dam embankment in coordination with State Engineer approval. Conduit rehabilitation involved grouted steel pipe slip-lining of the outlet conduit.

City of Aurora, Box Creek Reservoir Forebay and Diversion Structure Project, Kobe, CO. Project Manager for development and evaluation of alternatives analysis and identification of recommendations for water supply diversion options and forebay storage options including a zoned earthen embankment dam to provide reservoir storage for up to 15,000 acre-feet of capacity, geotechnical site investigation along with development of design documents for a replacement diversion structure.

City of Santa Fe, Nichols and McClure Dam Rehabilitation, Santa Fe, New Mexico. Lead Engineer, Non-Dam Safety. Led a team that completed design of the non-dam safety aspects of the Nichols Reservoir Rehabilitation project. Design elements included raw water pipeline improvements at the Nichols site and the Canyon Road WTP site along with a below grade flow control and future hydropower valve vault, a below grade Nichols reservoir outlet valve vault, and an above grade mechanical equipment building. The multi-discipline design team involved site civil, structural, process, mechanical, electrical, power distribution, instrumentation, and controls engineering coordinated closely with the City team.

Bradner Dam and Peterson Dam Alternatives Analyses, Las Vegas, New Mexico. Hydraulic Engineer. Developed and completed analysis of hydraulic transient pressures for raw water supply pipeline from Bradner reservoir to the City's water treatment plant.

Upper Yampa Water Conservancy District, Yamcolo Reservoir Outlet Control Valve Replacement, Yampa, Colorado.

Project Manager for replacement of the existing American Water Works Association (AWWA) C504, Class 150B, 36-inch cast iron butterfly valve addressing a fracture that developed on the valve leaf/disc suspected to have resulted from the effects of frazil ice buildup or other wear and tear, such as harmonics from vortex shedding. Included evaluation of valve replacement options including AWWA C529 high performance butterfly valves involving single, double, and triple offset along with salvage and reuse of the existing hydraulic valve operator.

Colorado Parks and Wildlife, Beaver Park Reservoir Flow Control Optimization, South Fork, Colorado. Technical Lead to conduct flow testing of the reservoir outlet works, evaluate hydraulic conditions and equipment performance, and develop improvements to maximize the operational capacity of the structure. AECOM determined the removal of the 42-inch butterfly valve (BFV) was necessary to provide full operating capacity at full reservoir levels. AECOM developed design drawings to allow for removal of the BFV in order to maximize the flow releases provided by the 42-inch cone valve and evaluated equipment options to replace the existing valve with a full port isolation valve including a bonneted knife gate, stainless steel ball valve, and plug valve suitable for these high velocity and low pressure conditions

United States Air Force Academy, Non-Potable Reservoir 2 Hazard Classification, Colorado. Principal Engineer for dam hazard classification of a High Hazard Dam in accordance with Colorado Division of Water Resources Rules and Regulations for Dam Safety and Dam Construction. Hazard classification included dam breach analysis, dam hazard classification, and development of an emergency response plan.

United States Air Force Academy, Non-Potable Reservoir 3 Hazard Classification, Colorado. Principal Engineer for dam hazard classification of a Significant Hazard Dam in accordance with Colorado Division of Water Resources Rules and Regulations for Dam Safety and Dam Construction. Hazard classification included dam breach analysis, dam hazard classification, and development of an emergency response plan.

Integrated Utility Master Plan, City of Thornton, Thornton, Colorado. Project Manager. Developed utility wide master plan for water supply, treatment, distribution and wastewater collection systems following an integrated planning approach and including evaluation of facilities performance, operations, water quality, redundancy, reliability, resiliency and development of a prioritized capital improvement program including rehabilitation and replacement costs for all pipelines based on prioritized evaluation of risk and consequence of failure associated with each asset. System modeling involves water balance and water quality mitigation alternatives and limnologic analysis for water supply reservoir water quality.

Private Client, Water Supply Projects, Weld County, CO: Design and construction of multiple water supply projects including development of water supply systems, water storage reservoirs, and water pumping, distribution and delivery systems.

Private Client, Water Supply and Utilities Planning, Western Slope, CO: Lead Utility Engineer for engineering, master planning and permitting services for new public water system, wastewater utility and utility systems including alternative development and analysis of multiple water supply diversions, water storage reservoirs, water treatment facilities, water distribution system components including pipelines, pump stations, and multiple pressure zones.

Pandora Water Supply Project, Town of Telluride, CO: Principal Engineer provided design and construction engineering services for completion of new water supply sources, raw water transmission system, water treatment facility, hydroelectric generation plant, treated water transmission system, booster pump station, support facility, and related infrastructure.

Topock Marsh Infrastructure Improvements, U.S. Fish and Wildlife Service, Needles, CA: Provided design of 60 CFS raw water pump station and associated piping, valving and electrical systems. Floating pump system was part of improvements to intake and canal structures.

Santa Ana National Wildlife Refuge, U.S. Fish and Wildlife Service, Hidalgo and Cameron Counties, TX: Provided design of 3,000 gpm raw water pump stations and associated piping, valving and electrical systems including floating barge-pump system at five (5) separate sites within the NWR.

City of Aurora, Aurora Rampart Raw Water Lines Relocation at US 85 and Titan Road, Aurora, Colorado. Design and relocation of two critical raw water transmission lines in Aurora to accommodate Highway 85 re-construction by CDOT. The work involved extensive coordination with Aurora's water department, CDOT, and adjacent utilities to ensure continuous water supply.

Xcel Shoshone Hydroelectric Penstock Repair, Glenwood Springs, Colorado. Provided design engineering services to rehabilitate the twin 108-inch diameter penstocks at the Shoshone Hydroelectric Plant due to a catastrophic rupture of one of the existing penstocks just above the turbine building. Evaluated hydraulic transient pressures of repair and replacement options and recommended installing new 100-inch diameter welded steel pipe lining inserts inside each of the existing penstocks.

Tammy Karst-Riddoch, Ph.D.

Senior Aquatic Scientist/Limnologist and Paleolimnologist

Education	Years of Experience	Professional History	Training and Certifications
BSc (honours), Biology, Laurentian University, 1994	With AECOM: 8 With Other Firms: 12	07/2017 - Present, AECOM Senior Aquatic Scientist/Limnologist	AECOM Certified Project Manager (2019)
MSc, Aquatic Ecology and Paleolimnology, Queen's University, 1997	Professional Affiliations North American Lake Management Society (NALMS)	01/2010 - 06/2017, Hutchinson Environmental Sciences Ltd. Senior Aquatic Scientist, Manager, Director	Low Impact Development Treatment Train Tool Workshop (2017)
PhD, Aquatic Ecology and Paleolimnology, Queen's University, 2004		07/2006 - 01/2010, AECOM Senior Aquatic Scientist 06/2005 - 04/2006, Ontario Ministry of the Environment and University of Toronto Postdoctoral Research Fellow 06/2001 - 05/2005, University of Waterloo Postdoctoral Research Fellow	Project Management Institute (PMI) Training (2015) Lake and Pond Phosphorus Inactivation and Interception Workshop (NALMS, 2013)

Summary

Dr. Tammy Karst-Riddoch is an accomplished senior aquatic scientist, bringing more than 25 years of research and consulting experience to the AECOM team. She manages, leads and advises on complex surface water and watershed management projects for government, industry, and private stakeholders across North America.

Tammy specializes in the use of physical, biological, chemical and geochemical information to assess the responses of aquatic systems to natural (e.g., climate change and variability, hydrological changes, vegetation dynamics, fire, etc.) and human disturbances (e.g., effluent discharge, mining, land-clearance, agriculture, watershed development, river regulation, flooding, etc.). She has expert knowledge of approaches to improve the health of natural and built aquatic systems, including in-lake technologies, best management practices, and low impact development to control sources of nutrients and solids. She has used this knowledge to develop mitigation and management plans that address site-specific issues while considering social, political, and economic concerns. Tammy is a technical lead for the development and application of AECOM's innovative algae harvesting technology for nutrient reduction and the mitigation of harmful algal blooms.

Tammy is well respected in the scientific community; she has published 14 papers on limnology, hydrology, and ecology of lakes and wetlands, and has acted as a peer reviewer of original research (Journal of Lake and Reservoir Management, Journal of Paleolimnology).

Tammy's key skills and areas of expertise are: surface water and watershed management; limnology and paleolimnology; algal bloom dynamics, aquatic plant and nutrient management; scientific synthesis, peer review, and expert testimony; advanced statistical analysis; effluent receiving water and assimilative capacity assessment; and aquatic monitoring program design and implementation.

Project Experience

West Columbia, City of, Drinking Water Source Quality Assessment, West Columbia, South Carolina, US. Technical lead investigating sources of taste and odour events due to Geosmin and 2-methylisoborneol in Lake Murray to inform source water protection planning and treatment plant upgrade needs. [2019-ongoing]

West Kelowna, City of, Roseville Reservoir Water Quality Assessment and Management Recommendations, British Columbia. Technical Lead for the assessment of water quality and factors promoting cyanobacteria blooms in a large drinking water reservoir. Evaluating existing management strategies including dam operations, algaecide applications and aeration on water quality, with the goal to enhance management for improved water quality at the drinking water intake. [2019-ongoing]

Irvine Ranch Water District, Reservoir Water Quality Management System Design, Orange County, CA. Technical Lead for the assessment of source water quality and evaluation of oxygenation and aeration technologies in support of the Syphon Reservoir Improvement Project. [2021]

Peel, Region of, Lorne Park Water Treatment Plant Review of Algae and Water Quality Monitoring Technology, Ontario. Technical Lead for the assessment of source water quality and the evaluation of innovative technologies to monitor changes in raw water quality sourced from Lake Ontario related to algae blooms that have caused damages to the traveling screens and plant water production interruptions. Providing oversight of the installation of the monitoring equipment and data analysis. [2020-ongoing]

Northwest Florida Water Management District NFWMD), Intact Cellular Algae Harvesting with Simultaneous Nutrient Export Demonstration Project, Lake Munson, FL. Technical lead on NFWMD's demonstration research project that will use of a 1 MGD Hydronucleation Flotation Technology (HFT) as a sustainable and environmentally safe lake management solution to address eutrophication and HABs in Lake Munson, Leon County, FL. Responsible for senior technical input including for the preparation of the Quality Assurance Protection Plan, design of water quality monitoring and modeling programs, monitoring and evaluation of HFT, and development of a long-term HFS treatment plan to mitigate HABs in Lake Munson and alleviate nutrient enrichment concerns downstream of the lake in Munson Slough and the Floridan Aquifer. [2021-ongoing]

US Army Corps of Engineers (USACE), HABITATS Phase 2, Lake Chautauqua, NY and Saddle Creek, FL. Technical lead for the award winning Harmful Algal Bloom Interception, Treatment and Transformation System (HABITATS) research program, providing input to program design and responsible for performance data collection and analysis, AECOM project reporting, and technical review of the USACE ERDC report. The success of HABITATS was recognized by USACE, which received the 2020 USACE Innovation of the Year Award and the 2020 National Environmental Business Journal Award. [2019-2021]

Various clients, Drinking Water Source Protection (DWSP) Technical Studies. Completed surface water studies (intake characterization, vulnerability and threats assessments) in support of the provincial DWSP initiative for municipal intakes in North Bay, Callander and South River and peer reviewed studies for surface water intakes in Sydenham and the Trent Source Protection Area. Developed and completed pilot technical studies for the District of Muskoka and Town of Cobden.

City of Markham, Swan Lake Chemical Treatment to Reduce Nutrients and Control Cyanobacteria Blooms, Markham, ON. Developed a chemical treatment plan for the application of polyaluminum chloride in Swan Lake to strip phosphorus from the water column and inactivate sediment phosphorus. Provided field oversight during the application. Initial results of the treatment showed significant decreases in lake water total phosphorus concentration and improvements in water clarity, without evidence of harmful side effects of the product. [2021]

New York State Department of Environmental Conservation and Office of General Services, NY, Lake Agawam Cyanobacteria and Microcystin Removal Demonstration. Technical lead for overseeing monitoring activities, evaluating efficiencies and reporting on novel algae harvesting treatment technology (dissolved air flotation and ozonation) to remove cyanobacteria and associated toxins and nutrients from Lake Agawam. The treatment achieved greater than 95% removal of algae and reduced microcystin concentrations in effluent to below the US EPA drinking water standard. [2019-2021]

Town of Richmond Hill, Lake Wilcox Management Plan Update, Richmond Hill, Ontario. Technical Lead for a comprehensive management plan to address impacts of urbanization on water quality, cyanobacteria blooms and aquatic habitat in a large kettle lake on the Oak Ridges Moraine. Project work included detailed limnological assessment (water quality, aquatic biota, internal phosphorus loading), and modeling of phosphorus and chloride loading and lake response to those loads. Effective and feasible management options were recommended to address existing and emerging concerns identified from the study, and in consideration of socioeconomic and planning constraints. [2017-2019]

City of Hamilton, Bayfront Beach Water Quality Investigation and Implementation Strategy, Hamilton, Ontario. Senior Aquatic Scientist. Evaluated the effectiveness of measures implemented to reduce bacteria contamination (source controls) and elevated cyanobacteria toxins (ultrasound technology) that have caused an increasing number of closures of two beaches in Hamilton Harbour. Project work included assessment of bird population and scat counts, water quality, algal community composition and biomass, zooplankton vitality and fish presence at control and impact sites. [2017-2018]

Various Clients, Lake Water Quality Modeling Technical lead on Lakeshore Capacity phosphorus modeling projects for numerous lakes in central and northern Ontario including regional studies for the City of Elliot Lake, the Township of Seguin, City of Greater Sudbury and District of Muskoka. Studies included the determination of phosphorus and water loads to the lakes and modeling to predict phosphorus concentrations that consider in-lake dynamics of phosphorus settling and internal loading from lake sediments. Management recommendations were developed to include technical and planning approaches.

Lake of Bays Water Quality Monitoring Program, Lake of Bays, Ontario. From 2006 to 2016, provided technical guidance and oversight for the Lake of Bays Association water quality monitoring program. Revised the program over the years to maximize resources and address emerging water quality concerns. Completed annual reports to document existing conditions, assess trends in phosphorus and *E.coli*, and evaluated mechanisms influencing those trends.

Seguin Township Water Quality Monitoring Program, Seguin, Ontario. Developed a comprehensive water quality monitoring program for spring overturn total phosphorus, and end-of-summer dissolved oxygen, temperature and total phosphorus in more than 60 area lakes. Conducted annual reviews and summaries of monitoring results and provided support to the Town's field staff from 2008 to 2017. [Prior to AECOM]

Peer Reviewed Publications

- Branaavan, S., A.M. Paterson, K.M. Rühland, D. Köster, **T.L. Karst-Riddoch** and J.P. Smol, 2018: Diatom responses to 20th century shoreline development and climate warming in three embayments of Georgian Bay, Lake Huron. *Journal of Great Lakes Research*, 44: 1339-1350.
- Faulkenham, S.E., R.I. Hall, P.J. Dillon and **T.L. Karst-Riddoch**, 2003: Effects of drought-induced acidification on diatom communities in Ontario lakes. *Limnology and Oceanography* 48:1662-1673.
- Karst, T.L.**, and J.P. Smol, 1998: Tracking the cultural eutrophication history of Collins Lake (southeastern Ontario, Canada) using paleolimnological techniques. *Journal of Lake and Reservoir Management* 14:456-465.
- Karst, T.L.**, and J.P. Smol, 2000: Paleolimnological evidence of limnetic nutrient concentration equilibrium in a shallow, macrophyte-dominated lake. *Aquatic Sciences*. 62:20-38.
- Karst-Riddoch, T.L.**, M.F.J. Pisaric and J.P. Smol, 2005: Diatom responses to 20th century climate-related environmental changes in high-elevation mountain lakes of the northern Canadian Cordillera. *Journal of Paleolimnology* 33: 265-282.
- Karst-Riddoch, T.L.**, M.F.J. Pisaric, D.K. Youngblut and J.P. Smol, 2005: Postglacial record of diatom assemblage changes related to climate in an alpine lake from the northern Rocky Mountains, Canada. *Canadian Journal of Botany* 83: 968-982.
- Karst-Riddoch, T.L.**, H.J. Malmquist and J.P. Smol, 2009: Relationships between freshwater sedimentary diatoms and environmental variables in Subarctic Icelandic lakes. *Fundamental and Applied Limnology* 175:1-28.
- McGowan, S., P.R. Leavitt, R.I. Hall, B.B. Wolfe, T.W.D. Edwards, **T.L. Karst-Riddoch** and S.R. Vardy, 2011: Interdecadal declines in flood frequency increase primary production in lakes of a northern river delta. *Global Change Biology* 17:1212-1224.
- Pisaric, M.F.J., J.M. Szeicz, **T.L. Karst** and J.P. Smol, 2000: Comparison of pollen and stomate spectra as indicators of treeline in montane and alpine lake sediments from northwestern Canada. *Canadian Journal of Botany*. 78:1180-1186
- Pisaric, M.F.J., C. Holt, J.M. Szeicz, **T.L. Karst** and J.P. Smol. 2003: Holocene treeline dynamics in the mountains of northeastern British Columbia, Canada, inferred from fossil pollen and stomates. *The Holocene*. 13(2): 161-173
- Sinnatamby, R.N., Y. Yi, M.A. Sokal, K.P. Clogg-Write, T. Asada, S.R. Vardy, **T.L. Karst-Riddoch**, W.M. Last, J.W. Johnston, R.I. Hall, B.B. Wolfe and T.W.D. Edwards, 2010. Historical and paleolimnological evidence for expansion of Lake Athabasca (Canada) during the Little Ice Age. *Journal of Paleolimnology* 43:705-717.
- Wolfe, B.B., **T.L. Karst-Riddoch**, S.R. Vardy, M. Falcone, R.I. Hall and T.W.D. Edwards, 2005: Impacts of climate and river flooding on the hydro-ecology of a floodplain basin, Peace-Athabasca Delta, Canada since A.D. 1700. *Quaternary Research* 64: 147-162.
- Wolfe, B.B., **T.L. Karst-Riddoch**, R.I. Hall, T.W.D. Edwards, B. English, R. Palmi, S. McGowan, P.R. Leavitt and S.R. Vardy, 2006: Classification of water balance and hydro-limnological relationships in northern floodplain basins (Peace-Athabasca Delta, Canada) from analysis of stable isotopes ($\delta^{18}\text{O}$, $\delta^2\text{H}$) and water chemistry. *Hydrological Processes*. 21 (2) 151-168.
- Wolfe, B.B., R.I. Hall, W.M. Last, T.W.D. Edwards, M.C. English, **T.L. Karst-Riddoch**, A. Paterson, R. Palmi, 2006: Reconstruction of multi-century flood histories from oxbow lake sediments, Peace-Athabasca Delta, Canada. *Hydrological Processes* 20:4131-4153.

White Papers

- Page, M. B. MacAllister, M. Campobasso, A. Urban, C. Thomas, C. Cender, C. Arnett, C. White, E. Martinez-Guerra, A. Boyd, E. Gao, A. Kennedy, T. Biber, K. Pokrzywinski, C. Grasso, B. Fernando, C. Veinotte, J. Riley, A. Gonzalez, J. Miller, K. Gunderson, L. Schideman, Y. Zhang, B.K. Sharma, D. Levy, W. Colona, D. Pinelli, **T. Karst-Riddoch**, and W. Lovins, 2021: Optimizing the Harmful Algal Bloom Interception, Treatment, and Transformation System (HABITATS). US Army Corps of Engineers, Engineer Research and Development Center (ERDC). Technical Report TR-21-18. 227 pp.
- Karst-Riddoch, T.L.**, D. Jackson, D. And S. Bhavsar, 2008: Changes in contaminant burdens in Niagara River sport fish following remedial actions to reduce toxic loadings since 1986/87. University of Toronto and Ontario Ministry of Environment. ISBN 978-1-4249-7674-4.
- Clark, B. and **T.L. Karst-Riddoch**, 2011: Ontario: Surface Water Intakes. *LakeLine*, North American Lake Management Society, 31:3 9-11.

Lorin Hatch, Ph.D.

Independent Technical Reviewer, Limnologist, Water Quality Specialist

Education	Years of Experience	Professional History	Training and Certifications
Doctor of Philosophy (PhD), Ecology, University of California - Davis, 1997	With AECOM: 1 With Other Firms: 30	07/2021 - Present, AECOM USACE Program/Project Manager	Technology of Participation Facilitation Training
Bachelor of Arts (BA), Biology, University of Iowa, 1989	Professional Affiliations	03/2019 - 06/2021, Widseth Smith Nolting water quality specialist	National Environmental Policy Act
Master of Science (MSc), Ecology, Iowa State University, 1992	Minnesota Water Resources Planning Committee	08/2017 - 08/2018, RMB Environmental Laboratories Director of Operations 06/2015 - 02/2017, WSB Senior Scientist 08/2006 - 06/2015, HDR Engineering Senior water quality specialist	

Summary

Dr. Hatch has over 30 years of experience in water resources and ecosystem management in the academic, public, and private sectors. He has worked on lakes, rivers, streams, watersheds, and estuaries on multiple spatial and temporal scales, ranging from pristine to highly impacted ecosystems across the country. He has extensive experience in project and team management. Dr. Hatch has served as an adjunct professor and student advisor at the University of Minnesota in both the Water Resources Science and the Conservation Biology graduate programs. He has over 20 peer-reviewed publications. Trained as a limnologist Lorin specializes in watershed management, monitoring program design, modeling, water chemistry, and algal response. Given his emphasis on water chemistry he has worked in many sectors including drinking water, wastewater, water resources, environmental, and hydropower.

Project Experience

Xcel Energy, Cabin Creek Hydro Relicensing Project, Clear Creek County, Colorado. Water Quality Expert. Assisted with the development of a water quality monitoring plan to support the relicensing of a 324 MW pump storage facility, as well as designed strategic sampling efforts to understand iron dynamics in the system. Task also involved assisting with a feasibility study to mitigate excess iron in the system.

City of Gillette Wyoming, Fishing Lake TMDL, Gillette, WY. Water Quality Expert. Gillette Fishing Lake has been placed on the WY DEQ 303 (d) List of Waterbodies with Water Quality Impairments (siltation and phosphorus). As part of the project team, Dr. Hatch assisted the City of Gillette, WY to complete the requirements to gain access to the grant money and provide baseline environmental data so that implementation can be effective. The project involved stakeholder coordination, project management, water quality sampling, modeling and data analysis, completing the TMDL report, and on-going public involvement.

City of Cheyenne, Board of Public Works Manganese, Iron and Biological Study, Wyoming. Water Quality Expert. Evaluated the sources of manganese and iron entering the Sherard Water Treatment Plant (WTP). A review of flow and water quality data for the Sherard WTP supply indicated that the problem arose in the reservoir system and in the raw water pipeline. Responsibilities involved developing multiple alternative solutions for avoiding colored water events and recommended corrective actions in a staged approach to prevent future manganese events. The recommended actions included hypolimnetic aeration of the terminal reservoir, additional oxidation of manganese, improvements to mixing and coagulation, and provision of a sequesterant feed system.

Minnehaha Creek Watershed District, MCWD, Stubbs Bay Improvement Project/Classen Wetland Restoration, Hennepin County, MN. Project Manager and Water Quality Expert. Dr. Hatch analyzed water quality issues in this eutrophic bay of Lake Minnetonka and proposed wetland restoration and headwater lake controls to restore hydrology in the Classen Creek subwatershed. Part of project utilized University of Minnesota students for their senior capstone project.

Minnehaha Creek Watershed District, Lake Water Quality Data Analysis, Hennepin County, MN. Water Quality Expert. Dr. Hatch performed long-term trend analysis on multiple lake sites for several parameters and made recommendations to streamline monitoring efforts on both a spatial and temporal basis. He also reviewed the client's long-term water quality monitoring program and provided feedback to improve the program.

PacifiCorps, Pilot Study of Algal Conditions Management within a Selected Reservoir Cove, CA. Water Quality Expert. Dr. Hatch reviewed multiple mechanical alternatives to reduce the intensity of blue- green algal blooms in Iron Gate Reservoir on the Klamath River, California. Alternatives included low- speed paddlewheels, impeller-aspirator systems, axial flow pumps, pump and cascade systems, air- powered mixers, and sonicators.

USACE Kansas City District, Lake Contrary Restoration Project, St. Joseph, MO. Water Quality Expert. A Planning Design and Analysis Report (PDA) for the Section 514 Missouri and Mississippi River Enhancement Project at St. Joseph, Missouri was prepared. The project was a continuation of activities to analyze six alternatives to restore Lake Contrary, an oxbow lake that became hypereutrophic due in part to sedimentation. Dr. Hatch used the SCS method to calculate water budgets, and the RUSLE method to calculate sediment loads.

Private Client, Swan Lake Pumped Storage Project, OR. Water Quality Expert. Researched and prepared a water quality feasibility report for a proposed pumped lake storage project in southern Oregon. Dr. Hatch examined the potential impacts of temperature and chemical constituents on future water quality conditions and possible algal issues.

Water Environment Federation, Management of Disruptive Aquatic Species in Pacific Northwest Drinking Water Supplies, WA. Senior Algal Ecologist and Water Quality Expert. Analyzed water quality and algal monitoring data to determine cause-and-effect relationships as well as invasive algal species niche analysis for the two largest water suppliers in Washington State. The study addressed drinking water quality and treatment issues related to alien or indigenous plankton species in source waters of the Coastal Pacific Northwest region, focused on understanding what drives the production of problem species, developed monitoring strategies and tools to help utilities predict occurrence in source waters, and provided practical guidelines for managing the impacts of problem species on drinking water supplies.

Vadnais Lake Area Water Management Org, Water Quality Modeling of the VLAWMO Watershed, St. Paul, MN. QA/QC Reviewer and Modeler. Developed a BATHTUB water quality model for lakes in the watershed. This model was used to set individual lake water quality goals and guide management activities in the watershed.

Stearns County Environmental Services, Pelican Lake of St. Anna Clean Water Partnership Phase I Diagnostic Study, Stearns County, MN. Project Manager and Water Quality Expert. Assisted with writing project reports, modeling, and providing technical advice to Pelican Lake Association for the CWP grant to monitor the lake and stream water quality for two years.

Riley Purgatory Bluff Creek Watershed District, Aquatic Invasive Species Management Plan, Chanhassen, MN. Project Manager and Water Quality Expert. Reviewed aquatic invasive species (AIS) concerns in the District, determined vectors and pathways for those organisms, developed an AIS prevention matrix, recommended implementation plan alternatives and associated costs, and wrote the final plan.

City of San Francisco, Lake Merced Harmful Algal Bloom Monitoring, San Francisco, CA. Limnologist and Water Quality Expert. Dr. Hatch conducted a field visit with City staff and is guiding analysis of available water quality data to provide the client with monitoring guidance for this backup non-potable water supply for the City.

City of Watertown, Phosphorus Removal Facility Project, Watertown, SD. Senior Algal Ecologist. Provided technical support for the modification of a functional, but recently decommissioned water treatment facility (1.5 MGD capacity), along the shores of highly-eutrophic Lake Kampeska to grow algae year-round to remove phosphorus from the lake water. The algae were harvested and the lower-phosphorus water returned to the lake to reduce the overall P content in the lake over time.

Water Environment Research Foundation, Nutrient Regulatory Issues: Nutrient Effluent Discharge Permitting Guidelines. Water Quality Expert. Assisted with the development of a report that reviewed how nutrients are addressed in NPDES discharger permits. Case studies were analyzed, and emphasis was placed on watershed permitting, water quality trading programs, and nutrient offsets.

Chisago Lakes Lake Improvement District, Basin-Wide SWAT Model, Chisago County, Minnesota. Ecologist. Developed a preliminary SWAT model targeted to the Chisago Chain of Lakes. The SWAT models used to simulate the movement of sediment and phosphorus through the Chisago Chain of Lakes system. The model builds upon the body of knowledge developed in previous studies such as the Storm Water Management Model and the BATHTUB modeling projects

California Department of Water Resources, Bay Delta Conservation Plan, Sacramento, California. Water Quality Expert. Assessed current water quality conditions for the EIR/EIS and the impacts of selected management strategies to support the Bay Delta Conservation Plan which examines strategies to deliver high-quality water to central and southern California, while at the same time addressing environmental issues pertaining to fisheries in the Sacramento-San Joaquin Delta. Parameters assessed included sediments, nutrients, heavy metals, pesticides, PAHs, and emerging contaminants.

Texas Water Development Board, Nueces Watershed Pre- and Post-Development Nutrient Budgets, Texas. Water Quality Expert. Evaluated pre-development and current conditions nutrient budgets, quantified differences between these budgets, assessed potential causes of these differences (e.g., reservoir operations, frequent and extended drought periods, etc.), and facilitated consideration of metrics for identification of the desired future condition for estuarine productivity. Once any potential nutrient imbalances were identified through the nutrient budgeting process, cost-effective strategies to address such imbalances were developed. Responsibilities also involved assisting with data management and analysis.

HWSP Water Quality Mitigation Plan, Milton Seaman Reservoir
City of Greeley

10/13/2023

Fee Estimate

Prepared: JC / TKR
Reviewed: CK
Approved: KS

Date: 11-Oct-23
Date: 12-Oct-23
Date: 13-Oct-23

Task/Scope	LABOR HOURS BY CLASSIFICATION																				TOTAL HOURS	LABOR COST	EXPENSE COST	TOTAL COST
	Project Manager	Project Engineer	Project Controller / Tech Editing	Senior Limnologist	Mid-level Limnologist	Independent Technical Review (Limnology)	Independent Technical Review (Engineering)	Aeration System SME Reviewer	Senior Electrical Engineer	Electrical Engineer	Structural Engineer	Structural Drafting	Process Mechanical Design (Aeration)	CAD Designer	Cost Estimator	Senior Engineering Geologist	Tower Structural	Project Engineer	Independent Technical Reviewer	Gates Expert				
	N. Walker	J. Crouch	Project Controller	T. Karst- Riddoch	B. Winston	L. Hatch	V. Adams, R. Hawthorne, B. Skolozdra	Aeration System SME	C. Adams	Q. Harlen	S. Pauls	G. Hesseltine	S. Weber	R. Carpio	R. Watts	Sr. Geologist	M. Simon	S. Warren	ITR	L. Gerbig				
	\$279	\$161	\$186	\$173	\$134	\$232	\$264	\$311	\$279	\$122	\$186	\$130	\$216	\$216	\$216	\$279	\$279	\$147	\$338	\$413				
PHASE 1																								
Task 1: Project Management	62	48	32	28	0	0	0	0	0	0	0	0	0	0	0	2	14	6	0	0	192	\$41,168	\$2,136	\$43,304
Site Visits	12	24		24													12				72	\$14,712	\$2,136	\$16,848
H&S Plan			6																		6	\$1,116	-	\$1,116
Kick-Off Meeting (Phase 1 and 2)	20	4																			24	\$6,224	-	\$6,224
Progress Meetings	20	20		4												2	2	6			54	\$11,490	-	\$11,490
Project Set-Up			6																		6	\$1,116	-	\$1,116
Prepare Invoices	10		20																		30	\$6,510	-	\$6,510
Task 2: Water Quality Review and Analysis	8	12	4	44	60	10		6													144	\$24,746	\$0	\$24,746
Task 3: Feasibility Design for Oxygenation and Aeration Systems	24	78	6	18	0	2	14	12	44	40	38	30	28	52	0	0	0	0	0	0	386	\$76,780	\$0	\$76,780
Oxygenation and Aeration System Options Analysis	20	72		16		2		12													122	\$24,136	-	\$24,136
Prepare 15% BODR	4	4	6	2			4		40		8		16								84	\$20,382	-	\$20,382
Prepare 15% Design Drawings (Includes: Draft, comment responses, and Final)		2							4	40	30	30	12	52							170	\$29,622	-	\$29,622
QAQC							10														10	\$2,640	-	\$2,640
Task 4: Feasibility Design and Engineering of Multi-Level Outlet Tower	39	76	45	8	0	0	0	4	36	54	0	0	75	80	30	64	151	158	22	55	897	\$204,069	\$0	\$204,069
Task 4A Data Review and Development of Study Approach	2	72							4	8			12	0	0	10	16	16	4	8	152	\$31,096	-	\$31,096
Task 4B Civil and Structural Analysis for Alternatives	32	2	30	8				4	0	0			4	80	30	24	100	100	18	17	449	\$104,483	-	\$104,483
Task 4C Mechanical and Electrical Analysis for Alternatives	5	2	15					32	46				59	0	0	30	35	42	0	30	296	\$68,490	-	\$68,490
Task 5: Evaluation and Cost Estimating of Water Quality Mitigation Options	9	58	12	2	8	2	0	0	2	6	4	2	4	0	16	0	6	18	2	1	152	\$27,986	\$0	\$27,986
Evaluation of options	8	56	12	2	8																86	\$14,898	-	\$14,898
Prepare Cost Estimate (Task 5)	1	2				2			2	6	4	2	4		16	0	6	18	2	1	66	\$13,088	-	\$13,088
Task 6: Water Quality Mitigation Plan Recommendations and Reporting	4	12	10	2	4	4			4		4		4			4	4	4	2	2	64	\$13,764	\$0	\$13,764
PHASE 1 Subtotal	146	284	109	102	72	18	14	22	86	100	46	32	111	132	46	70	175	186	26	58	1835	\$ 388,513	\$ 2,136	\$ 390,649
PHASE 2																								
Task 7: Outlet Gates 60% Design	28	104	32	10	0	0	0	0	24	40	0	0	0	164	24	31	80	274	9	10	830	\$162,841	\$0	\$162,841
60% Design Drawings	24	100							8	40				164		18	48	124	4	6	536	\$105,804	-	\$105,804
Draft Technical Specifications			16						8							2	8	30	2	4	70	\$14,736	-	\$14,736
Basis of Design Report									8							10	6	45	2		71	\$13,987	-	\$13,987
Cost Estimate															24	1	4	34	1		64	\$11,915	-	\$11,915
Draft Submittal			10	6													2	7			25	\$4,485	-	\$4,485
Final Submittal	4	4	6	4													12	34			64	\$11,914	-	\$11,914
PROJECT Total	174	388	141	112	72	18	14	22	110	140	46	32	111	296	70	101	255	460	35	68	2665	\$551,354	\$2,136	\$553,490

FEE SCHEDULE

PERSONNEL CHARGES

The charge for all time required in performing the Scope of Services, including office, field, and travel time, will be at the Unit Price Hourly Rates set forth below for the labor classifications indicated.

Labor Classification	HourlyRate
Assistant/Support Staff 1	51
Assistant/Support Staff 2	65
Assistant/Support Staff 3	78
Assistant/Support Staff 4	90
Assistant/Support Staff 5	103
Assistant/Support Staff 6	118
Assistant/Support Staff 7	130
Assistant/Support Staff 8	143
Assistant/Support Staff 9	156
Assistant/Support Staff 10	169
Staff 1	95
Staff 2	109
Staff 3	122
Staff 4	134
Staff 5	147
Project 1	161
Project 2	173
Project 3	186
Project 4	200
Project 5	216
Consultant 1	232
Consultant 2	248
Consultant 3	264
Consultant 4	279
Consultant 5	295
Principal 1	311
Principal 2	338
Principal 3	364
Principal 4	389
Principal 5	413

Charges for temporary personnel under Company supervision and using Company facilities will be invoiced according to the hourly rate corresponding to their classification.

OTHER PROJECT CHARGES

Subcontracts

The cost of services subcontracted by the Company to others will be charged at cost plus 5%.

Travel and Other Direct Costs

The cost of travel (airfares, lodging, meals, rental vehicles, parking fees, baggage handling cost, etc.) or other direct costs (field supplies, report binding supplies, leased or rented field equipment, etc.) will be charged at cost. A per diem may be used for lodging and meals.

Document Reproduction

In-house labor for document reproduction will be charged directly to projects.

Vehicles and Mileage

Company owned or leased field vehicles (cars, pickups, vans, trucks, etc.) used on project assignments will be charged at the current mileage rate established by the Internal Revenue Service. The mileage charge for personal autos will be the current mileage rate established by the Internal Revenue Service.

This fee schedule contains AECOM confidential business information. Do not disclose, copy, or distribute without written permission from AECOM.

**INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF GREELEY AND
THE CITY OF FORT COLLINS REGARDING CERTAIN ASPECTS OF THE
HALLIGAN WATER SUPPLY PROJECT**

(Water Quality Analysis and Mitigation Measures, and
Milton Seaman Reservoir Release Gate Design)

This Intergovernmental Agreement (“Agreement”) is entered into on the date of execution shown on the signature pages, by and between the City of Fort Collins, a home rule municipal corporation, (“Fort Collins”) and the City of Greeley, a home rule municipal corporation, (“Greeley”) (together “Parties,” and individually “Party”).

RECITALS

- A. Through the Halligan Water Supply Project (“Halligan Project”), Fort Collins is pursuing the enlargement of Halligan Reservoir, an existing reservoir located on the North Fork of the Cache la Poudre River (“North Fork”); and,
- B. Greeley owns Milton Seaman Reservoir, an existing reservoir located on the North Fork downstream of Halligan Reservoir; and,
- C. Greeley is in the process of an urgent capital project to replace the reservoir release gate at Milton Seaman Reservoir (“Replacement Gate Design Project”); and,
- D. The Parties have been in discussion regarding potential structural changes at Milton Seaman Reservoir and/or Greeley’s Bellvue Water Treatment Plant necessary to mitigate certain anticipated water quality impacts caused by and operational changes due to the Halligan Project (“Greeley’s Concerns”) and potential operational and reservoir release gate design changes at Milton Seaman Reservoir necessary to accommodate certain environmental mitigation and enhancement commitments on behalf of Fort Collins (“Fort Collins’ Objectives”); and,
- E. The Parties recognize that Greeley’s current Replacement Gate Design Project design may need to be modified to accommodate Fort Collins’ Objectives; and,
- F. The Parties would like to retain a consultant to evaluate Greeley’s Concerns and redesign the Replacement Gate Design Project to meet Greeley’s requirements and accommodate Fort Collins’ Objectives; and,
- G. The Parties’ efforts will comprise of two general phases:

Phase 1 – Analysis and Preliminary Design
Phase 2 – Implementation
- H. The Parties desire that AECOM, as an existing consultant for both Parties, should perform Phase 1; and,

- I. The Parties have developed the attached scope of work, attached hereto as Exhibit A (“Study”), which includes water quality analysis and an evaluation and comparison of certain water quality mitigation measures, including oxygenation and aeration and a multi-level outlet tower (“Tasks 1-6”) and gate design that would allow for smaller releases to accommodate Fort Collins’ Objectives (“Task 7”); and,
- J. The Parties intend to use the Study as a basis for developing an implementation plan for Phase 2 that will be the subject of a subsequent agreement, including establishing potential future impacts, identifying appropriate mitigation measures, and evaluating preliminary gate designs (“Purpose”); and,
- K. As governmental entities, the Parties are authorized to enter into the following intergovernmental agreement pursuant to C.R.S. §29-1-203.

AGREEMENT

1. **Incorporation of Recitals.** The foregoing recitals are hereby incorporated as if fully restated in their entirety.

2. **Purpose.** The purpose of this Agreement is to establish the Parties’ respective financial and management obligations and their mutual understanding and agreement as to the Purpose for the Study. Nothing in this Agreement addresses Phase 2 – Implementation.

3. **Funding.** Greeley and Fort Collins will split the cost evenly. Greeley will contract with AECOM and will be responsible for making all payments. Greeley will invoice Fort Collins for its share of the cost, with payment due to Greeley thirty (30) days after receipt.

4. **Management Obligations.**

4.1. **Water Quality and Mitigation Analysis—Tasks 1-6.**

4.1.1. Notwithstanding Greeley’s contractual relationship with AECOM, Greeley and Fort Collins will jointly manage AECOM and the development of Tasks 1-6. Each Party will appoint a project manager who will be responsible for conferring with their counterpart before providing any direction to AECOM. For purposes of this Agreement, the project managers (each a “PM”) are as follows:

Fort Collins Project Manager: Halligan Project Manager
Attn: Darren Parkin
Phone: (307) 630-9414
dparkin@fcgov.com

Greeley Project Manager: Water & Sewer Chief Engineer,
Attn: Adam Prior, P.E.

Phone: (970) 350-9875
Adam.Prior@greeleygov.com

- 4.1.2. The Greeley PM will be responsible for ensuring that the Fort Collins PM is provided with copies of all reports, data, drawings, computer programs, or other reproducible, tangible things developed by AECOM in connection with Tasks 1-6 (“Water Quality Work Product”). In addition, Greeley will obtain AECOM’s agreement that Fort Collins may use the Water Quality Work Product for any purpose connected to this Agreement.
- 4.1.3. Each Party will be entitled to review and provide feedback on the Water Quality Work Product via their respective PM. All comments must be provided within a reasonable time to maintain the schedule as identified in the Scope. Once a consensus has been reached, the Greeley PM will be responsible for providing any necessary direction to AECOM and ensuring that the Fort Collins PM is included in all communication with AECOM related to the Study. Greeley may (but is not required to) include the Fort Collins PM on non-substantive communication such as coordinating schedules and/or internal Greeley billing processes and procedures.
- 4.1.4. If the PMs disagree on the direction or feedback to provide AECOM on Tasks 1-6, the Parties’ respective management team will meet to discuss the conflict until a resolution has been reached. If a meeting becomes necessary to resolve a conflict, the PMs shall promptly schedule the meeting so as not to delay the schedule identified in the Scope.

4.2. Replacement Gate Design Project—Task 7

- 4.2.1. Greeley will manage AECOM on all matters related to Task 7 and shall have sole discretion over any design changes or modifications to the reservoir release gate and related facilities.
- 4.2.2. To accommodate Fort Collins’ Objective, the Greeley PM will be responsible for ensuring that the Fort Collins PM is provided with copies of the reports, data, drawings, computer programs, or other reproducible and tangible things developed by AECOM in connection with Task 7 (“Gate Design Work Product”).
- 4.2.3. Fort Collins’ will be entitled to review and provide feedback on the Gate Design Work Product via their PM. All comments must be provided within a reasonable time to maintain the schedule as identified in the Scope. Greeley will consider, and in good faith seek to incorporate Fort Collins’ feedback in order to ensure that the designed reservoir release gate is capable of meeting Fort Collins’ Objectives without compromising Greeley’s needs. Greeley PM will be responsible for, and reserves the right to, direct AECOM regarding all aspects of the Gate Design Work Product.

5. **Term.** This Agreement will be in effect on the last date it is signed by the Parties until final payment of the Study has been submitted to AECOM and Fort Collins has satisfied its obligation to Greeley under Paragraph 3.

6. **Claimed Confidential Information.**

6.1. **CORA.** The Parties acknowledge that the documents and communications created under this Agreement may be subject to the Colorado Open Records Act, C.R.S. §§24-72-101 *et seq.* (“CORA”).

6.2. **Confidential Information Procedures.** If a Party (“Providing Party”) desires to provide documents or information to the other Party (“Receiving Party”) that the Providing Party claims to be confidential (“Confidential Information”), the Providing Party may invoke the terms and conditions of this Paragraph 6.2.

6.2.1. If the Providing Party intends to claim that certain information is confidential under this Paragraph 6.2 and desires to have the Receiving Party take certain precautions under this Agreement with such claimed Confidential Information, then within three calendar days of when the Providing Party provides the claimed Confidential Information to the Receiving Party, the Providing Party shall provide written notice to the Receiving Party containing the following:

- (i) an identification of each piece of information that is claimed to be Confidential Information;
- (ii) for each piece of such information, an identification of the documents, files, or other forms of communication provided to the Receiving Party in which the claimed Confidential Information is located; and
- (iii) for each piece of such information, a brief statement identifying the basis for which the Providing Party may claim the information to be confidential.

6.2.2. With respect to the claimed Confidential Information identified pursuant to Paragraph 6.2.1, the Receiving Party hereby agrees:

- (i) to hold the claimed Confidential Information in confidence and to take all reasonable precautions to protect such Confidential Information from inadvertent or accidental disclosure; and
- (ii) to not disclose any such claimed Confidential Information to any third person, except pursuant to Paragraph 0.

In the normal course of business, the Receiving Party may also dispose of any documents containing claimed Confidential Information.

6.2.3. The obligations of the Receiving Party with respect to claimed Confidential Information under this Paragraph 6.2 shall not apply to:

- (i) Claimed Confidential Information beginning six months after the termination of this Agreement pursuant to Paragraph 5;
- (ii) Claimed Confidential Information that the Receiving Party can document:
 - (A) is or has become (through no improper action or inaction by the Receiving Party or any affiliate, agent, consultant, or employee) generally available to the public;
 - (B) was in its possession prior to receipt from the Providing Party under Paragraph 6.2.1, except to the extent that such information was unlawfully appropriated by the Receiving Party;
 - (C) was independently developed by the Receiving Party without use of any claimed Confidential Information of the Providing Party under Paragraph 6.2.1; or
 - (D) was disclosed pursuant to the requirements of law, subject to Paragraph 0.

6.2.4. Nothing herein shall affect the obligations of a Receiving Party to either make disclosures or preserve the confidentiality of claimed Confidential Information to the extent required by law or court order, including, but not limited to, requirements under the Colorado Open Records Act, CRS §24-72-201 *et seq.*, and other Colorado and federal statutes, court rules, and administrative rules and regulations. If a Receiving Party receives a request under law for the Providing Party's claimed Confidential Information, or if a Receiving Party would otherwise be required to disclose the Providing Party's claimed Confidential Information pursuant to law, the Receiving Party shall notify the Providing Party as soon as practicable of the request or pending disclosure, and in such event, upon the request of the Receiving Party, the Providing Party may take such timely action as may be required to obtain a declaratory judgment as to the confidential status of the Confidential Information, and, if the Providing Party elects not to do so, then the Receiving Party's obligation to preserve that Confidential Information shall have been waived hereunder, except as otherwise provided by law.

6.2.5. The Providing Party shall have the right to require the return and destruction of claimed Confidential Information in the possession of a Receiving Party as set forth in this paragraph. Such right shall exist from the effective date of this Agreement through six months after the date of termination of this Agreement pursuant to Paragraph 5.5. If claimed Confidential Information has been copied or transcribed into another document, such documents will be destroyed, erased, or modified to remove the claimed Confidential Information.

7. **Fiscal Contingency.** Notwithstanding any other provisions of this Agreement to the contrary, the obligations of the Parties in fiscal years after the initial fiscal year of this Agreement shall be subject to appropriation of funds sufficient and intended therefor, with the Party having the sole discretion to determine whether the subject funds are sufficient and intended for use under this Agreement. The failure of a Party to appropriate such funds shall be grounds for termination of this Agreement as to such Party upon written notice pursuant to Paragraph 1111.

8. **No Third-Party Beneficiaries.** This Agreement is entered into between the Parties for the purposes set forth herein. It is the intent of the Parties that they are the only beneficiaries of this Agreement and that the Parties are benefitted only to the extent provided under the express terms and conditions of this Agreement.

9. **Governing Law and Enforceability.** This Agreement shall be construed in accordance with the laws of the State of Colorado. The Parties recognize that the constitutions, statutes, and rules and regulations of the State of Colorado and of the United States, as well as the Parties' respective bylaws, city charters and codes, and rules and regulations, impose certain legal constraints on each Party and that the Parties intend to carry out the terms and conditions of this Agreement subject to those constraints. Whenever possible, each provision of this Agreement shall be interpreted in such a manner so as to be effective and valid under applicable law.

10. **Waiver.** A waiver of a breach of any of the provisions of this Agreement shall not constitute a waiver of any subsequent breach of the same or another provision of this Agreement. Nothing in this Agreement shall be construed as any waiver of governmental immunity of the Parties who are governments or any other governmental provisions of State law. Specifically, by entering into this Agreement, no Party waives the monetary limitations on liability or any other rights, immunities, or protections provided by the Colorado Government Immunity Act, C.R.S. § 24-10-101, *et seq.*, or any successor or similar statutes of the State of Colorado.

11. **Notices.** All notices or other communications hereunder shall be sufficiently given and shall be deemed given (i) when personally delivered; (ii) on the date and at the time of delivery or refusal of acceptance of delivery if delivered or attempted to be delivered by an overnight courier service to the party to whom notice is given at the address specified below; (iii) on the date and at the time shown on the electronic mail if sent by electronic transmission at the email addresses set forth below and receipt of such electronic mail is acknowledged by the intended recipient thereof; or (iv) after the lapse of five business days following mailing by certified mail-return receipt requested, postage prepaid, addressed as follows:

To Fort Collins:

City Manager
City Hall West
300 LaPorte Avenue; P.O. Box 580
Fort Collins, Colorado 80522-0580

With copy to:

Fort Collins City Attorney
300 LaPorte Avenue; P.O. Box 580
Fort Collins, Colorado 80522-0580
epotyondy@fcgov.com

and:

Fort Collins Utilities
Attn: Sr. Director of Water Planning and Sciences
4316 LaPorte Ave.
Fort Collins, Colorado 80521

To Greeley:

City of Greeley
Attn: Director of Water & Sewer
1001 11th Ave, 2nd Floor,
Greeley, Colorado 80631

With a copy to:
Greeley City Attorney
1100 10th Street, Suite 401
Greeley, Colorado 80631
Jerrae.Swanson@greeleygov.com

12. Construction. This Agreement shall be construed according to its fair meaning as it was prepared by the Parties. Headings in this Agreement are for convenience and reference only and shall in no way define, limit, or prescribe the scope or intent of any provision of this Agreement.

13. Representations. Each Party represents to the other parties that it has the power and authority to enter into this Agreement and the individual signing below on behalf of that Party has the authority to execute this Agreement on its behalf and legally bind that Party.

14. Assignment. No Party may assign any rights or delegate any duties under this Agreement without the written consent of all other Parties.

15. Severability. If any provision of this Agreement shall prove to be illegal, invalid, unenforceable, or impossible of performance, the remainder of this Agreement shall remain in full force and effect.

[Remainder of Page Left Blank Intentionally]

CITY OF FORT COLLINS, a municipal corporation

By: _____
Kelly DiMartino, City Manager

Date: _____

ATTEST:

By: _____
City Clerk

APPROVED AS TO FORM:

By: _____
City Attorney's Office

CITY OF GREELEY, a municipal corporation

APPROVED AS TO SUBSTANCE:

By: _____ Date: _____
City Manager

AVAILABILITY OF FUNDS:

By: _____ Date: _____
Director of Finance

APPROVED AS TO LEGAL FORM

By: _____ Date: _____
City Attorney's Office

**EXHIBIT A TO INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF
GREELEY AND THE CITY OF FORT COLLINS REGARDING CERTAIN ASPECTS
OF THE HALLIGAN WATER SUPPLY PROJECT**

(See attached Scope of Work)



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Alex Tennant, Water Resource Administrator II

Title:

Approve Grazing and Farm Lease Agreement (A&A Farming)

Summary:

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. Adams has requested to continue the lease for another year.

When staff brought this lease agreement to the Board for approval in February of 2023, there was discussion about Water and Sewer transferring approximately 16 acres between two parcels (C and D) north of F St to Culture, Parks, and Recreation Department in an interdepartmental transfer of real property assets. This transfer was completed in December 2023. Due to the property transfer, the subject Grazing and Farm Lease would be decreased to 70 acres while still including the 14.4 GIC shares. The term would be for one year, terminating on December 31, 2024. The lease amount would stay at \$9,000.00 and would be paid in two installments of \$4,500.00. Despite removing 16 acres from the lease, Greeley and Mr. Adams agreed to retain the same lease payment.

City staff are in the beginning stages of annexation along F st corridor for the new City of Greeley maintenance facilities. The timeline is subject to change, but there may be utility and transportation design work and construction on the property in 2025. The subject Grazing and Farm Lease maintains status quo while the city's design process proceeds. Staff are satisfied with Mr. Adams grazing practices, evidenced by his maintenance of the property, and believe a continuation of the lease with a one-year term is in the interest of the Water and Sewer Department. Water and Sewer staff recommends that the Water and Sewer Board approve the enclosed Grazing and Farm Lease Agreement between the City of Greeley and A&A Farming LLC.

Recommended Action:

Staff recommends that the Water and Sewer Board approve the Lowell Property Grazing and Farm Lease Agreement with A&A Farming LLC.

Recommended Motion:

"I move 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."

Attachments:

1. Lowell Property Farm and Grazing Lease
2. 2024.02.12 - Grazing and Farm Lease (A&A Farming LLC)

Lowell Property Farm and Water Lease Agreement

February 21, 2024



Lowell Property

- Water & Sewer acquired the Lowell Property in November of 2021. 13.4 shares of Greeley Irrigation Company included in the sale
- Five parcels, approximately 136 acres
- Location: north of Greeley along F Street between 35th and 59th Avenues
- City staff are currently evaluating potential municipal uses of the Lowell Property



Lowell Property



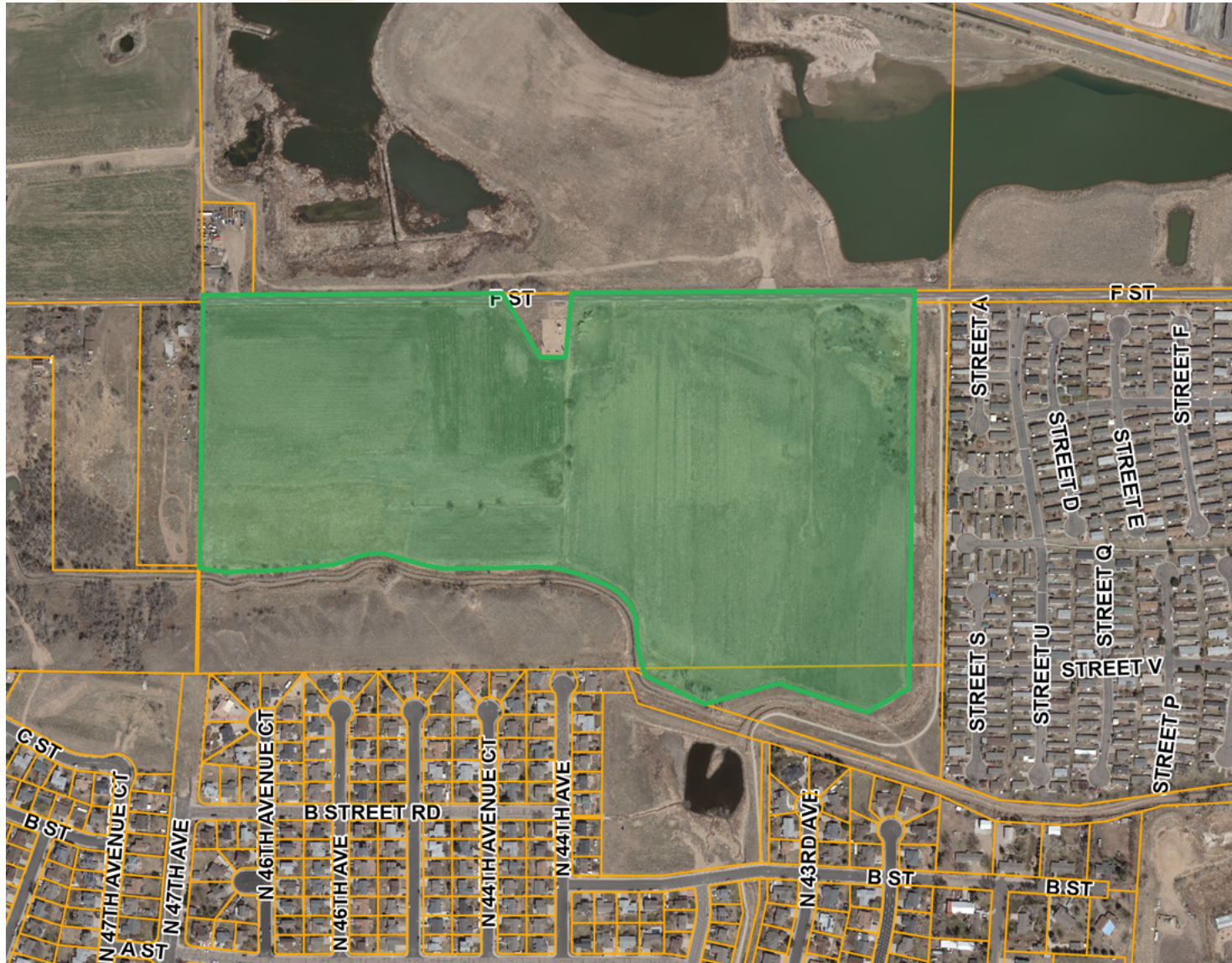
- Parcels C and D have been transferred to Culture, Parks, and Recreation Department

Grazing and Farm Lease Agreement

- **Lessee:** Mr. Adams with A&A Farming LLC and his family have been leasing a portion of the Lowell property for the past 20+ years
- **Property:** Approximately 70 acres of land of which 55 is an irrigated hay field
 - Consists of the 70-acre parcel south of F St.
 - Lessee plans on mostly grazing the 70 acres, but will harvest the hay as needed
- **Term:** One year agreement ending December 31, 2024
- **Water:** 14.4 Shares of the Greeley Irrigation Company
 - One (1) additional share of GIC from Bunn acquisition
- **Amount:** \$9,000 paid in two installments of \$4,500 each



Grazing and Farm Lease Agreement

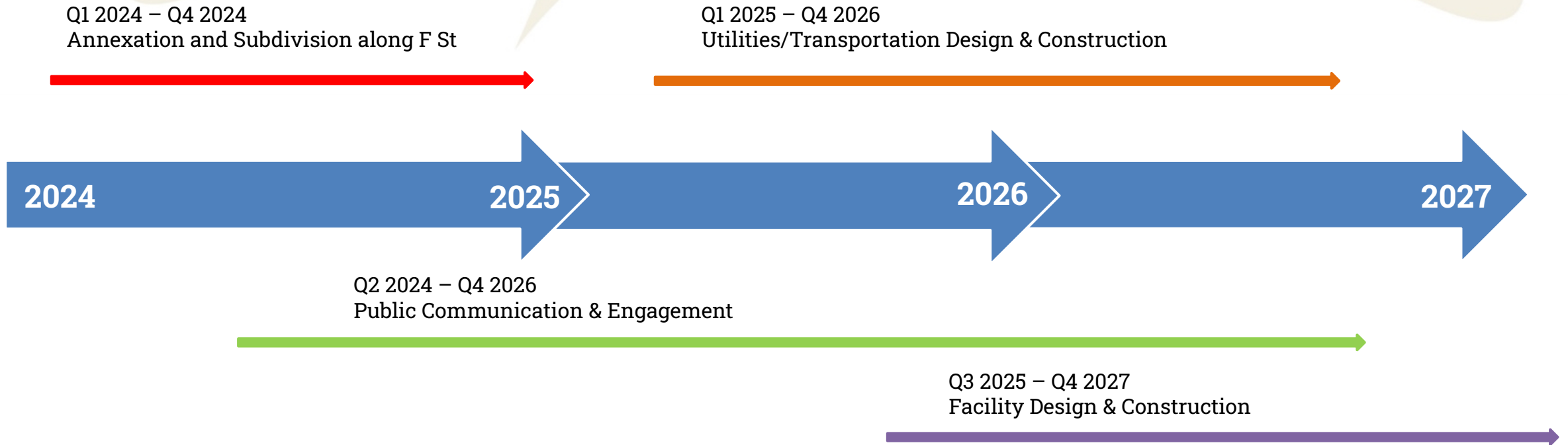


Grazing and Farm Lease Agreement

- Proposed lease maintains status quo through development of municipal facilities on Lowell Property
- Single-year lease
- Mr. Adams has maintained the property well



Facilities Project Timeline



Recommendation

W&S staff recommends approving the Grazing and Farm Lease Agreement with Kurt Adams of A&A Farming LLC.



Questions?

GRAZING AND FARM LEASE AGREEMENT

This GRAZING AND FARM LEASE AGREEMENT ("Lease Agreement") is entered into this ____ day of February 2024, by and between the CITY OF GREELEY, COLORADO, a Colorado home rule municipality acting by and through its Water Enterprise ("Greeley") and A & A FARMING, LLC, a Colorado limited liability company ("A & A Farming").

Recitals

WHEREAS, Greeley owns certain real property consisting of approximately 70 acres located in Weld County, Colorado, which real property is more particularly described on Exhibits A-1 and A-2, attached hereto and incorporated herein (collectively "Property"); and

WHEREAS, Greeley also owns those certain water rights represented by fourteen and two-fifths (14-2/5) shares of capital stock in The Greeley Irrigation Company evidenced by Stock Certificate Nos. 3471 and 3473 ("Water Rights"); and

WHEREAS, Greeley desires to manage rangelands on this and other of its properties in alignment with best practices to improve overall land health, including managing undesirable species by non-chemical means to the greatest extent practicable; and

WHEREAS, A & A Farming desires to use the Property and Water Rights for grazing and farming purposes, and is willing to support and collaborate with Greeley and the Natural Areas & Trails division of its Greeley Culture, Parks and Recreation Department on its weed management and other land management efforts on the Property; and

WHEREAS, Greeley is willing to lease the Property and Water Rights to A & A Farming for such purposes under the terms of this Lease Agreement;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Greeley and A & A Farming agree as follows.

Agreement

1. **LEASE**. Greeley hereby leases the Property and Water Rights to A & A Farming for grazing and farming purposes.

2. **TERM OF LEASE**. The term of this Lease Agreement begins on the date it is fully executed and expires on December 31, 2024.

3. **CONSIDERATION**. A & A Farming shall pay to Greeley a Lease Amount of nine thousand dollars (\$9,000.00) for use of the Property and Water Rights, in two equal installments. The first installment of four thousand five hundred dollars (\$4,500.00) is due upon execution of this Lease Agreement, and the second installment of four thousand five hundred dollars (\$4,500.00) is due no later than December 15, 2024.

4. **IMPROVEMENTS**. With the exception of any existing fencing, there are no structures or improvements on the Property to which A & A Farming is entitled use by this Lease Agreement.

5. **CONDITION OF PROPERTY**. A & A Farming has inspected the Property and acknowledges that the Property is being leased "as-is." No representations, statements or warranties, express or implied, have

been made by or on behalf of Greeley as to the condition of the Property. In no event shall Greeley be liable for any defect in the Property or for any limitation on its anticipated uses.

6. AUTHORIZED USE AND MANAGEMENT OF PROPERTY. A & A Farming shall occupy and use the Property solely for farming and the grazing of cattle. A & A Farming shall not introduce any other livestock to the Property without advance written consent from Greeley. Such consent may be given or withheld in the sole discretion of Greeley.

a. A & A Farming shall care for the Property in a manner that is consistent with sound agricultural and conservation practices and supports Greeley's land management efforts, including the avoidance of overgrazing on the Property. If at any time Greeley suspects that A & A Farming is overgrazing, Greeley may use stocking calculations and NRCS methodology to assess range condition and determine remaining grazing days. Upon the determination pursuant to such an assessment that any portion of the Property has been overgrazed, Greeley may limit further grazing or terminate this Lease Agreement. A & A Farming shall disperse watering troughs, mineral stations, and any similar facilities throughout the Property, and move them regularly, to avoid soil compaction or other detrimental impacts caused by concentrating animals in one area. Mineral stations shall be of a style that prevents the material from affecting the soil.

b. A & A Farming shall furnish, at its sole expense, all labor, machinery, and other materials needed for the use and occupation of the Property.

c. A & A Farming shall not mow the Property other than to keep vegetation clear of fencing or other permitted improvements on the Property. A & A Farming shall not trim nor cut down any trees on the Property.

d. Greeley will manage noxious weeds on the Property that Greeley determines, in its sole discretion, are not sufficiently managed by grazing and other appropriate non-chemical means. A & A Farming shall cooperate with Greeley in all such efforts and facilitate access to the Property by Greeley staff at all reasonable times for the purposes of weed eradication and associated activities. A & A Farming shall not apply chemicals to the Property without advance written consent from Greeley. Such consent may be given or withheld in the sole discretion of Greeley. A & A Farming shall not apply any materials to the Property that are prohibited by applicable local, state, or federal law, as applicable now or hereafter enacted.

7. AUTHORIZED USE OF WATER RIGHTS.

a. A & A Farming may use the Water Rights for agricultural irrigation on the Property at no additional charge beyond the Annual Lease Amount.

b. Greeley shall be responsible for any ditch company assessments or other charges and expenses attributable to the Water Rights. A & A Farming shall comply with all the rules, regulations, and policies of The Greeley Irrigation Company.

c. A & A Farming agrees to use the Water Rights, and the water delivered pursuant to this Lease Agreement, only for agricultural irrigation of the Property. A & A Farming agrees to take and use the water delivered pursuant to the Water Rights to the fullest extent possible, and shall undertake no action which could be construed as abandonment of the Water Rights.

d. A & A Farming shall not rent, sublease, nor otherwise convey the right to use the Water Rights to third parties, nor allow any third parties to use the Water Rights or water delivered pursuant to said Water Rights on lands other than the Property or for any uses other than described in this Lease Agreement.

e. Greeley makes no warranty, guarantee, nor representation of any kind regarding the amount or quality of water that will be yielded or delivered pursuant to the Water Rights. Greeley shall not be liable for any failure of delivery of water pursuant to the Water Rights due to drought, other force of nature, or due to the failure of any ditch and/or reservoir company infrastructure.

f. A & A Farming acknowledges that Greeley may file an application to change the use of the Water Rights with the Division 1 Water Court for the State Colorado. A & A Farming agrees to cooperate with Greeley and its agents or representatives in the review and analysis of the historical use of the Water Rights. Upon request from Greeley, A & A Farming shall provide information regarding use of the Water Rights and reasonable access to the Property during and in preparation for any proceeding before the Division 1 Water Court.

8. LESSEE'S COVENANTS.

a. A & A Farming shall take all necessary action to ensure that cattle are confined to the Property, and not permitted to roam onto F Street, adjacent trails, or other adjacent parcels.

b. A & A Farming shall install and maintain electric wire fencing to separate the portions of the Property being grazed from adjacent trails and other adjacent parcels, to ensure that all cattle are confined to the Property. A & A Farming shall utilize no less than two strands of the electric wire fencing to ensure that cattle of all sizes are confined. Such electric wire fencing shall be installed at a distance no less than 30 feet from adjacent trails at all points along the perimeter of the Property. The fencing shall comply at a minimum with the excerpt from Colorado Parks and Wildlife's "Fencing for Wildlife" guide attached hereto as Exhibit B. A & A Farming shall maintain adequate signage on the fence line inside the edge of the Property to ensure that users of adjacent trails and all other passersby are provided notice that the fencing is charged.

c. A & A Farming shall not intentionally harass, injure, or kill any wildlife species on the Property, including, without limitation, non-domesticated amphibians, reptiles, fish, birds, or mammals native to the Greeley area. Adams shall contact Greeley and Colorado Parks and Wildlife to address any wildlife management concerns on the Property.

d. A & A Farming shall not hunt or fish on the Property without obtaining separate approval from Greeley, which approval may be given, conditioned, or withheld at Greeley's sole discretion. A & A Farming shall not allow any other party to hunt or fish on the Property.

e. A & A Farming shall not assign this Lease Agreement, nor sublet the Property or any part thereof. A & A Farming shall not pledge nor mortgage its interest in this Lease Agreement without the prior written consent of Greeley, which consent is in the sole discretion of Greeley. A & A Farming shall not directly nor indirectly create, incur, assume, or suffer to exist any mortgage, pledge, lien, charge, encumbrance, or claim on or with respect to the Property.

f. A & A Farming shall not construct, nor permit construction of any structure, building or other improvement, temporary or otherwise, on the Property without the prior written consent of Greeley, which consent is in the sole discretion of Greeley. A & A Farming shall not erect, paint, or maintain any signs on the Property without the prior written consent of Greeley, which consent is in the sole discretion of Greeley. A & A Farming shall promptly remove any such signs or improvements to which Greeley consents upon expiration or termination of this Lease Agreement.

g. A & A Farming shall not allow any noise, odors, fumes, or vibrations on the Property other than those caused by normal agricultural practices that may disrupt normal activities on adjacent properties.

h. A & A Farming shall undertake reasonable measures to avoid the introduction of noxious weeds to the Property, including, without limitation, using certified weed-free feed and bedding, and by cleaning equipment before entering onto the Property.

i. A & A Farming shall maintain the Property in as good repair and condition as it exists at the commencement of this Lease Agreement. A & A Farming shall not damage the Property, including, without limitation, by vehicle use associated with grazing. A & A Farming shall promptly notify Greeley of any such damage caused and immediately restore the Property to its previous condition.

j. A & A Farming shall peaceably surrender possession of the Property to Greeley upon the expiration or termination of this Lease Agreement.

9. INDEMNIFICATION.

a. A & A Farming assumes the risk of loss or damage to any cattle, crops, and any other personal property located on the Property, whether from windstorm, fire, earthquake, snow, water run-off, soil conditions, or any other causes whatsoever.

b. A & A Farming and its agents, employees, contractors, and invitees release and agree to indemnify, defend and hold harmless Greeley, its agents, officers, and employees from and against all damages, claims, actions, causes of action, demands, judgments, costs, expenses of every kind and nature, predicated upon injury to or death of any person or loss of or damage to any property, arising, in any manner, from the operations and activities of A & A Farming under this Lease Agreement, including, without limitation, the operation by A & A Farming of the required electric wire fencing to confine cattle to the Property.

c. Nothing in this Lease Agreement is intended constitute a waiver, express or implied, of any of the immunities, rights, benefits, protections or other provisions, of the Colorado Governmental Immunity Act, C.R.S. §§24-10-101 et seq., as applicable now or hereafter amended.

10. HAZARDOUS MATERIAL.

a. A & A Farming shall not cause or permit any Hazardous Material to be brought upon, kept, or used in or about the Property by A & A Farming, its agents, employees, contractors, or invitees without the prior written consent of Greeley (which Greeley shall not unreasonably withhold consent so long as A & A Farming demonstrates to Greeley's reasonable satisfaction that such Hazardous Material is necessary to use of the Property for grazing or farming purposes, and will be used, kept, and stored in a manner that complies with all laws regulating any such Hazardous Material).

b. If A & A Farming breaches the obligations stated herein, or if the presence of Hazardous Material on the Property caused or permitted by A & A Farming results in contamination of the Property, or if contamination of the Property by Hazardous Material otherwise occurs for which A & A Farming is legally liable to Greeley for damage resulting therefrom, then A & A Farming and its agents, employees, contractors, and invitees shall indemnify, defend, and hold Greeley harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities, or losses which arise during or after the lease term as a result of such contamination. This indemnification of Greeley includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal, or restoration work required by any federal, state, or local governmental agency or political subdivision because of Hazardous Material present in the soil or groundwater on or under the Property.

c. Without limiting the foregoing, if the presence of any Hazardous Material on the Property caused or permitted by A & A Farming results in any contamination of the Property, A & A Farming shall

promptly take all actions at its sole expense as are necessary to return the Property to the condition existing prior to the introduction of any such Hazardous Material to the Property; provided that Greeley's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld so long as such actions would not potentially have any material adverse effect on the Property.

d. As used herein, the term "Hazardous Material" means any hazardous or toxic substance, material, or waste which is or becomes regulated by any local governmental authority, the State of Colorado, or the United States Government. The term "Hazardous Material" includes, without limitation, any material or substance that is (i) defined as a "hazardous substance" under appropriate state law provisions; (ii) petroleum; (iii) asbestos; (iv) designated as a "hazardous substance" pursuant to the Federal Water Pollution Control Act, 33 U.S.C. § 1321; (v) defined as a "hazardous waste" pursuant to the Federal Resource Conservation and Recovery Act, 42 U.S.C. § 6903; (vi) defined as a "hazardous substance" pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601; or (vii) defined as a "regulated substance" pursuant to the Solid Waste Disposal Act (Regulation of Underground Storage Tanks), 42 U.S.C. § 6991.

11. RESERVATIONS. Greeley reserves the right under this Lease Agreement to have its officers, employees, and representatives enter onto the Property at any time for any purpose, including, without limitation, for inspections, site assessments, surveys, groundwater monitoring, weed management, and other associated activities. Greeley agrees to compensate A & A Farming for any damage to crops directly caused by such activities.

a. Without limiting the foregoing, Greeley reserves the right under this Lease Agreement to allow third parties to access the Property during the term of this Lease Agreement for hunting purposes. Greeley shall undertake reasonable efforts to minimize any potential effects of such access on authorized uses of the Property by A & A Farming and shall provide an advance notice to A & A Farming of no less than 72 hours before allowing such access to third parties.

12. TERMINATION FOR CAUSE.

a. If A & A Farming fails to observe or perform any term or condition of this Lease Agreement, then Greeley, upon written notice to A & A Farming, may in its sole discretion terminate this Lease Agreement and re-enter and repossess the Property, with or without legal proceedings, using such force as may be necessary, and remove any property belonging to A & A Farming without prejudice to any claim for rent or for the breach of covenants hereof. A & A Farming and its agents, employees, contractors, and invitees agree to indemnify and hold Greeley harmless from and against any costs for the removal and storage of property incurred by Greeley under the provisions of this section.

b. If Greeley determines that A & A Farming has created a public safety hazard, then Greeley may immediately take action to secure the safe operation of the Property, including without limitation, terminating this Lease Agreement and/or removing A & A Farming and any equipment or livestock from the Property.

13. INSURANCE REQUIREMENTS.

a. A & A Farming shall purchase and maintain for the full term of this Lease Agreement, at its sole expense, insurance policies providing coverage as follows:

i. Farm liability insurance, including coverage for bodily injury, property damage, contractual liability, and broad-form property damage and owner/contractor's protective coverage, with a minimum coverage of not less than \$1,000,000.00, or such amount as is otherwise approved by the City of Greeley Risk Manager; and

ii. Workers' compensation and employers' liability insurance, if applicable, which shall cover the obligations of A & A Farming in accordance with the provisions of the Workers' Compensation Act of Colorado, as it exists now or is later amended.

b. Before commencement of the lease term, A & A Farming must present all applicable insurance policies, certificates of insurance, and endorsements, along with a signed copy of this Lease Agreement, to the City of Greeley Risk Manager, and receive the Risk Manager's written approval as to the adequacy of such insurance coverage.

c. The insurance policies shall contain an endorsement naming Greeley, and its council members, officers, agents, employees, and volunteers as additional insured parties with respect to all activities A & A Farming may perform under this Lease Agreement. Moreover, such endorsement shall include a notice provision requiring 30 days written notice to Greeley before any cancellation.

d. Only insurance companies with authority to issue policies in the State of Colorado shall provide insurance coverage under this Lease Agreement.

e. For the term of this Lease Agreement, A & A Farming shall not cancel, materially change, or fail to renew the insurance coverage, and A & A Farming shall notify the City of Greeley's Risk Manager of any reduction or exhaustion of aggregate policy limits. If A & A Farming fails to purchase or maintain the insurance coverage stated in this Lease Agreement, Greeley shall have the right to procure such insurance coverage at the expense of A & A Farming.

f. Nothing in this Section 13 shall limit the extent of the responsibility of A & A Farming for payment of claims, liabilities, damages, fines, penalties, and costs resulting from its occupancy, use, or control of the Property or from its performance or nonperformance under this Lease Agreement.

14. STATUS OF LESSEE. A & A Farming and its agents, employees, contractors, and invitees shall conduct themselves at all times under this Lease Agreement as an independent contractor and not as employees, agents, or joint ventures of Greeley. The operations of A & A Farming will not be supervised by any employee or official of Greeley, nor will A & A Farming exercise supervision over any employee or official of Greeley. A & A Farming and its agents, employees, contractors, and invitees shall not represent themselves as employees, agents, or joint ventures of Greeley. A & A Farming and its agents, employees, contractors, and invitees are not entitled to Workers' Compensation benefits from Greeley, and are solely responsible for any tax obligations associated with their activities pursuant to this Lease Agreement.

15. MISCELLANEOUS PROVISIONS.

a. This Lease Agreement shall be construed and enforced in accordance with the laws of the State of Colorado.

b. No waiver or default by Greeley of any of the terms, covenants, warranties, or conditions hereof to be performed, kept, or observed by A & A Farming shall be construed or operate as a waiver by Greeley of any of the terms, covenants, warranties, or conditions herein contained, to be performed, kept, or observed by A & A Farming.

c. A & A Farming agrees that Greeley is under no obligation to maintain the Property in a particular condition or for a particular use, and A & A Farming waives all claims for damages of any kind or nature, whatsoever, resulting from the condition or suitability of the Property for its anticipated uses.

d. Article and section headings shall not be deemed to govern, limit, modify, or in any manner affect the scope, meaning, or intent of the provisions of this Lease Agreement.

e. The provisions of this Lease Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the language in question.

f. A & A Farming shall perform all obligations under this Lease Agreement in strict compliance with all local, state, and federal laws, rules, charters, ordinances and regulations, as applicable now or later enacted or amended.

g. No term, condition, or covenant in this Lease Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person or entity other than Greeley or A & A Farming receiving services or benefits under this Lease Agreement shall be considered an incidental beneficiary.

h. This Lease Agreement is an integration of the entire understanding of the parties with respect to the matters set forth herein. No representations, warranties, or certifications, expressed or implied, shall exist as between the parties, except as specifically set forth in this Lease Agreement. The parties shall only amend this Lease Agreement in writing with the proper official signatures attached thereto.

i. Invalidation of any specific provisions of this Lease Agreement shall not affect the validity of any other provision of this Lease Agreement.

j. A & A Farming shall not record this Lease Agreement in the real property records of any jurisdiction. This Lease Agreement is not intended to create any benefit or burden that runs with real property.

k. This Lease Agreement shall extend to and be binding upon the heirs, successors, and permitted assigns of the parties.

l. This Lease Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. Executed copies of this Lease Agreement may be delivered by electronic means. The parties agree to accept and be bound by electronic signatures.

16. NOTICE. Any notice required by this Lease Agreement shall be deemed sufficient when provided by U.S. mail, hand delivery, or by electronic mail if receipt is acknowledged or no notice of non-delivery is received, using the information set forth below. Greeley and A & A Farming shall promptly update the other party if the appropriate contact information changes.

If to Greeley: City of Greeley Water and Sewer
Attn: Water Resources Division
1001 11th Avenue, 2nd Floor
Greeley, Colorado 80631
Email: alex.tennant@greeleygov.com

If to Adams: A & A Farming, LLC
Attn: Kurt Adams
P.O. Box 126
Lucerne, Colorado 800646
Email: anahayfarming@gmail.com

IN WITNESS WHEREOF, the City of Greeley and A & A Farming have executed this Grazing and Farm Lease Agreement as of the date stated in the preamble.

CITY OF GREELEY, COLORADO

a Colorado home rule municipality
acting by and through its Water Enterprise

Attest:

By: _____
Mayor

City Clerk

A & A FARMING, LLC,
a Colorado limited liability company

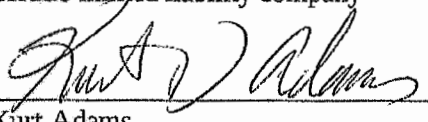
By: 
Kurt Adams

EXHIBIT A-1
GRAZING AND FARM LEASE AGREEMENT

Legal Description of the Property

Parcel A1: A part of the NE ¼ of the NW ¼ of Section 2, Township 5 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado, more particularly described as follows:

Beginning at a point on the North line of Section 2, Township 5 North, Range 66 West of the 6th P.M., said point being 677 feet West of the North quarter corner of said Section 2; thence South 236 feet to the center line of the Union Colony No. 3 Ditch; thence Northwesterly along said center line a distance of 541 feet to the intersection of said center line and the North line of said Section 2; thence East along said North line 460 feet to the point of beginning.

Parcel A2: All that part of the NW ¼ of Section 2, Township 5 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado, described as follows: beginning at the Northeast corner of the NW ¼ of said Section 2, thence West along the North line thereof 677 feet; thence South 156.5 feet, more or less, to the right of way of the Greeley Irrigation Company Canal (No. 3); thence Southeasterly along the right of way of said Canal to the East line of said NW ¼; thence North along the East line of said Northwest Quarter (NW) to the point of beginning.

Parcels A1 and A2 being more particularly described as follows: A parcel of land being comprised of portions of Parcel No. 1 and Parcel No. 2 as previously described in a deed recorded June 13, 2003 as Reception No. 3072645 of the Records of Weld County and being situate in the Northeast Quarter of the Northwest Quarter (NE1/4NW1/4) of Section Two (2), Township Five North (T.5N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, more particularly described as follows:

COMMENCING at the North Quarter Corner of said Section 2, as monumented by a 2.5" Aluminum Pipe with a 3.25" Aluminum Cap stamped LS22098 and 1992, and assuming the North line of the Northwest Quarter of said Section 2 as bearing South 89°26'09" West a distance of 2721.10 feet, with all other bearings contained herein relative thereto: THENCE South 89°26'09" West along the North line of the Northwest Quarter of said Section 2 a distance of 121.34 feet to the Westerly line of that parcel described in a Warranty Deed recorded May 26, 2004 as Reception No. 3183518 of the Records of Weld County and to the POINT OF BEGINNING;

The next Four (4) courses are along the Westerly and Northerly lines of said parcel described in a Warranty Deed recorded May 26, 2004 as Reception No. 3183518 of the Records of Weld County: THENCE South 00°24'57" West a distance of 86.76 feet; THENCE South 59°51'03" West a distance of 174.56 feet; THENCE North 72°35'49" West a distance of 338.32 feet; THENCE South 74°26'36" West a distance of 280.71 feet to the Northerly Right of Way line of the Greeley #3 Ditch as called for in said Warranty Deed recorded May 26, 2004 as Reception No. 3183518 of the Records of Weld County; THENCE South 73°14'56" East along the Northerly Right of Way line of the Greeley #3 Ditch a distance of 211.00 feet; THENCE South 02°36'47" East a distance of 31.80 feet to the center line of the Union Colony No. 3 Ditch;

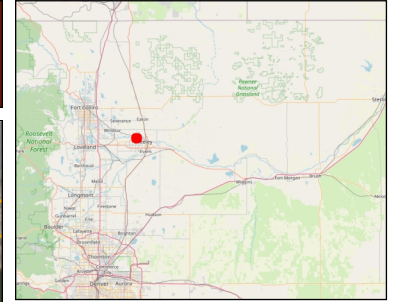
The following Four (4) courses are along the center line of the Union Colony No. 3 Ditch: THENCE North 73°14'56" West a distance of 221.54 feet; THENCE North 66°27'32" West a distance of 206.66 feet to a Point of Curvature; THENCE along the arc of a curve concave to the Northeast a distance of 82.09 feet, said curve has a Radius of 110.00 feet, a Delta of 42°45'28" and is subtended by a Chord bearing North 45°04'48" West a distance of 80.20 feet to a Point of Tangency; THENCE North 23°42'04" West a distance of 30.71 feet to the North line of the Northwest Quarter of said Section 2; THENCE North 89°26'09" East along the North line of the Northwest Quarter of said Section 2 a distance of 1012.12 feet to the POINT OF BEGINNING.

Parcel B: That portion of the following property lying north and east of the Greeley No. 3 Canal – the South Half of the Southwest Quarter (S1/2SW1/4) of Section Thirty-Five (35), Township Six North (T.6N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado.

Excepting Therefrom that parcel of land conveyed to The City of Greeley in a Warranty Deed recorded May 26, 2004 as Reception No. 3183518 and also Excepting Therefrom that parcel of land conveyed to William A. Putnam and Mary A Putnam in a Quit Claim Deed recorded March 14, 1985 as Reception No. 2001839, said parcel of land conveyed in the Quit Claim Deed subsequently becoming the most westerly portion of the Stoneybrook Subdivision Filing No. 1.

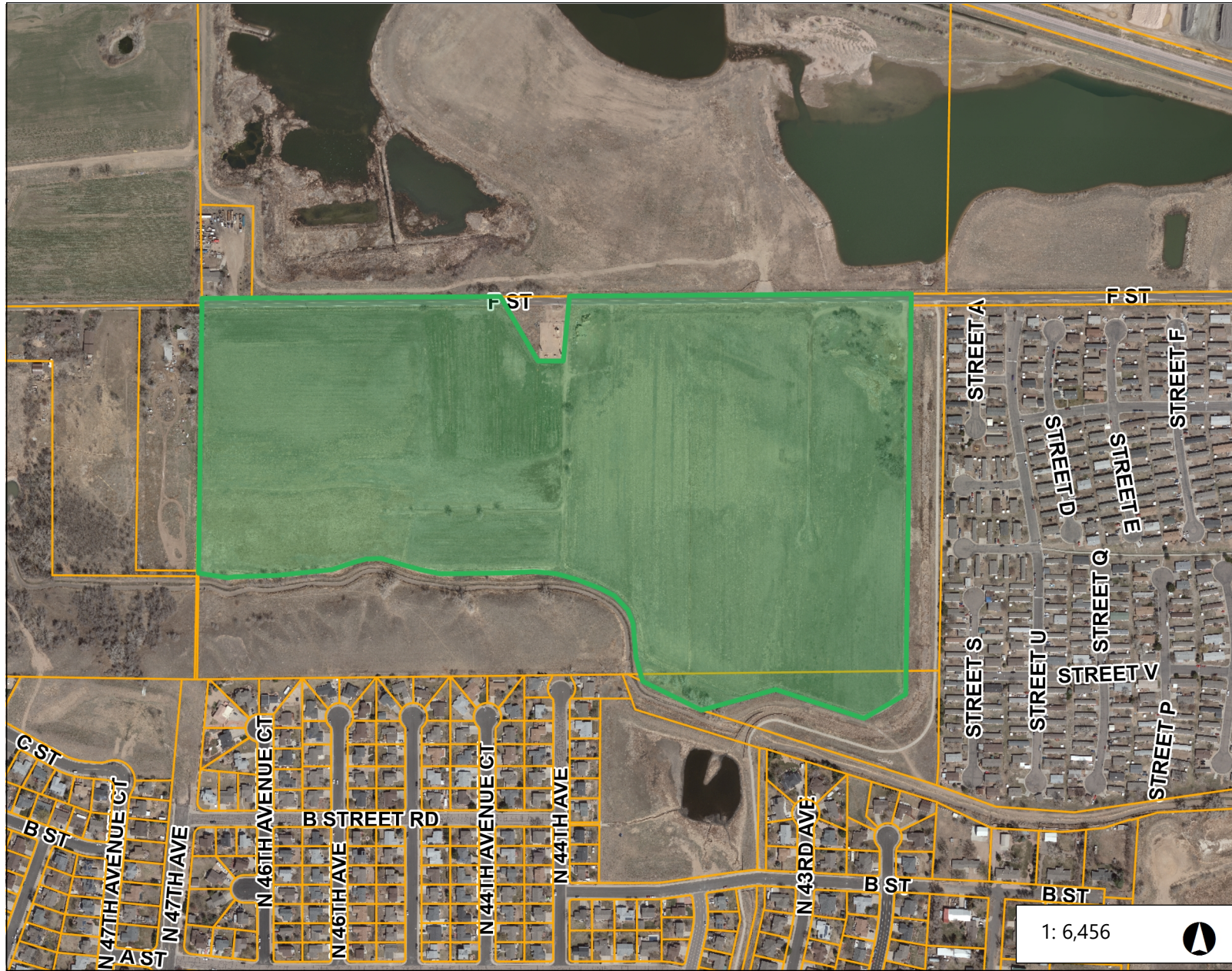
EXHIBIT A-2
GRAZING AND FARM LEASE AGREEMENT

Map of the Property



Legend

- Parcels
- Highway
- County Boundary



1: 6,456



1,076.1 0 538.03 1,076.1 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Weld County Colorado

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Virgil Pierce, Rates and Budget Analyst

Title:

Adopt Amendment to 2024 Rates and Fees Resolution

Summary:

Staff recommends 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.

Recommended Action:

Approve the Resolution Amending the Resolution for Rates, Fees, and Chargers for Water and Sewer Services in 2024.

Recommended Motion:

“I move that the Board adopt the proposed resolution to amend Resolution 2, 2023 concerning residential plant investment fees and non-potable service charges.”

Attachments:

1. 2_2024 Rate Resolution PIF Ammendment - Presentation
2. 3_2024.01.30. Revised Draft 2024 Rate Resolution Amendment



**Amendment to Water and Sewer Rates
and Fees Resolution: Adding
Graduated Plant Investment Fees for
Lot Sizes and
Correcting Non-Potable Monthly
Service Charges
Water & Sewer Board
January 17, 2024**

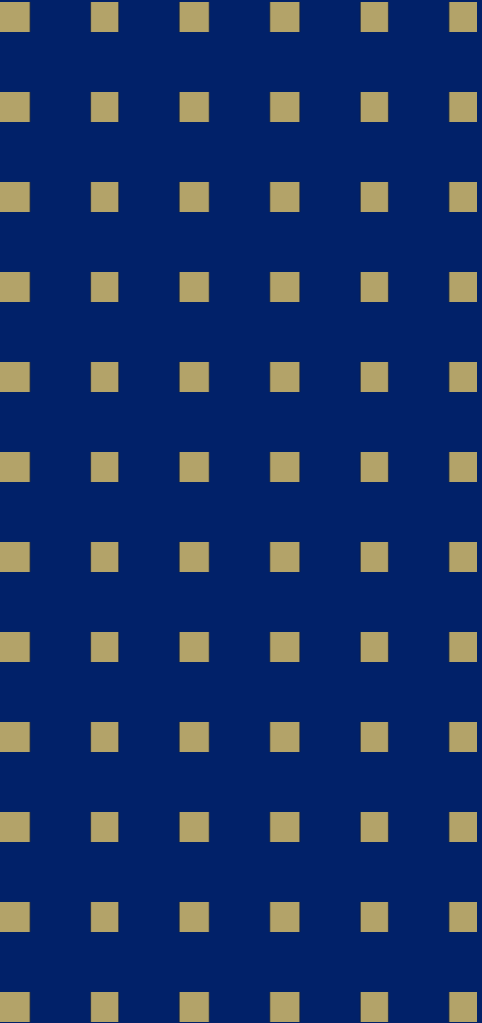


Water PIF Updates

Graduated Water Plant Investment Fee (PIF):

- The existing PIF is based on the size of the water meter installed.
- The charge is based upon the system demand of a single-family home on a standard sized lot of 6,000-13,000 sq feet using treated water for irrigation.
- This results in a larger than necessary charge for homes on smaller lots, which are becoming more common.

The proposal is to amend the 2024 Rate Resolution to include a reduced PIF for residential lots smaller than a standard sized one or that will use non-potable water for irrigation.

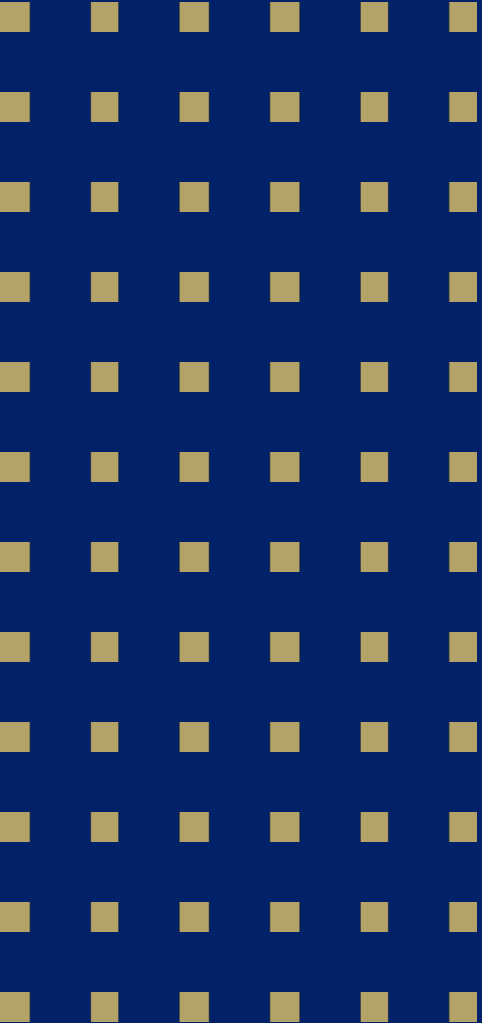
A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 10 rows and 6 columns.

Plant Investment Fees

Plant Investment Fees

Residential Lot Type	Lot Size (s.f.)	Potable Irrigation	Common Space Non-Potable	House to House Non-Potable
Row House	Less than 1500 s.f.	50%	50%	50%
Small Format	1,500-2,999 s.f.	50%	50%	50%
Small Lot	3,000-4,499 s.f.	60%	60%	50%
Medium Lot	4,500-5,999 s.f.	70%	70%	50%
Standard Lot	6,000-13,000 s.f.	100%	75%	50%
Estate Lot	More than 13,000 s.f.	100%	100%	50%

Plant investment fee schedule as a percentage of the meter-size based PIF in the rate resolution.

A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 10 rows and 6 columns.

Non-Potable Monthly Service Charge

Non-Potable Monthly Service Charge

The 2024 Rate Resolution included in the rates for Non-Potable Water use a monthly service charge based on the size of the meter used by the customer.

This structure cannot be implemented by the current billing system.

The proposal is:

- Amend the non-potable rate section of the rate resolution to charge customers the monthly service charge of \$17.75 that is charged to a ¾" Meter under the original resolution.
- With the new billing system, we will revisit service charges and likely will be proposing a service charge for non-potable water that is based upon the meter size.

Recommendation



Staff's Recommendation is: Adopt the amendment to Resolution 2, 2023 which sets the 2024 Water and Sewer Rates and Fees.

Thank you



**CITY OF GREELEY, COLORADO
ACTING BY AND THROUGH ITS WATER AND SEWER BOARD**

RESOLUTION ___, 2024

**A RESOLUTION AMENDING WATER AND SEWER BOARD RESOLUTION 2, 2023
TO MODIFY PLANT INVESTMENT FEES FOR RESIDENTIAL LOTS
AND CORRECT NON-POTABLE SERVICE CHARGES**

WHEREAS, the City of Greeley (“City”) is a Colorado home rule municipality empowered pursuant to Sections 1 and 6 of Article XX of the Colorado Constitution to, *inter alia*, construct, purchase, acquire, lease, add to, maintain, conduct, and operate water works and everything required therefor, within or without its territorial limits, for use of the City; and

WHEREAS, Section 17-4 of the City Charter and Sections 20-27 and 20-30 of the Greeley Municipal Code authorize and require the Water and Sewer Board (“Board”) to, *inter alia*, annually establish minimum water and sewer rates by resolution, which must be sufficient to include expenditures for all operations and maintenance of the water and sewer system, all debt service, and additions to a reserve account in sufficient amounts to offset depreciation to the water and sewer system; and

WHEREAS, Section 17-4 of the City Charter and Section 20-30 of the Greeley Municipal Code authorize and require the Board to acquire, develop, convey, lease, and protect water and sewer assets, supplies, and facilities; and

WHEREAS, Section 20-28 of the Greeley Municipal Code authorizes the Board to adopt minimum rates, fees and charges the Board deems necessary to cover the costs of inspections, tap installations, operations, maintenance and extensions of the water and sanitary sewer systems; and

WHEREAS, the Board has advised the City Council of its long-term capital improvement plans, pursuant to Section 17-7 of the City Charter; and

WHEREAS, the Board’s long-term capital improvement plan for water and wastewater contains extensive new construction and rehabilitation within the next five years; and

WHEREAS, the Board’s long-term water storage and water acquisition plans contemplate the acquisition of new water supplies, as well as the construction and expansion of water storage infrastructure; and

WHEREAS, the Board adopted Resolution 2, 2023, A Resolution Adopting Rates, Fees, and Charges for Water and Sewer Services in 2024, on December 20, 2023, in which the Board, *inter alia*, set minimum water and sewer rates and fees; and

WHEREAS, the Board now desires to amend Resolution 2, 2023 to establish a graduated scale for plant investment fees for treated water service to single-family residential customers, to be based on the lot size of the property, and to correct the previously adopted rates for non-potable water service;

NOW THEREFORE, BE IT RESOLVED BY THE WATER AND SEWER BOARD OF GREELEY, COLORADO:

Section 1. Section I, Plant Investment Fee Schedule for Water, of Appendix A to Water and Sewer Board Resolution 2, 2023, is amended and replaced in its entirety as shown on Appendix A to this resolution.

Section 2. The plant investment fees set forth in Appendix A to this resolution shall take effect on March 1, 2024.

Section 3. Section F, Non-Potable Service, of Appendix A to Water and Sewer Board Resolution 2, 2023, is amended and replaced in its entirety as shown on Appendix A to this resolution to adjust the monthly service charge to a flat rate regardless of meter size.

Section 4. The non-potable water rates set forth in Appendix A to this resolution shall take effect on March 1, 2024.

Section 5. Except as explicitly amended by this resolution, the terms of Water and Sewer Board Resolution 2, 2023, A Resolution Adopting Rates, Fees, and Charges for Water and Sewer Services in 2024, remain in full force and effect.

Section 6. In the event of any unintended discrepancy between this resolution and the Greeley Municipal Code, the provisions of the Greeley Municipal Code shall govern.

PASSED AND ADOPTED, SIGNED AND APPROVED THIS ____ DAY OF FEBRUARY 2024.

ATTEST

**CITY OF GREELEY
WATER AND SEWER BOARD**

**Raymond C. Lee III
Secretary to the Board**

**Harold Evans
Chairman, Water and Sewer Board**

APPENDIX A

2024 WATER RATES AND FEES

F. NON-POTABLE SERVICE

The non-potable water usage rate shall be \$4.12 per 1,000 gallons for the volume of water used. A monthly service charge of \$17.75 shall be assessed on every non-potable account during the period of its operation, regardless of the volume of water used.

I. PLANT INVESTMENT FEE SCHEDULE FOR WATER

- 1. Minimum Plant Investment Fees Based on Tap Size:** The following are minimum plant investment fees for treated water service to nonresidential and multi-family residential lots.

<u>Tap Size</u>	<u>Water Plant Investment Fee</u>
3/4"	\$12,900
1"	\$21,500
1½"	\$43,000
2"	\$68,800
3"	\$150,500
4"	\$258,000
6"	\$537,500

- 2. Minimum Plant Investment Fees for Residential Lots:** The following are minimum plant investment fees for treated water service to single-family residential lots and multi-family residential lots on which each dwelling unit is serviced by a separate water tap. The plant investment fees for such properties shall be calculated as a proportion of the applicable tap size-based values in subsection I.1. above, according to the following schedule and based on the property lot size and irrigation water source. For multi-family residential lots on which each dwelling unit is serviced by a separate water tap but not individually platted, the property lot size for each dwelling unit shall be calculated on a pro rata basis using the total lot size.

Residential Lot Type	Property Lot Size (Square Feet)	Potable Irrigation	Common Space Non-Potable Irrigation	House to House Non-Potable Irrigation
Row House	Less than 1,500 s.f.	50%	50%	50%
Small Format	1,500 – 2,999 s.f.	50%	50%	50%
Small Lot	3,000 – 4,499 s.f.	60%	60%	50%
Medium Lot	4,500 – 5,999 s.f.	70%	70%	50%
Standard Lot	6,000–13,000 s.f.	100%	75%	50%
Estate Lot	More than 13,000 s.f.	100%	100%	50%



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Ryan Duve, Water Resource Engineer IV

Title:

Recommend to City Council Establishment of Westgate Non-Potable LID

Summary:

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 1,300 gallons per day (gpm) pump station is under construction and is scheduled to be online for the 2024 irrigation season.

The pump station is located on the west side of 71st Avenue south of 25th Street within the new Westgate Subdivision. The pump station will serve the Westgate Subdivision and future developments within its service area. 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.

The LID establishes a single rate based on the bulk area for each parcel within the LID including developed and undeveloped parcels. However, the W&S's policy is to not charge developed properties to remove any disincentives to conversion.

The Westgate Service Area is approximately 775 acres (bulk area). However, the pump station was sized to service approximately 417 acres. The 358 acres excluded from the LID are mainly occupied by existing single-family homes and were not included in the sizing of the pump station since the potential of conversion are very low. The LID boundaries and location of the pump station is depicted in Exhibit A of the Ordinance.

The cost for repayment is based on dividing the cost of the pump station by 417.284 acres. Currently, the cost of the pump station is \$2,600,522. Therefore, the LID rate is \$6,232.02/bulk acre. The maximum amount that can be recovered is \$1,549,417.14 and the remainder of the construction costs are covered by W&S. The LID may not exceed the amount shown but could be reduced after construction is completed and final costs are determined.

Recommended Action:

Staff recommends that Board recommend City Council adopt an ordinance to establish a local improvement district for the construction of the Westgate non-potable pump station.

Recommended Motion:

“I move 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.”

Attachments:

1. Westgate LID
2. 2024.02.14. Revised Draft Ordinance Establishing Westgate LID
3. Exhibit A



Establishment of Westgate Non-Potable LID – Approve and Recommend to City Council

Ryan Duve, Water Resources Engineer

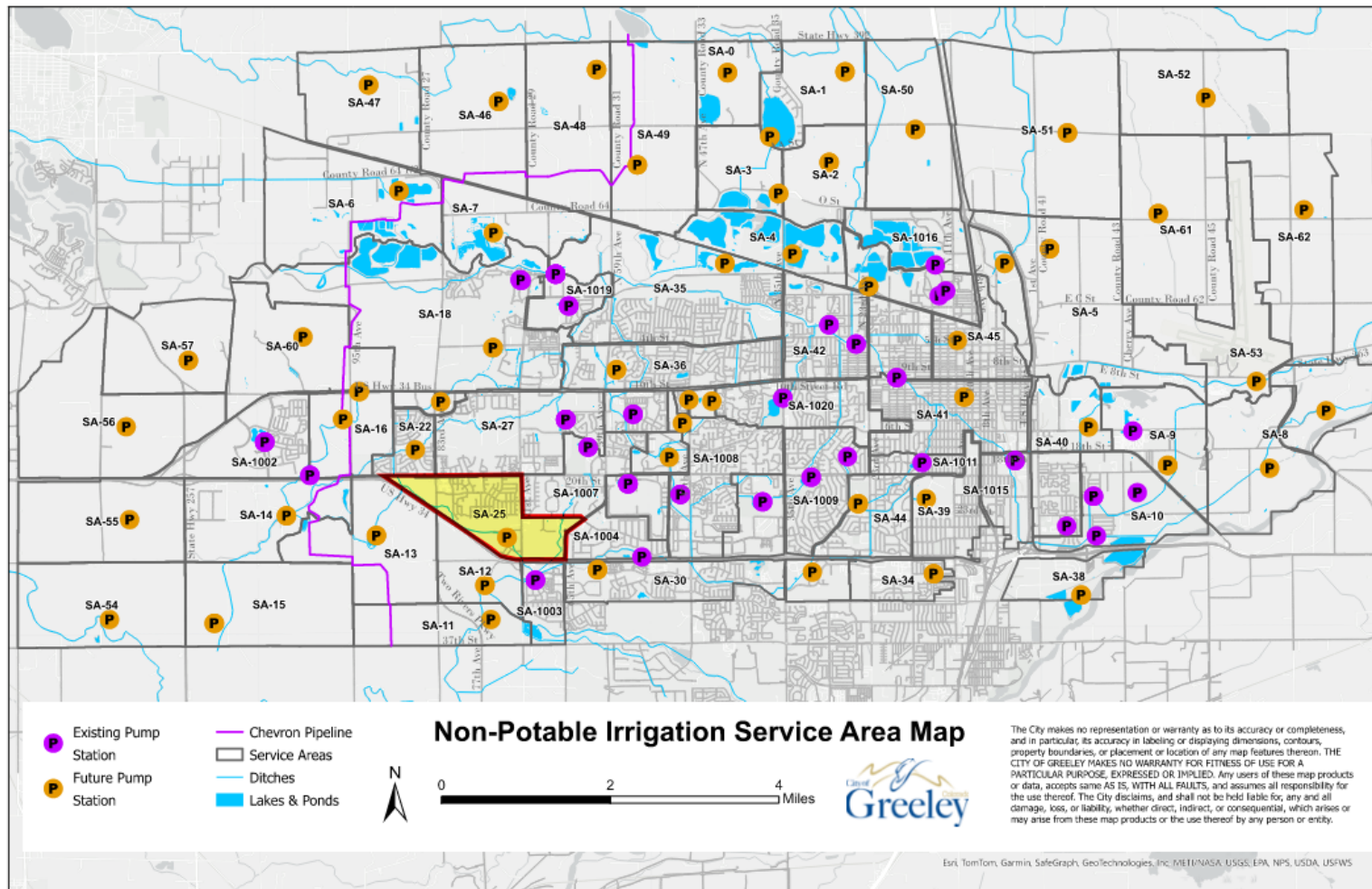
Ryan.duve@greeleygov.com, 970-350-9813

Water & Sewer Board – February 21, 2024



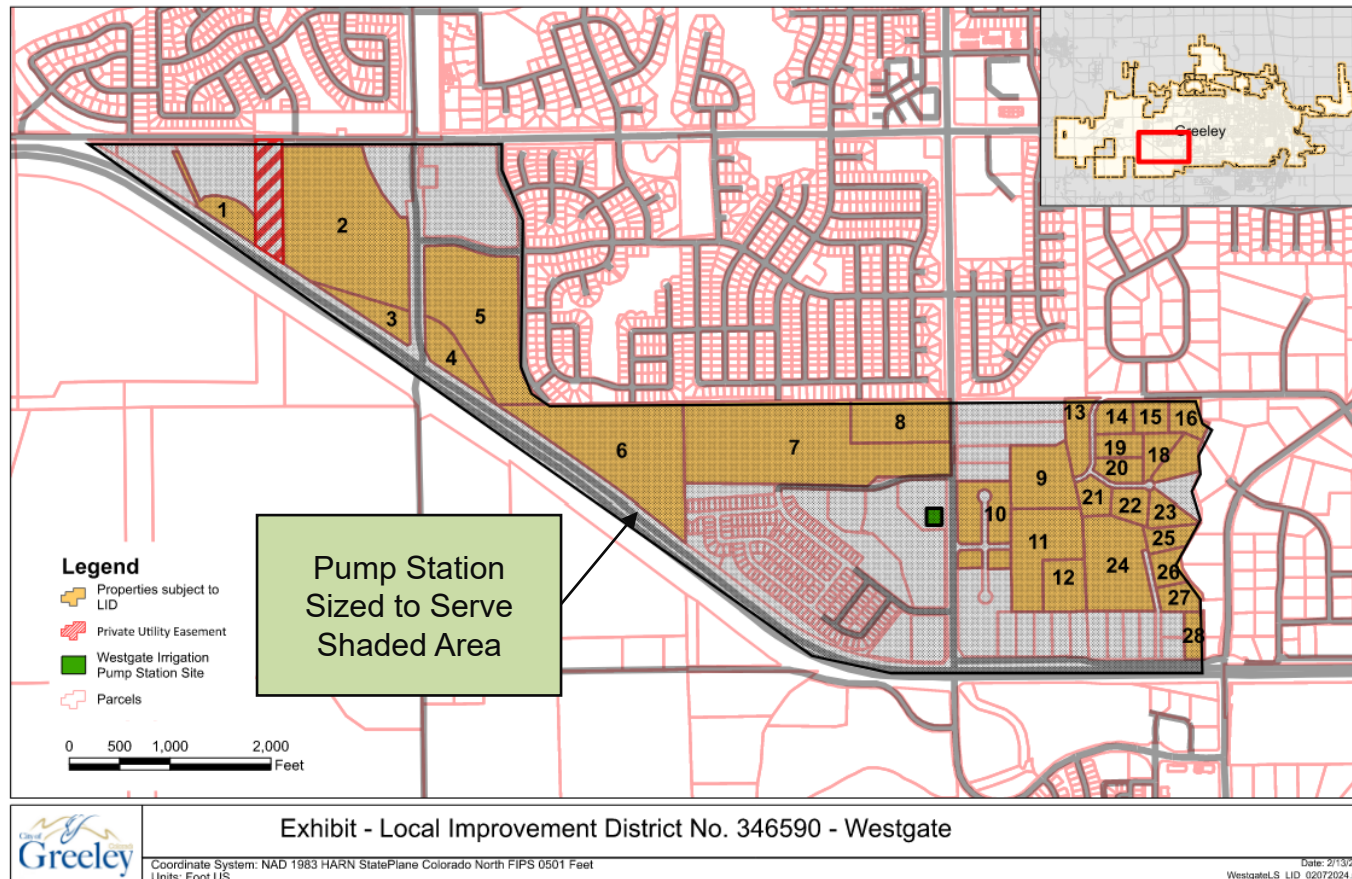
Infrastructure & Mobility

2021 Non-Potable Masterplan



- SA-25: Westgate Service Area ±775 Bulk Acres

Non-Potable Pump Station Service Area



- West gate Service Area
417.284 acres

Funding Alternatives Evaluated

- Do Nothing
 - Cannot add non-potable (NP) water systems for existing and new developments
 - Each development must build individual NP systems for increased costs
- Plant Investment Fees (PIFs)
 - \$1.5M represents one third of the collected PIF revenue from 2023.
 - Potential for increasing PIF by 32% for all development
- Water Rate Increase
 - Additional \$91,000 per year in debt service paid for by all water rate payers
- Westgate Local Improvement District (Recommended)
 - Allows costs allocated to users of NP pump station

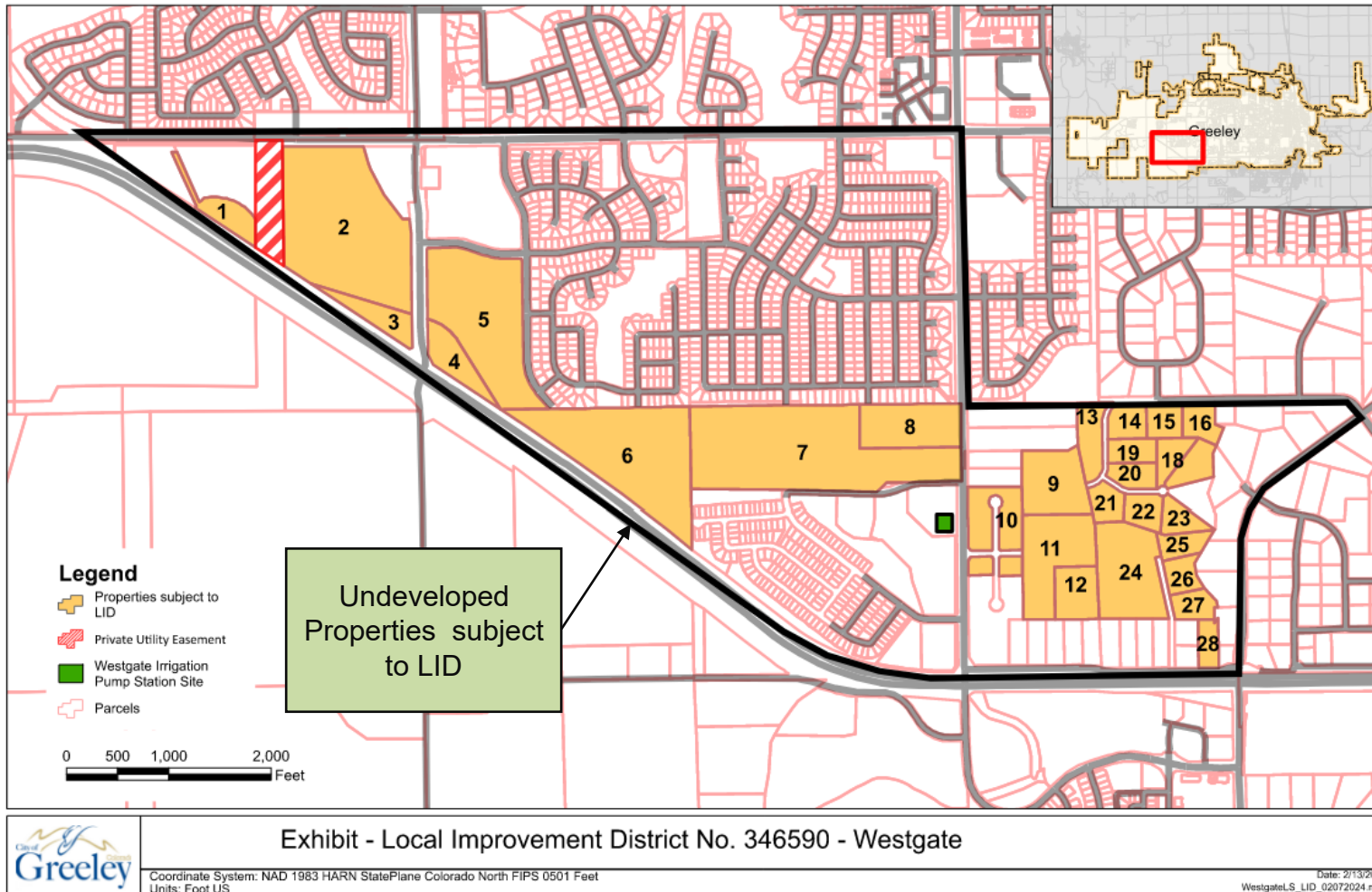
Local Improvement District

- Local Improvement Districts (LIDs) are an infrastructure financing tool for making improvements of a special nature.
 - Applied to a specific limited area of the city that needs specific infrastructure.
 - Applied for the benefit of properties within the specific area.
 - Improvement districts can be used for the construction, extension maintenance or reconstruction of water, sewer, or stormwater infrastructure.

Source: Greeley Municipal Code, Chapter 6

LOCAL IMPROVEMENT DISTRICTS, Sec. 18-379

Non-Potable Pump Station Service Area - LID Parcels



- West gate Service Areas:
 - LID Parcels – 248.622 ac
 - Developed Parcels (W&S) – 168.662 ac

Local Improvement District Cost

- **Westgate Pump Station Total Construction Cost = \$2.6 Million**

- Customers utilizing NP water have a reduced potable water PIF
- Typical development can have 5 or more single family homes per acre

- LID Cost Methodology and Calculation

Total Construction Cost	\$2,600,522.00
LID Bulk Area	417.284 acres
Calculated Cost per Acre	\$6,232.02/acre
Developed Area Portion	\$1,051,104.86 (W&S Cost)
Undeveloped Area Portion	\$1,549,417.14 (LID Cost)

Next Steps

- February 21 Water & Sewer Board Approval and Recommendation
- Community Information Sharing and Q&A Meeting (TBD in March)
- Two step approval process by City Council (March/April):
 - 1st Ordinance - Defines the LID boundary, properties list, and maximum total cost.
 - Listed properties will receive a mailed public hearing notice
 - 2nd Ordinance defines the actual cost of the project and cost per acre
 - 2nd Ordinance goes to council upon completion of the project

Recommended W&S Board Action

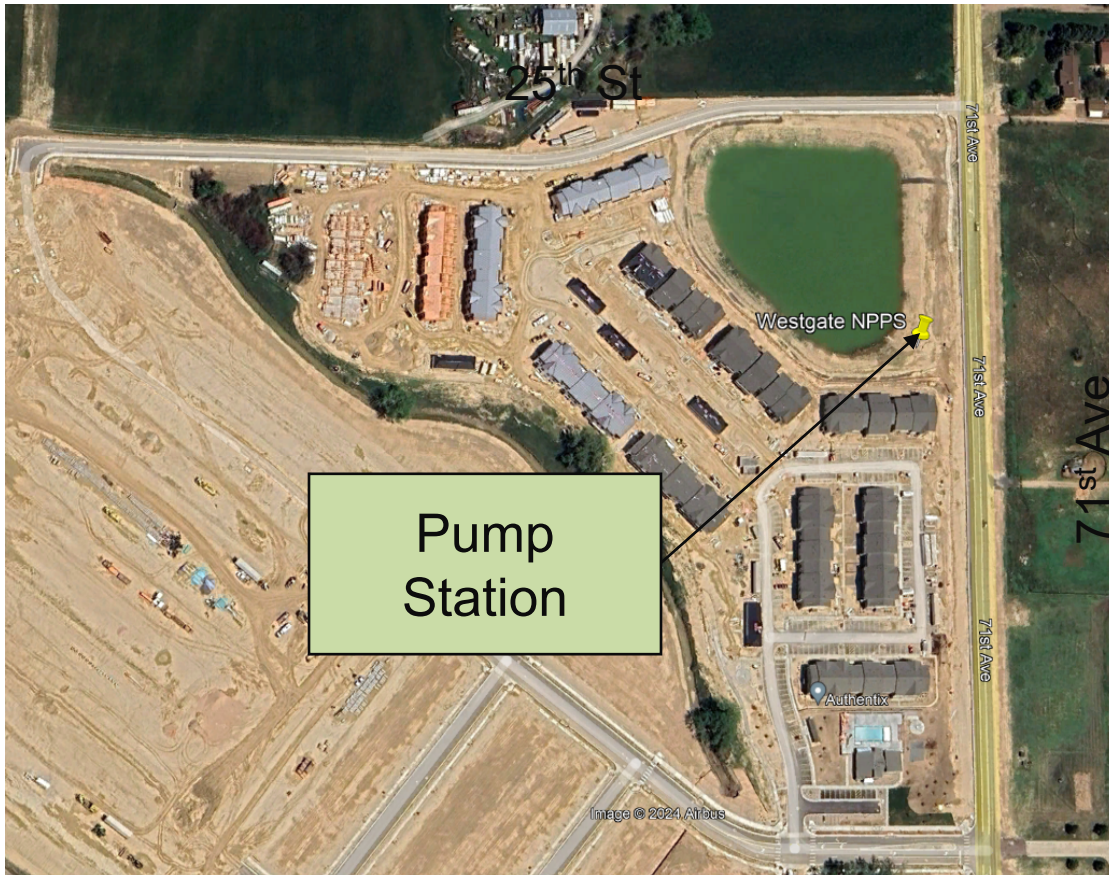
- Westgate Non-Pot Irrigation Pump Station is recommended for approval by Water & Sewer Board and Department staff.
- Recommend approval of the ordinance establishing Local Improvement District #346590 for the Westgate Non-Potable Irrigation Pump Station.

Questions



Pump Station Location

- Insert photo of skid install.



CITY OF GREELEY, COLORADO
ORDINANCE NO. ___, 2024

**AN ORDINANCE ESTABLISHING LOCAL IMPROVEMENT DISTRICT NO. 346590
FOR THE CONSTRUCTION OF A NON-POTABLE IRRIGATION PUMP STATION IN GREELEY,
COLORADO; DETERMINATION OF LOTS AND LANDS TO BE INCLUDED WITHIN LOCAL
IMPROVEMENT DISTRICT 346590; SETTING FORTH THE MAXIMUM COSTS OF
CONSTRUCTION; AND SETTING FORTH THE PROPERTY TO BE INCLUDED AND NAMES OF
THE APPARENT OWNERS OF PROPERTY TO BE INCLUDED (WESTGATE NON-POTABLE
IRRIGATION PUMP STATION)**

WHEREAS, the City of Greeley, Colorado (“City”) is a home rule municipality empowered pursuant to Sections 1 and 6 of Article XX, and Section 7 of Article X of the Colorado Constitution to, *inter alia*, levy assessments against real property within the City for municipal purposes, including, without limitation, for local improvements; and

WHEREAS, the Charter for the City of Greeley, Colorado further empowers the City to establish local improvement districts, for the purpose of, *inter alia*, constructing local improvements and assessing the costs thereof upon the property especially benefitted by such improvements; and

WHEREAS, Title 18, Chapter 6 (Local Improvement Districts) of the Greeley Municipal Code sets forth the particular authority and procedures by which the City may establish such local improvement districts; and

WHEREAS, the City anticipates continued development in west Greeley, with new developments containing over two (2) acres of irrigable area being required to utilize non-potable water for irrigation purposes, and has accordingly identified a need for additional non-potable irrigation infrastructure in this general area; and

WHEREAS, the City has identified more specifically a near-term need for a non-potable irrigation pump station (“Westgate Non-Potable Irrigation Pump Station”) to serve the geographic area located generally south of 20th Street, north of Highway 34 Bypass, and west of 65th Avenue in southwest Greeley (“Westgate Non-Potable Irrigation Pump Station Service Area”); and

WHEREAS, the City Council desires, on its own initiative, to establish a local improvement district for the construction of the Westgate Non-Potable Irrigation Pump Station, for the benefit of properties that will be required utilize non-potable irrigation service within the Westgate Non-Potable Irrigation Pump Station Service Area in Greeley;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GREELEY, COLORADO:

Section 1. Establishment of Local Improvement District 346590. Pursuant to the authority set forth in Section 18-379(d) of the Greeley Municipal Code, the City Council hereby orders the creation of a local improvement district for the construction of the Westgate Non-Potable Irrigation Pump Station, for the benefit of properties that will be required to utilize non-potable irrigation service within the Westgate Non-Potable Irrigation Pump Station Service Area in Greeley. The local improvement district shall be assigned number 346590 and contain the lots and lands set forth in Section 7 below. The location of the Westgate Non-Potable Irrigation Pump Station and the lots and lands to be included within Local Improvement District No. 346590 are shown on the map attached hereto as Exhibit A.

Section 2. Westgate Non-Potable Irrigation Pump Station Service Area. The City anticipates that the Westgate Non-Potable Irrigation Pump Station will serve 417.284 bulk acres. Of that total service area acreage, 168.662 acres have been identified by the City as conversion areas. A conversion area is defined in Section 5 of the City's Design Criteria as "a previously developed parcel that is currently irrigated by potable water but may consider switching to non-potable irrigation in the future." The remaining 248.622 bulk acres of that total service area acreage may be required by the Greeley Municipal Code to connect to the City's non-potable irrigation infrastructure.

Section 3. Estimation and Description of Maximum Costs. The total maximum cost of construction for the Westgate Irrigation Pump Station Infrastructure is estimated at this time to be \$2,600,522 (i.e., \$6,232.02 per bulk acre). This total estimated maximum cost includes expenses for which the City will be responsible, as described in Section 4 below.

Section 4. City Portion of Infrastructure Costs. Of the total estimated maximum cost set forth in Section 3, the City will bear at a minimum the construction costs attributable to the 168.662 bulk acres associated with conversion areas described in Section 2 above and to those properties within the Westgate Non-Potable Irrigation Pump Station Service Area that are owned by the City. The minimum cost to be borne by the City is estimated at this time to be \$1,051,104.86.

Section 5. Assessments against Local Improvement District 346590 Properties. The final determination of assessments to be made against the lots and lands included in Local Improvement District 346590 shall be established by an ordinance adopted after completion of the Westgate Non-Potable Irrigation Pump Station improvements described herein, and such assessments shall be based upon the costs of construction and a fair market rate of projected interest to be recommended by the Director of Finance and set forth in the assessment ordinance at the time it is adopted. Interest shall accrue on each assessment from the date of the City's final payment on construction costs until the assessment is paid in full. The portion of the total maximum cost of construction for the Westgate Non-Potable Irrigation Pump Station not borne by the City shall be allocated to the 248.622 bulk acres within the Westgate Non-Potable Irrigation Pump Station Service Area that may be required by the Greeley Municipal Code to connect to the City's non-potable irrigation infrastructure, as is shown on the map attached hereto as Exhibit A. Within such allocation, the costs and interest shall then be assessed proportionally in accordance with the bulk acreage of each parcel that connects to the City's non-potable irrigation system. Assessments shall be due from the property owner at the earlier of: (i) final plat approval, or (ii) a request from the property owner for connection to the City's non-potable irrigation system, and payable in accordance with the terms set forth in the assessment ordinance.

Section 6. Construction of the Westgate Non-Potable Irrigation Pump Station commenced prior to the passage of this ordinance. The City shall ensure construction is completed within a reasonable time after passage of this ordinance.

Section 7. Lots and Lands to be Included in Local Improvement District 346590; Owners. The lots and lands that shall be included within Local Improvement District 346590, the street addresses (if applicable) and legal descriptions of such lots and lands, and the current record owners of such lots and lands, according to the records of the Weld County Clerk and Recorder's Office, are as follows.

1. Owner(s): Samad D. and Susan K. Aghajani
 Mailing Address of Owner(s): P.O. BOX 200375
 EVANS, CO 80620

 Address of LID Property: N/A
 Weld County Parcel No.: 095918101002
 Legal Description of LID Property: LOT 2 GREELEY STORAGE MINOR
2. Owner(s): Noble Energy, Inc.
 Mailing Address of Owner(s): c/o K.E. Andrews
 1900 DALROCK ROAD
 ROWLETT, TX 750885526

 Address of LID Property: N/A
 Weld County Parcel No.: 095918110001
 Legal Description of LID Property: Lot 1 FRANCIS MINOR SUB
3. Owner(s): City of Greeley
 Mailing Address of Owner(s): c/o Real Estate Management
 1000 10th STREET
 GREELEY, CO 80631-3808

 Address of LID Property: N/A
 Weld County Parcel No.: 095918108004
 Legal Description of LID Property: GR TAL OUTLOT I TALON
4. Owner(s): City of Greeley
 Mailing Address of Owner(s): c/o Real Estate Management
 1000 10th STREET
 GREELEY, CO 80631-3808

 Address of LID Property: N/A
 Weld County Parcel No.: 095917208007
 Legal Description of LID Property: OUTLOT H TALON
5. Owner(s): Creek View Commercial Holdings, LLC
 Mailing Address of Owner(s): 7251 W 20TH STREET, UNIT L-200
 GREELEY, CO 80634-4626

 Address of LID Property: N/A
 Weld County Parcel No.: 095917232002
 Legal Description of LID Property: TRACT 1 OWL RIDGE 5TH FG
6. Owner(s): Marble Properties, Ltd.
 Mailing Address of Owner(s): 822 7TH STREET, SUITE 760
 GREELEY, CO 80631-3943

 Address of LID Property: N/A
 Weld County Parcel No.: 095917000022
 Legal Description of LID Property: GR 17597 SW4 17 5 66 (WEST RIDGE AREA ANNEX)
 LYING N OF NEW STATE HWY #34 R/W EXC UPRR RES
 (25R2D)
7. Owner(s): Jim L. Ells

- Mailing Address of Owner(s): 2435 71ST AVENUE
GREELEY, CO 80634-9609
- Address of LID Property: 2435 71ST AVENUE
GREELEY, CO 80634
- Weld County Parcel No.: 095917000027
- Legal Description of LID Property: GR PT SE4 17-5-66 (BRIGGS & ELLS ANNEX) BEG S0D22'W 435.6' OF E4 COR SEC S0D22'W 330' N89D57'W 739.35' S46D39'W 145.25' N87D45'W 898.87' N88D30'W 912.82' N0D07'W 807.69' S89D57'E 1662.31' S0D22'W 435.6' S89D57'E 1000' TO BEG (.25R)
8. Owner(s): Jim L. Ells
Mailing Address of Owner(s): 2435 71ST AVENUE
GREELEY, CO 80634-9609
- Address of LID Property: 2423 71ST AVENUE
GREELEY, CO 80634
- Weld County Parcel No.: 095917000024
- Legal Description of LID Property: GR PT SE4 17-5-66 (BRIGGS & ELLS ANNEX) BEG AT E4 COR OF SEC W1000' S435.6' E1000' N435.6' EXC UPRR RES (.25R)
9. Owner(s): Green Keen Acres, LLC
Mailing Address of Owner(s): 254 ALABASTER WAY
JOHNSTOWN, CO 80534-9474
- Address of LID Property: N/A
- Weld County Parcel No.: 095916300025
- Legal Description of LID Property: GR PT SW4 16 5 66 (WEST RIDGE AREA ANNEX) BEG SW COR SEC N0D05W 2191.13 N89D53E 580.8' TO TPOB TH CONT N89D53E 449.55' N59D30E 109.92' S0D14E 18' S12D09E 680.21' S90DW 688.63' N0D05W 446.43' N89D54E 1.97' TH N0D05W 180' TO TPOB
10. Owner(s): Jay E. Goza Trust No. 1
Mailing Address of Owner(s): c/o Calven Goza
40373 SKYLARK DRIVE
FORT COLLINS, CO 80524-9029
- Address of LID Property: N/A
- Weld County Parcel No.: 095916306000
- Legal Description of LID Property: GR PA L1 & 8 BLK1 & L1-3 & 5-7 BLK2 (WEST RIDGE AREA ANNEX) PETERSON-ALEXANDER
11. Owner(s): Green Keen Acres, LLC
Mailing Address of Owner(s): 254 ALABASTER WAY
JOHNSTOWN, CO 80534-9474
- Address of LID Property: N/A
- Weld County Parcel No.: 095916300024
- Legal Description of LID Property: GR PT SW4 16-5-66 (WEST RIDGE AREA ANNEX) BEG NE COR L1 PETERSON 1ST FG N90DW 434.16' TO POB TH CONT N90DW 310' N0D05W 1022' N90DE 688.63' S12D09E

12.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Amezcuca Family Trust 2272 DEEDS COURT LOVELAND, CO 80538-4877 6815 28TH STREET GREELEY, CO 80634 095916300015 GR 17590-D PT SW4 16-5-66 (WEST RIDGE AREA ANNEX) BEG NE COR L1 PETRSON SUB 1ST FILING W434.16' N513.15' E415.17' S02D07'E 513.50' TO BEG
13.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Schroetlin Commercial Holdings, LLC 2224 GLEN HAVEN DRIVE LOVELAND, CO 80538-4903 N/A 095916308012 Lot 12A WESTRIDGE 5TH FG 2ND RPLT
14.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Schroetlin Commercial Holdings, LLC 2224 GLEN HAVEN DRIVE LOVELAND, CO 80538-4903 N/A 095916308003 Lot 3A WESTRIDGE 5TH FG 2ND RPLT
15.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Schroetlin Commercial Holdings, LLC 2224 GLEN HAVEN DRIVE LOVELAND, CO 80538-4903 N/A 095916308002 Lot 2A WESTRIDGE 5TH FG 2ND RPLT
16.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Schroetlin Commercial Holdings, LLC 2224 GLEN HAVEN DRIVE LOVELAND, CO 805384903 N/A 095916308001 Lot 1A WESTRIDGE 5TH FG 2ND RPLT
17.	Owner(s): Mailing Address of Owner(s): Address of LID Property: Weld County Parcel No.: Legal Description of LID Property:	Golden Eye Investments, LLC 361 71ST AVENUE GREELEY, CO 80634-9782 N/A 095916308007 Lot 7A WESTRIDGE 5TH FG 2ND RPLT
18.	Owner(s): Mailing Address of Owner(s):	Golden Eye Investments, LLC 361 71ST AVENUE

- Address of LID Property: GREELEY, CO 80634-9782
Weld County Parcel No.: N/A
Legal Description of LID Property: 095916308006
Lot 6A WESTRIDGE 5TH FG 2ND RPLT
19. Owner(s): Schroetlin Commercial Holdings, LLC
Mailing Address of Owner(s): 2224 GLEN HAVEN DRIVE
LOVELAND, CO 80538-4903
Address of LID Property: N/A
Weld County Parcel No.: 095916308004
Legal Description of LID Property: Lot 4A WESTRIDGE 5TH FG 2ND RPLT
20. Owner(s): Golden Eye Investments, LLC
Mailing Address of Owner(s): 361 71ST AVENUE
GREELEY, CO 80634-9782
Address of LID Property: N/A
Weld County Parcel No.: 095916308005
Legal Description of LID Property: Lot 5A WESTRIDGE 5TH FG 2ND RPLT
21. Owner(s): Golden Eye Investments, LLC
Mailing Address of Owner(s): 361 71ST AVENUE
GREELEY, CO 80634-9782
Address of LID Property: N/A
Weld County Parcel No.: 095916308011
Legal Description of LID Property: Lot 11A WESTRIDGE 5TH FG 2ND RPLT
22. Owner(s): Golden Eye Investments, LLC
Mailing Address of Owner(s): 361 71ST AVENUE
GREELEY, CO 806349782
Address of LID Property: N/A
Weld County Parcel No.: 095916308010
Legal Description of LID Property: Lot 10A WESTRIDGE 5TH FG 2ND RPLT
23. Owner(s): Golden Eye Investments, LLC
Mailing Address of Owner(s): 361 71ST AVENUE
GREELEY, CO 806349782
Address of LID Property: N/A
Weld County Parcel No.: 095916308009
Legal Description of LID Property: Lot 9A WESTRIDGE 5TH FG 2ND RPLT
24. Owner(s): Linda C. and Stephen R. Zumbrun
Mailing Address of Owner(s): 2655 65TH AVENUE
GREELEY, CO 80634-8904
Address of LID Property: N/A
Weld County Parcel No.: 095916303010
Legal Description of LID Property: GR 5WR1-4 L4 (WEST RIDGE AREA ANNEX) REPLAT OF
BLK1 WESTRIDGE 5TH FILING
25. Owner(s): Linda C. and Stephen R. Zumbrun
Mailing Address of Owner(s): 2655 65TH AVENUE

Address of LID Property: GREELEY, CO 80634-8904
Weld County Parcel No.: N/A
Legal Description of LID Property: 095916303009
GR 5WR1-3 L3 (WEST RIDGE AREA ANNEX) REPLAT OF
BLK1 WESTRIDGE 5TH FILING

26. Owner(s): Linda C. and Stephen R. Zumbrun
Mailing Address of Owner(s): 2655 65TH AVENUE
GREELEY, CO 80634-8904
Address of LID Property: N/A
Weld County Parcel No.: 095916303013
Legal Description of LID Property: GR 5WR1-2 L2 (WEST RIDGE AREA ANNEX) REPLAT OF
BLK1 WESTRIDGE 5TH FILING

27. Owner(s): Linda C. and Stephen R. Zumbrun
Mailing Address of Owner(s): 2655 65TH AVENUE
GREELEY, CO 80634-8904
Address of LID Property: N/A
Weld County Parcel No.: 095916303012
Legal Description of LID Property: GR 5WR1-1 L1 (WEST RIDGE AREA ANNEX) REPLAT OF
BLK1 WESTRIDGE 5TH FILING

28. Owner(s): Angela and Jukka Koponen
Mailing Address of Owner(s): 205 CARROLL STREET
CENTER, TX 75935-3503
Address of LID Property: N/A
Weld County Parcel No.: 095916300011
Legal Description of LID Property: GR 17589-D PT SW4 16 5 66 (WEST RIDGE AREA ANNEX)
ELY 200' OF FOL DESC PARCEL BEG 191.79' W OF S4
COR W489.17' N41D41'E 89.46' N464.21'E 386.87' S0D08'E
30.54' N41D44'E 57.90' S0D25'E 543.63' M/L TO BEG

Section 8. Properties within the boundaries of Local Improvement District No. 346590 remain subject to all requirements of the Greeley Municipal Code regarding City non-potable water service and irrigation, including, without limitation, the requirement to construct additional distribution main line extensions, if necessary, to facilitate connection to the Westgate Non-Potable Irrigation Pump Station.

Section 9. This ordinance shall take effect on the fifth (5th) day following its final publication, as set forth in Section 3-16 of the Greeley City Charter.

**PASSED AND ADOPTED, SIGNED AND APPROVED ON THIS _____ DAY OF _____
2024.**

ATTEST:

THE CITY OF GREELEY, COLORADO

City Clerk

Mayor

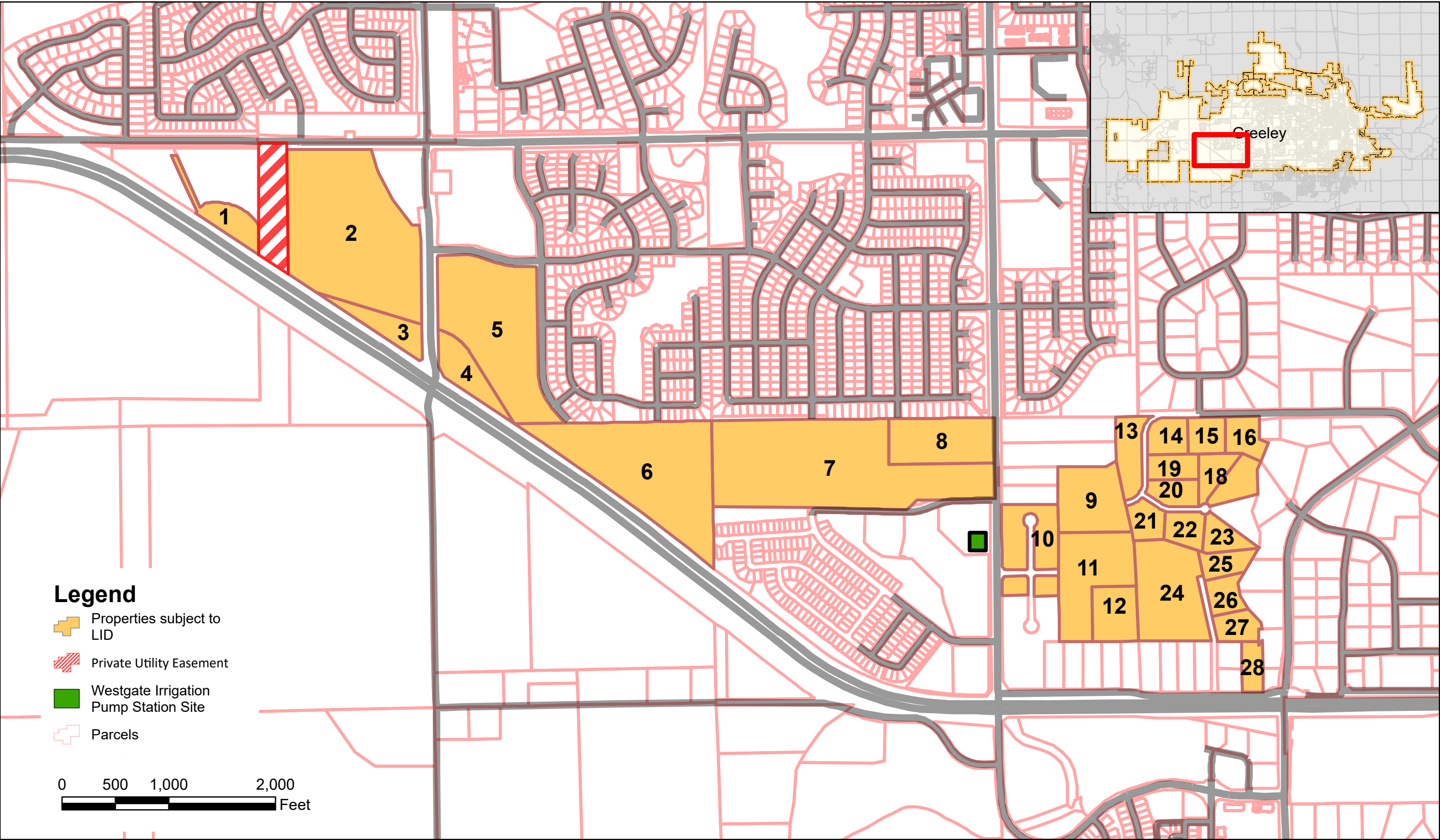


Exhibit - Local Improvement District No. 346590 - Westgate

Coordinate System: NAD 1983 HARN StatePlane Colorado North FIPS 0501 Feet
Units: Foot US

Date: 2/13/2024
WestgateLS_LID_02072024.mxd



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

Title:

Approve Second Amendment to Water Agreement (Carestream Health)

Summary:

Background: Since 2007, the City of Greeley has been serving Carestream at the Kodak and Carestream site in unincorporated Weld County with potable treated water off the Bellvue lines. This service was the result of agreements with Kodak from the late 1970's and a subsequent Assignment Agreement (Fort Collins Raw Water Agreement) Carestream executed with Kodak in April 2007, by which Carestream took assignment from Kodak of the right to delivery of 645 acre-feet of raw water each year from the Colorado-Big Thompson Project from the City of Fort Collins. The 645 acre-feet of C-BT was a portion of the raw water supply historically provided to Greeley by Kodak for its own treated water service. At that same time, Greeley, Carestream, and Kodak entered into an Assignment and Amendment to Water Agreement, which provided the terms and conditions by which Carestream would take assignment from Kodak of a right to receive treated water service from Greeley and annually provide to Greeley up to 645 acre-feet of C-BT from Fort Collins as a source of raw water for that service.

Current Status: Carestream has elected to divest of the right to delivery of 645 acre-feet of raw C-BT water annually, selling said contract right to the Fort Collins-Loveland Water District (FCLWD). While the remaining real estate and buildings at the Carestream site are decommissioned and cleaned up, Carestream has requested that Greeley continue to provide treated water service for the limited duration of the site closure, under substantially similar terms to the Assignment and Amendment to Water Agreement, whereby FCLWD would lease back to Carestream the raw water necessary (up to 300 AF per year) to meet or exceed the Carestream decommissioning demands.

Water Resources staff with support from the City Attorney's Office have negotiated the enclosed 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.

Recommended Action:

Staff Recommendation: The Greeley Water & Sewer Utilities staff recommend approval of the Second Amendment to the Water Agreement with Carestream based upon its providing ongoing, but short term

benefit of raw water in excess of demands, and its firmly clarifying terms of service and termination, after which the City of Greeley will have no obligation to serve any of the 645 acre feet from the 2007 Kodak-Carestream Assignment, nor will the City have any ongoing obligation to serve the unincorporated Carestream site.

Recommended Motion:

“I move 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.”

Attachments:

1. Greeley Water Carestream Water Agreement 2nd Amendment
2. 2024.02.14. Revised Draft Second Amendment to Greeley-Carestream Water Agreement



Greeley Water – Carestream Water Agreement 2nd Amendment

**Water & Sewer Board
February 21, 2024**

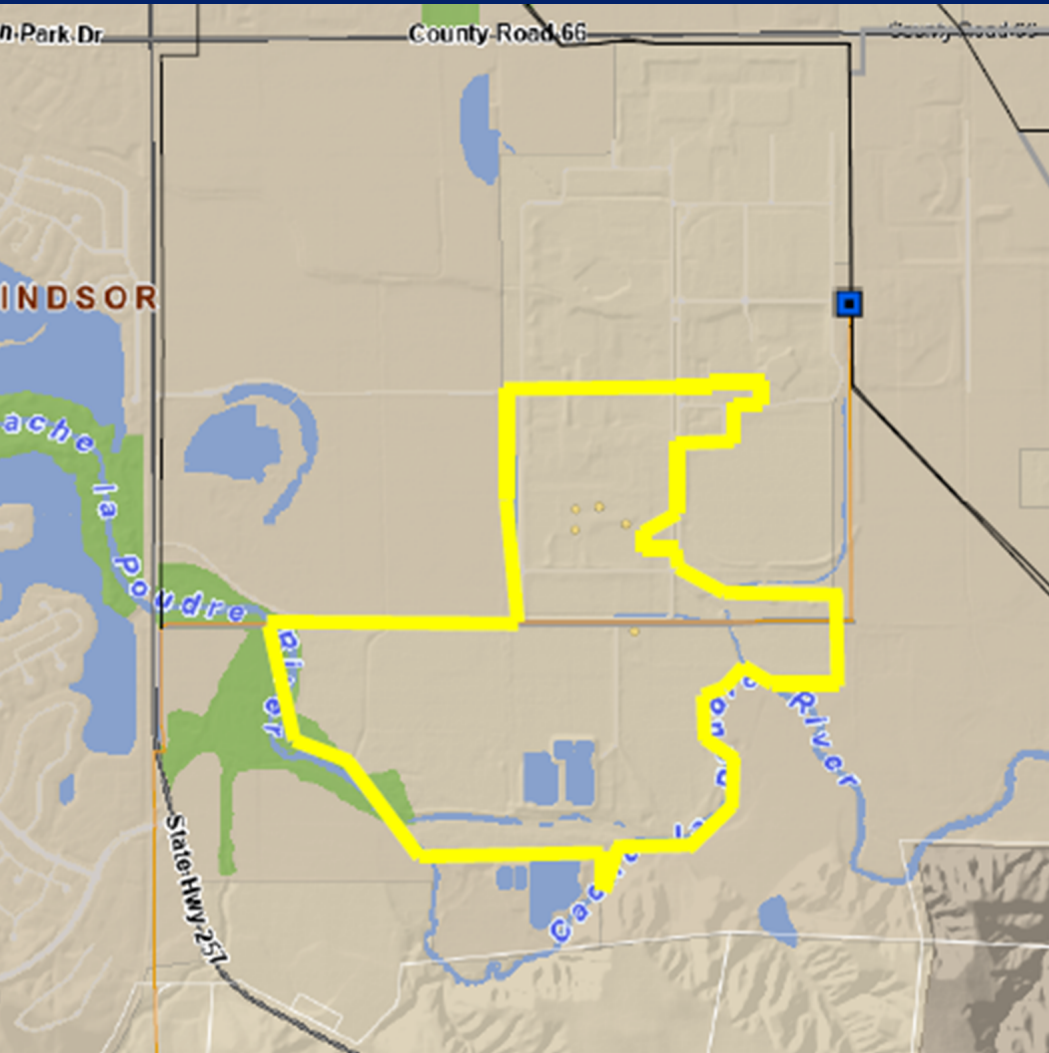
Why a Second Amendment to Carestream



Carestream Health in effort to restructure and recapitalize is closing its Windsor, CO facility

- Carestream Health has liquidated its contractual right to 645-acre feet of raw water in the form of C-BT
 - Sold in January to Fort Collins – Loveland Water District
- Carestream operations at the site are in clean-up and wind down
- There is a need for ~ 100 AF – 300 AF/yr. for the Carestream site close out
- Carestream has ability to provide Greeley with leaseback C-BT water from Ft. Collins and believes Greeley has an obligation to treat and deliver under the existing agreement
 - The obligation for ongoing service is at dispute; and
 - A reasonable resolution is an amendment that defines and limits Greeley's obligations going forward.

Limited Term Wind-down water service for Carestream site

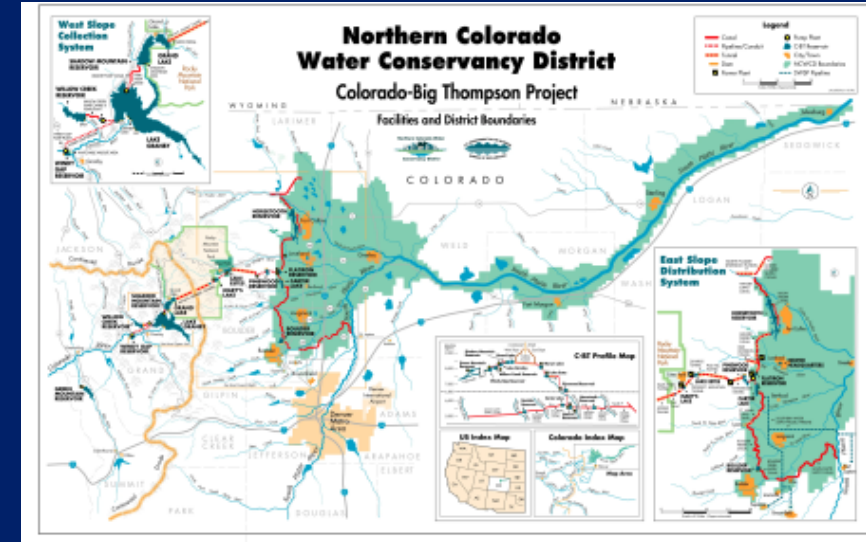


In exchange for limited term treated water service by Greeley, Carestream shall provide to Greeley the following:

- 300 AF / Yr. of Raw Water in the form of C-BT
 - Ft. Collins carry over capacity if available
- Amendment provides for a 1 year term – through March 2025
 - Ability to extend
 - Extension capped at 2 additional years
- Greeley protected against overuse
 - Raw Water Surcharge on any volume exceeding 300 AF/yr
 - \$15.23/ Kgal.
- Termination of Taps upon expiration or termination of the Second Amendment
 - Carestream shall disconnect all water service connections on the Carestream Property from Kodak Alaris Inc

Questions?

Thank you



SECOND AMENDMENT TO WATER AGREEMENT
BETWEEN CARESTREAM HEALTH, INC. AND THE CITY OF GREELEY

This SECOND AMENDMENT TO WATER AGREEMENT (“Second Amendment”) is entered into this ____ day of February 2024 by and between the City of Greeley, a Colorado home rule municipality acting by and through its Water Enterprise (“Greeley”) and Carestream Health, Inc., a Delaware corporation (“Carestream”).

Recitals

WHEREAS, Greeley entered into that certain Water Agreement dated May 11, 1978 with Eastman Kodak Company (“Kodak”), which agreement was subsequently amended by that certain Amendment to Water Agreement between Greeley and Eastman Kodak Company dated October 3, 1995 (collectively “Greeley-Kodak Agreement”), and which agreement set forth the terms and conditions by which Greeley would provide treated water service to Kodak; and

WHEREAS, Kodak entered into that certain Agreement with the City of Fort Collins (“Fort Collins”) dated March 13, 1995, which agreement, in part, entitled Kodak to the annual delivery from Fort Collins of 1,200 acre-feet of raw water from the Colorado-Big Thompson Project (“1995 Fort Collins-Kodak Agreement”); and

WHEREAS, Carestream entered into that certain Assignment Agreement (Fort Collins Raw Water Agreement) with Kodak dated April 30, 2007, by which Carestream took assignment from Kodak of a right to the annual delivery of 645 acre-feet of raw water from the Colorado-Big Thompson Project pursuant to the Fort Collins Raw Water Agreement (“2007 Kodak-Carestream Assignment”); and

WHEREAS, Greeley and Carestream entered into that certain Assignment and Amendment to Water Agreement between Eastman Kodak Company and the City of Greeley, Colorado dated April 30, 2007, which agreement, in part, set forth the terms and conditions by which Carestream would take assignment from Kodak of a right to receive treated water service from Greeley and annually provide to Greeley up to 645 acre-feet of raw water from the Colorado-Big Thompson Project in exchange for that treated water service (“Kodak-Greeley-Carestream Agreement”); and

WHEREAS, Carestream is now divesting of the right to annual delivery of 645 acre-feet of raw water from the Colorado-Big Thompson Project that it acquired from Kodak pursuant to the 2007 Kodak-Carestream Assignment and that served as the raw water supply for its treated water service from Greeley under the Kodak-Greeley-Carestream Agreement; and

WHEREAS, Carestream will have an ongoing need for treated water service for a limited duration beyond its divestment of the right to annual delivery of 645 acre-feet of raw water from the Colorado-Big Thompson Project described above, and Greeley is willing to provide such service on the terms and conditions of this Second Amendment; and

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Greeley and Carestream agree as follows.

Agreement

1. Term of Second Amendment. The term of this Second Amendment begins upon the date of mutual execution by Greeley and Carestream and expires on March 31, 2025. Carestream may renew this Second Amendment for a maximum of two additional terms of one year each, running from April 1, 2025 through March 31, 2026, and from April 1, 2026 through March 31, 2027 (each a “Renewal Term”), by giving written notice of its requested renewal to Greeley no later than March 1 before commencement of that Renewal Term.

2. Treated Water Service. Prior to the execution of this Second Amendment, Carestream provided to Greeley a projection of its anticipated treated water demand through March 31, 2025 (“Projected Usage”). During the term of this Second Amendment, Greeley shall provide treated water service to Carestream in an amount equal to Carestream’s Projected Usage, but not to exceed the amount of 300 acre-feet of raw water annually delivered to Greeley by Carestream pursuant to paragraph 4 below.

2.1 Greeley shall be obligated to provide the treated water service described above only at the existing Carestream industrial facility located at 2000 East Howard Smith Avenue and/or 2000 West Howard Smith Avenue, Windsor, Colorado, 80550 (“Carestream Property”). Such treated water service shall be provided through the existing infrastructure at the Carestream Property. Carestream shall report monthly its treated water usage to Greeley from the existing meters located between the Carestream Property and Kodak Alaris Inc..

2.2 If Carestream elects to renew this Second Amendment beyond March 31, 2025, as described in paragraph 1 above, it shall provide to Greeley an updated projection of its anticipated treated water demand (i.e., its Projected Usage) for each Renewal Term at the time it provides written notice of its requested renewal, no later than March 1 before commencement of each Renewal Term.

3. Rates for Treated Water Service. Carestream shall continue to pay for its treated water service at the Carestream Property through Kodak Alaris, as contemplated by the Kodak-Greeley-Carestream Agreement. All rates remitted by Carestream in connection with the treated water service provided under this Second Amendment are non-refundable.

4. Raw Water Supply. In exchange for the treated water service to be provided pursuant to this Second Amendment, Carestream shall deliver to Greeley 300 acre-feet of raw water from the Colorado-Big Thompson Project annually.

4.1 Carestream shall use its reasonable best efforts to deliver the 300 acre-feet of raw water from the Colorado-Big Thompson Project to Greeley in advance of October 1 for the following year in which it will be receiving treated water service under this Second Amendment, if sufficient associated carryover capacity to accompany the delivery is also available to Greeley at that time. Notwithstanding the foregoing, Carestream shall in any event deliver the 300 acre-feet of raw water from the Colorado-Big Thompson Project to Greeley no later than April 1 of each year it will be receiving treated water service.

4.2 Carestream shall not be entitled to any refund, return, or credit of any portion of the raw water delivered to Greeley pursuant to this paragraph 4, regardless of whether its actual treated water usage meets the 300 acre-feet of raw water delivered.

5. Raw Water Surcharges. Carestream shall pay to Greeley a raw water surcharge on any volume of treated water delivered to the Carestream Property that exceeds 300 acre-feet in any year beginning April 1 and ending March 31, at the then-current rate for non-residential treated water users set by resolution of the City of Greeley Water and Sewer Board. The applicable rate at the time this Agreement is executed is \$15.23 per one thousand (1000) gallons. Greeley shall invoice Carestream monthly for any raw water surcharges incurred and Carestream shall remit payment of such invoices within thirty (30) days. Carestream shall not be entitled to any refund, return, or credit of any raw water surcharges incurred and paid pursuant to this paragraph 5, except in the event of a legitimate billing or overpayment error.

6. Plant Investment Cost Reimbursement. Paragraph 5 of the Kodak-Greeley-Carestream Agreement required Carestream to share proportionally in and reimburse Greeley for 645/1,500 of any remaining plant investment costs in the event of termination of its right to treated water supply under the Kodak-Greeley-Carestream Agreement, which costs and obligation are described more particularly in paragraph 13 of the Greeley-Kodak Agreement. Greeley acknowledges that Carestream has no remaining reimbursement obligation to Greeley under paragraph 5 of the Kodak-Greeley-Carestream Agreement.

7. Assignment. Carestream may assign its interest in this Second Amendment, in whole or in part, but only with advance notice to Greeley and only to a purchaser of a portion or all of the Carestream Property. Carestream shall provide any such written notice to Greeley no less than thirty (30) days in advance of any desired assignment of its rights under this Second Amendment. Any permitted assignment by Carestream under this provision shall be subject to the terms and conditions set forth herein.

8. Default and Termination. If either Greeley or Carestream defaults in performing its obligations under this Second Amendment, the non-defaulting party may elect to (i) waive the default; (ii) terminate this Second Amendment; or (iii) initiate an action in the District Court for Weld County for specific performance or damages. Before enforcing any remedy hereunder, the non-defaulting party shall give the allegedly defaulting party written notice of the default, specifying (i) the particular obligation(s) for which the non-defaulting party believes the other party to be in default, and (ii) the reason for that belief. The allegedly defaulting party will then have thirty (30) calendar days to demonstrate that it is not in default, or to cure such default to the reasonable satisfaction of the non-defaulting party, before the non-defaulting party takes further action to enforce its remedies hereunder.

9. Notices. Any notices or other communications relating to this Second Amendment shall be made in writing. All such notices will be deemed to have been duly given on the date of service, if delivered and served personally on the recipient or if delivered by email; on the next business day after deposit for overnight delivery by a reputable courier service such as Federal Express; or on the fifth business day after mailing, if mailed to the recipient by first-class mail, postage prepaid, and properly addressed as follows:

If to Carestream:

Carestream Health, Inc.
150 Verona St.
Rochester, NY 14608
Attention: Kyle Wong, Controller
Kyle.wong@carestream.com

Carestream Health, Inc.
150 Verona St.
Rochester, NY 14608
Attention: Alisa Hoy, Deputy General Counsel
Alisa.hoy@carestream.com

With a copy to:

Carestream Health, Inc.
150 Verona St.
Rochester, NY 14608
Attention: General Counsel

If to Greeley:

City of Greeley Water and Sewer
Attn: Water Resources Division
1001 11th Avenue, Second Floor
Greeley, CO 80631
sean.chambers@greeleygov.com

City of Greeley City Attorney's Office
Attn: Environmental and Water Resources
1100 10th Street, Suite 401
Greeley, CO 80631
daniel.biwer@greeleygov.com

10. Scope of Second Amendment. Nothing in this Second Amendment is intended or should be construed to modify any of the rights and obligations of Greeley or Carestream as they relate to Kodak, or any of the rights and obligations of Kodak as they relate to Greeley and Carestream.

11. No Vested Interest. Greeley grants no rights, interest, or ownership in its water, water rights, or treated water system to Carestream by this Second Amendment, and Carestream acknowledges that no such rights, interest, or ownership shall vest, in law or in equity, as a result of Greeley providing the subject treated water service. Carestream shall not assert nor claim any such vested rights.

12. Abandonment of Taps. Upon the expiration or termination of this Second Amendment, Carestream shall promptly disconnect all treated water service connections on the Carestream Property from Kodak Alaris Inc. infrastructure in accordance with the standards set forth in Schedule S to that certain Second Amended and Restated Service Agreement dated June 1, 2020 between Carestream and Kodak Alaris Inc.

13. No Public Utilities Commission Regulation. Carestream shall not assert nor support any statement, policy, petition, rule-making, or legislative attempt to place Greeley under the authority or jurisdiction of the Colorado Public Utilities Commission, by virtue of this Second Amendment or otherwise.

14. Governmental Immunity. Nothing in this Second Amendment is intended or should be construed as a waiver by Greeley of any rights or privileges to which it may be entitled as a public entity pursuant to common or state law, including, without limitation, the Colorado Governmental Immunity Act, Section 24-10-101, et seq., of the Colorado Revised Statutes.

15. Governing Law and Venue. This Second Amendment shall be governed by and enforced in accordance with the laws of the State of Colorado. Venue for any legal action arising out of this Settlement Agreement shall be proper in the District Court for Weld County, Colorado.

16. Waiver of Claims for Breach. The failure of either Greeley or Carestream to declare a breach of this Second Amendment does not establish a precedent nor constitute an implied waiver of any other breach of the terms and conditions herein. No waiver is binding against either Greeley or Carestream unless made in a duly authorized writing signed by the party waiving the breach.

17. Costs and Attorneys' Fees. Greeley and Carestream shall pay their own attorneys' fees incurred in the negotiation and execution of this Second Amendment. In the event that litigation or other legal action is

necessarily commenced to enforce the terms of this Second Amendment, the prevailing party in such action shall be entitled to the recovery of all reasonable costs and expenses incurred in such action, including reasonable attorneys' fees.

18. Third Parties. Nothing in this Second Amendment is intended or should be construed to confer any rights or remedies upon any parties other than Greeley and Carestream, and their respective successors in interest. Any benefits realized by a third party as a result of this Second Amendment are purely incidental.

19. Recording. Neither Greeley nor Carestream shall record this Second Amendment in the real property records of any jurisdiction. This Second Amendment is not intended to create any benefits or burdens that run with real property. Nothing in this Second Amendment should be construed to require Greeley to provide treated water service to any party other than Carestream or a permitted assignee of this Second Amendment pursuant to paragraph 6 above.

20. Severability. If any provision of this Second Amendment is determined by a court of competent jurisdiction to be invalid or void, the remaining provisions shall nonetheless remain in full force and effect, unless the absence of the invalid or void provision(s) would frustrate the purpose of this Second Amendment.

21. Review by Legal Counsel. Greeley and Carestream acknowledge that they and their respective legal counsel have had the opportunity to participate in the negotiation, drafting, preparation, and review of this Second Amendment. No term or condition in this Settlement Agreement should be construed against either party based upon the identity of the drafter.

22. Integration and Amendment. This Second Amendment constitutes the entire agreement and understanding of Greeley and Carestream with respect to the subject matter described herein and supersedes all prior negotiations and understandings between the parties, whether written or verbal, concerning the subject matter described herein. Notwithstanding the foregoing, except as expressly modified in this Second Amendment, all of the terms and provisions of the Kodak-Greeley-Carestream Agreement shall remain in full force and effect and this Second Amendment shall not constitute an amendment or waiver of any provision of the Kodak-Greeley-Carestream Agreement not expressly referred to herein. This Second Amendment may only be amended in a written form duly authorized and executed by both parties.

23. Counterparts. This Second Amendment may be executed in any number of counterparts, each of which, when so executed, shall be deemed an original and all of which taken together shall constitute one and the same agreement.

IN WITNESS WHEREOF, Carestream Health, Inc. and the City of Greeley have executed this Second Amendment to Water Agreement effective as of the date first set forth above.

CARESTREAM HEALTH, INC.,
a Delaware corporation

By: _____

Date: _____

Scott Rosa
Vice President and Chief Financial Officer

STATE OF NEW YORK)
) ss.
COUNTY OF MONROE)

The foregoing instrument was acknowledged before me this _____ day of February 2024, by Scott Rosa, Vice President and Chief Financial Officer of Carestream Health, Inc.

Witness my hand and official seal.

Notary Public
My commission expires _____

THE CITY OF GREELEY,
a Colorado home rule municipality
acting by and through its Water Enterprise

By: _____

Date: _____

As to Water and Sewer Board Approval:

By: _____

As to Legal Form:

By: _____



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Dena Egenhoff, Water Conservation Manager

Title:

Annual Water Conservation Report

Summary:

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.

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

1. Annual Water Conservation Report-Presentation
2. Water Conservation 2024 Score Cards to Board



Annual Water Conservation Report

Water & Sewer Board
February 21, 2024

Water Conservation Team



WC Manager
Dena Egenhoff



WC Specialist II
Rita Jokerst



WC Coordinator
Ruth Quade



WC Efficiency
Coordinator
Margarita Padilla



WC Specialist II
Ben Schaffer

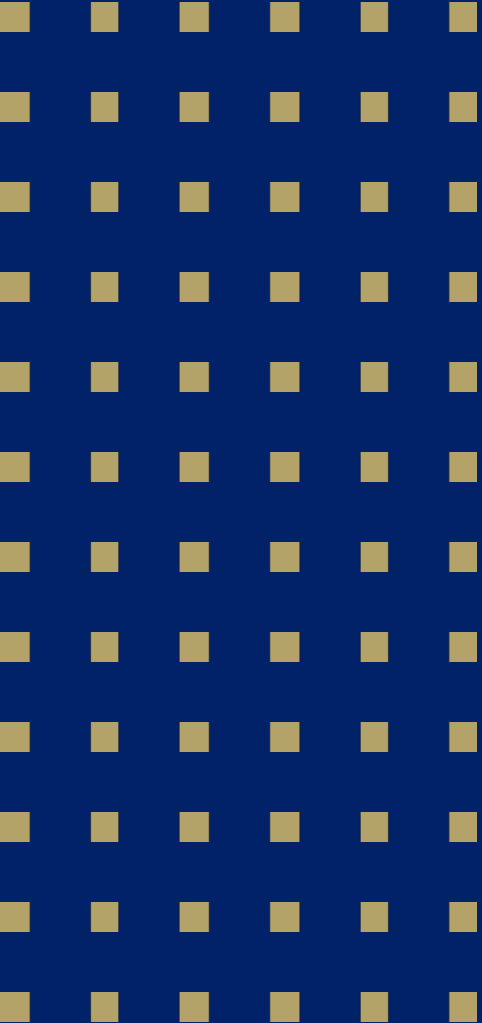


WC Intern
Adam Schofield

Agenda



- 2022 Water Efficiency Plan
- 2023 Water Conservation Programs
- 2023 Water savings estimates
- 2024 Score Cards-goals and objectives

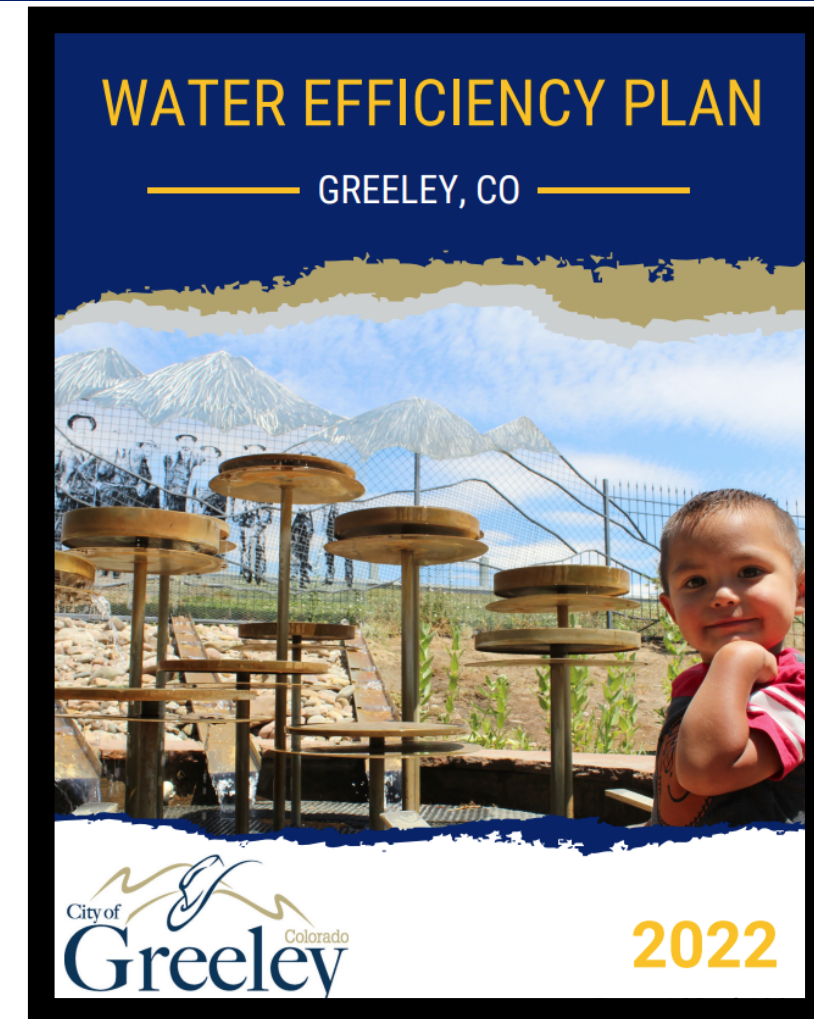
A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 10 rows and 6 columns.

2022 Water Efficiency Plan

2022 Water Efficiency Plan (WEP)



- Technical document required by the State
- Guide to sustainable water future
- Create efficiencies, synergies, and consistencies among policies, plans, projects and programs
- Maximize cost savings opportunities
- Create goals to measure success and progress



WEP Triple Bottom Line

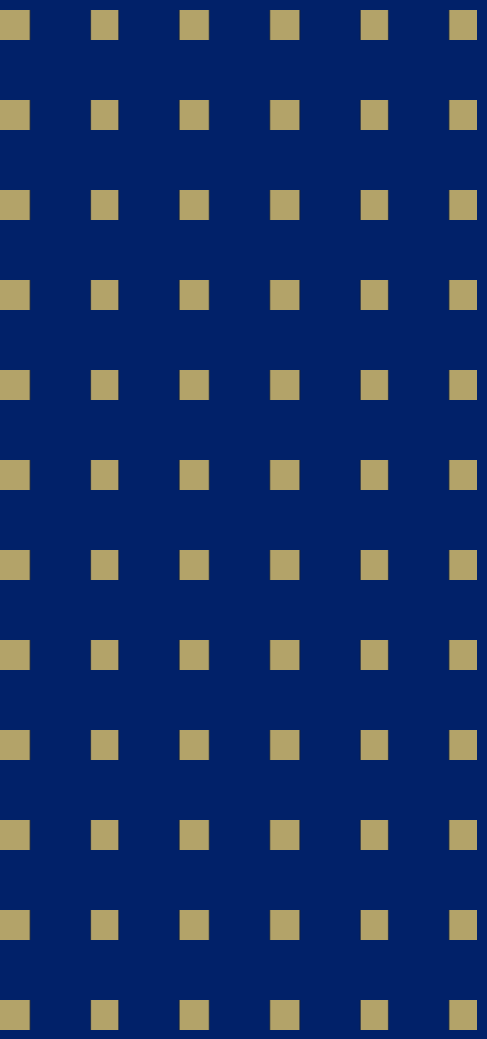


- Total future water savings 2022- 2030

TBL Type	Acre-Feet
Community	386
Prosperity	1,363
Water Conservation Management	285
Total	2,034

- Average yearly savings 226 AF/year

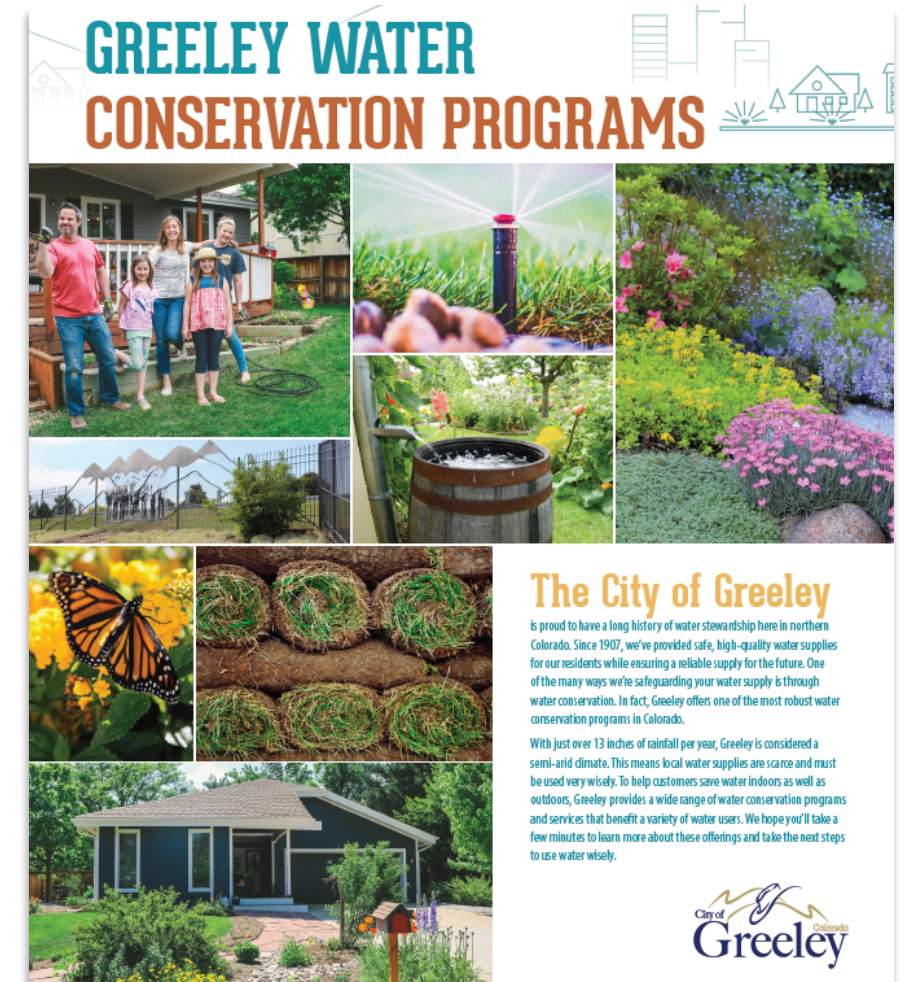


A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 6 columns and 12 rows.

2023 Water Conservation Programs and Highlights

Water Conservation Programs

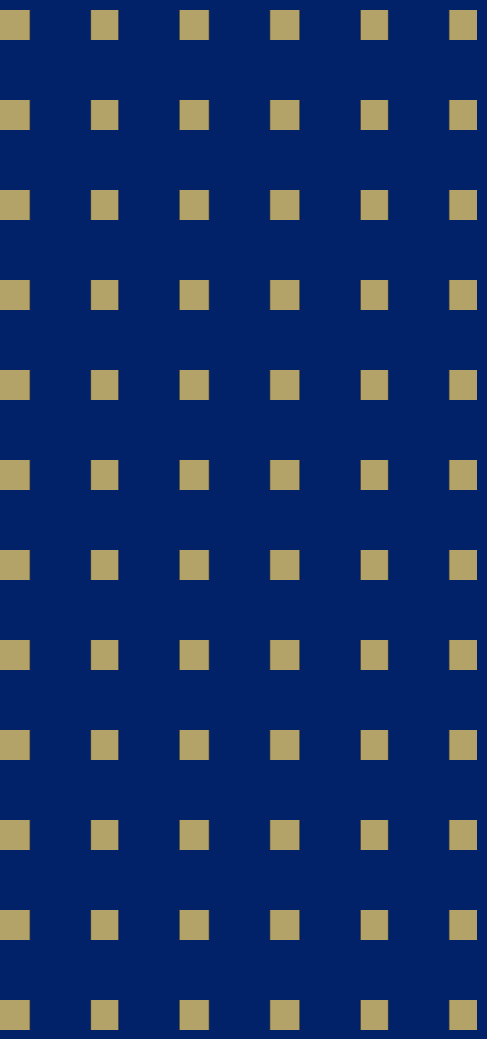
- Community and education outreach programs
- Life After Lawn (turf replacement)
- Demonstration Garden
- Rebates, incentives and discounts
- Free fixtures
- Water Assessments (Indoor and Outdoor)
- Online Water Efficiency Tools
 - Water Budget Portal
 - WaterSmart Portal
 - Online Plant Database



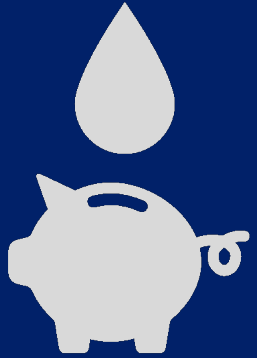
2023 WC Highlights



2023 Water Conservation Highlights	Totals
Water Assessments (Outside)	203
Water Assessments (Inside)	92
Rebates	1,716
Give-a-ways (showerheads/aerators)	140
Life After Lawn square foot of turf removed	226,936
Advance meter infrastructure (AMI) installed	1,502
Leaks detected	32,833
Customer outreach through water reports	10,075

A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 10 rows and 6 columns.

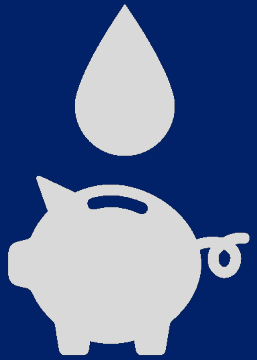
2023 Water Savings Estimate



2023 Water Savings Estimate

TBL Type	Acre-Feet
Community	115
Prosperity	191
Water Conservation Management	14
2023 Total	320

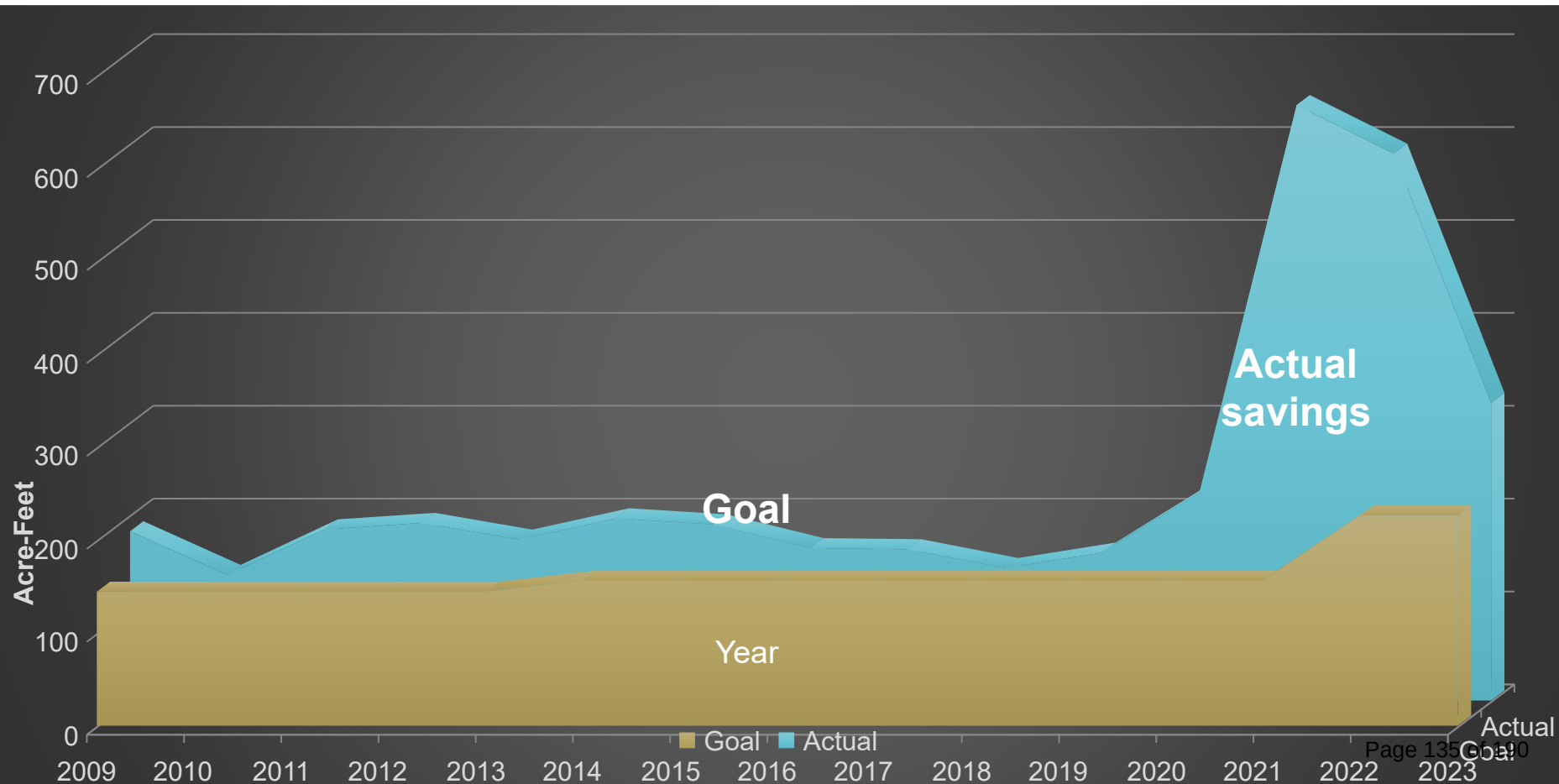


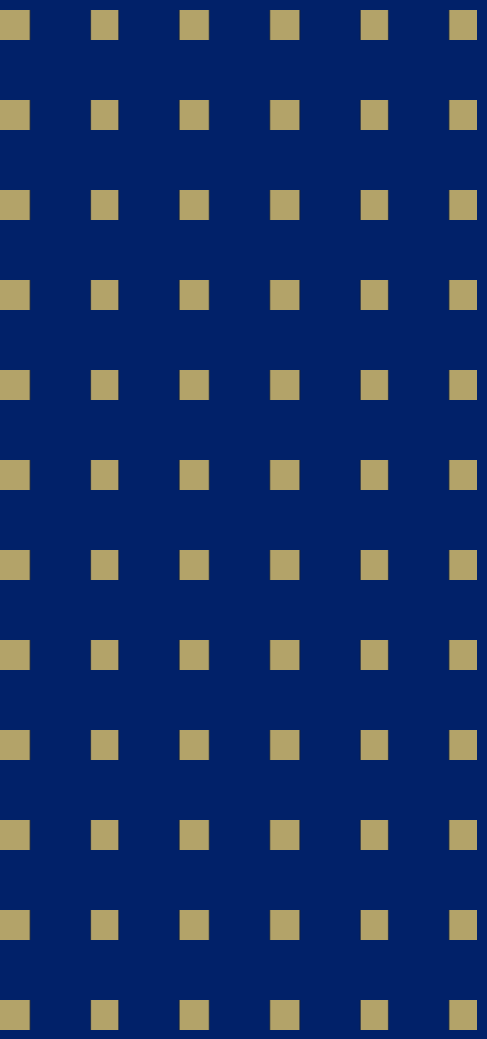


Largest Benefits

- Leak Alerts (based on AMI data only)
- AMI meters
- Education
- Water Assessments
- Life After Lawn

Water Savings Estimate



A decorative graphic on the left side of the slide, consisting of a grid of small gold squares arranged in 10 rows and 6 columns.

2024 Score Cards

Score cards

Community	Performance Indicators
Education- Lectures Series (webinars), Presentations, and Tours	• Work to partner with planned events/workshops • Utilize marketing strategies to increase participation • Include translations opportunities in materials and presentations
Education-Teacher Training	
Online Water Efficiency Tools	
Technology and Innovation	
Strategic Marketing Plan	
Collaboration	

Prosperity	Performance Indicators
Rebates and Incentives	• Annually review of rebate program including alignment with state and federal standards, industry changes, and City and Department goals and data-driven decision on rebate performance. • Annual review of return on investment and water saving calculations. Monitor programs effectiveness. • •
Advanced Metering Infrastructure (AMI) Optimization	• • •
Leak Detection	• • • •
Enforcement	• • • •
Income Qualified	• • • •

Water Conservation Management	Performance Indicators
Organizational Collaboration (Internally)	• Foster alignment with internal City partnerships to enhance water conservation methods • Enhance the data set and quantify the park's water budget for improved accuracy • Align assets in the field identified by Water Conservation to rectify any discrepancies
Land Use	• Leverage the Water Budget across all customer classes to optimize outdoor water use • Aid in the development of effective methods to boost soil amendments, improve Section 6 plan reviews, and address lawn variances. • Actively promote waterwise landscapes and establish demonstration garden areas.
Water Conservation Development	• Align performance goals with annual scorecard • Provide training, leadership and certification opportunities for staff • Enhance overall efficiency by implementing cross-training initiatives, thoroughly documenting operations and procedures, increasing internal mobility, and fostering a culture of collaboration.
Financial Resources and Budget	• Timely submission of the Conservation Budget • Track budget and current grants • Measure the return on investment for programs/projects
Reporting	• Track, compile and submit the mandated reports (HB1051, M36, AMI and other grant reports) • Align data analyses with program priorities
Water Loss	• Internal collaboration to reduce water loss • Incorporate leak notifications through customer service business processes • Conduct data analyzes on locations of leaks
Facility Maintenance	• Redesign and implement a new irrigation system at the Reservoir Rd. garden • Ensure the upkeep of two demonstration gardens • Develop a structured maintenance plan to guide and optimize care of the demonstration gardens • Establish sustainable methods for accommodating future EV/Hybrid vehicles
Customer Information System (CIS)	• Commit to a two-year initiative to ensure the successful launch of the new CIS • Undertake comprehensive database clean-up, management, and documentation processes • Develop and implement report outputs to streamline and enhance operational processes



2024 Score Cards

Highlights of Goals and Strategies

Community

- Education
- LILAC- DEI water conservation program
- Strategic Marketing Plan
- External Collaboration

Prosperity

- Rebate spatial analysis
- CII program development
- Leak detection
- Other DEI water conservation programs

Management

- Data driven programs, policies and procedures
- Reporting to Federal, State and local
- Land Use
- Collaboration within the City
- CIS



Thank you



Community	Performance Indicators
Education- Lectures Series (webinars), Presentations, and Tours	• Work to partner with planned events/workshops • Utilize marketing strategies to increase participation • Include translations opportunities in materials and presentations
Education-Teacher Training	• Provide teachers credits for water and conservation issues for local teachers • Correlate material within lesson plans towards water resources • Evaluate opportunities for middle school/high school expansion
Online Water Efficiency Tools	• Develop and utilize latest technology to increase efficiencies and easy for public interaction • Continue support and refine: - General website reorganization effort - Plant database to support criteria - WaterSmart registration - Increase efficiencies in scheduling audits - Standardize rebate forms
Technology and Innovation	• Determine and address equity issues within programs • Develop a survey strategy for more engagement and create a clear pathway to water conservation programs • Maximize use of technology and innovation to streamlines processes and data-based information to construct an effective outreach strategy • Implement GIS tools to support water conservation processes
Strategic Marketing Plan	• Coordinate with C&E to support objective of the water conservation programs • Create media campaigns • Create evergreen graphics and materials
Collaboration	• Leverage community and professional partnerships on water conservation projects • Outreach to community businesses, non-profits, irrigation and landscape industries, etc. to create partnerships and methods for water savings

Prosperity	Performance Indicators
Rebates and Incentives	• Annually review of rebate program including alignment with state and federal standards, industry changes, and City and Department goals and data-driven decision on rebate performance. • Annual review of return on investment and water saving calculations. Monitor programs effectiveness. • Develop pilot programs to increase equity within rebates and incentives • Develop a Commercial, Industrial, and Institutional focused program
Advanced Metering Infrastructure (AMI) Optimization	• Provide feedback in the new CIS system for reports and alerts • Coordinate with the meter shop for indoor assessments and meter replacements • Configure data storage system for AMI data
Leak Detection	• Enhance public awareness through targeted educational materials on leak detection and repair • Generate bi-annual Bureau of Reclamation Reports, quantifying water savings resulting from fixed leaks • Facilitate intern department roles in managing leak alerts and work orders effectively • Sustain efforts to identify continuous flow, initiating proactive communication through letters and calls, and collaborating with customer service for efficient resolution
Enforcement	• Align messaging strategies to create educational opportunities about watering restrictions • Prioritize efforts on Landscape and Irrigation Criteria, emphasizing lawn variances • Establish comprehensive policies and effective tracking methods for the drought emergency plan, Landscape and Irrigation Criteria, and lawn variances • Capitalize on regional messaging opportunities whenever feasible
Income Qualified	• Pursue social equity within Water Conservation programs and projects to ensure inclusivity • Expand opportunities to cater to the needs of all community members • Explore diverse engagement methods to involve all sectors of the community and embrace inclusivity • Initiate a pilot program focused on land use to address and enhance social equity within the community

Water Conservation Management	Performance Indicators
Organizational Collaboration (Internally)	• Foster alignment with internal City partnerships to enhance water conservation methods • Enhance the data set and quantify the park's water budget for improved accuracy • Align assets in the field identified by Water Conservation to rectify any discrepancies
Land Use	• Leverage the Water Budget across all customer classes to optimize outdoor water use • Aid in the development of effective methods to boost soil amendments, improve Section 6 plan reviews, and address lawn variances. • Actively promote waterwise landscapes and establish demonstration garden areas.
Water Conservation Development	• Align performance goals with annual scorecard • Provide training, leadership and certification opportunities for staff • Enhance overall efficiency by implementing cross-training initiatives, thoroughly documenting operations and procedures, increasing internal mobility, and fostering a culture of collaboration.
Financial Resources and Budget	• Timely submission of the Conservation Budget • Track budget and current grants • Measure the return on investment for programs/projects
Reporting	• Track, compile and submit the mandated reports (HB1051, M36, AMI and other grant reports) • Align data analyses with program priorities
Water Loss	• Internal collaboration to reduce water loss • Incorporate leak notifications through customer service business processes • Conduct data analyzes on locations of leaks
Facility Maintenance	• Redesign and implement a new irrigation system at the Reservoir Rd. garden • Ensure the upkeep of two demonstration gardens • Develop a structured maintenance plan to guide and optimize care of the demonstration gardens • Establish sustainable methods for accommodating future EV/Hybrid vehicles
Customer Information System (CIS)	• Commit to a two-year initiative to ensure the successful launch of the new CIS • Undertake comprehensive database clean-up, management, and documentation processes • Develop and implement report outputs to streamline and enhance operational processes



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Virgil Pierce, Rates and Budget Analyst

Title:

2023 Financial Report

Summary:

Report on 2023 Revenue and Expenditures for the Water and Sewer Department.

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

1. 2023 WS Board Financial Report
2. Memo - 2023 Financial Report
3. 2023 Financial Report Appendices



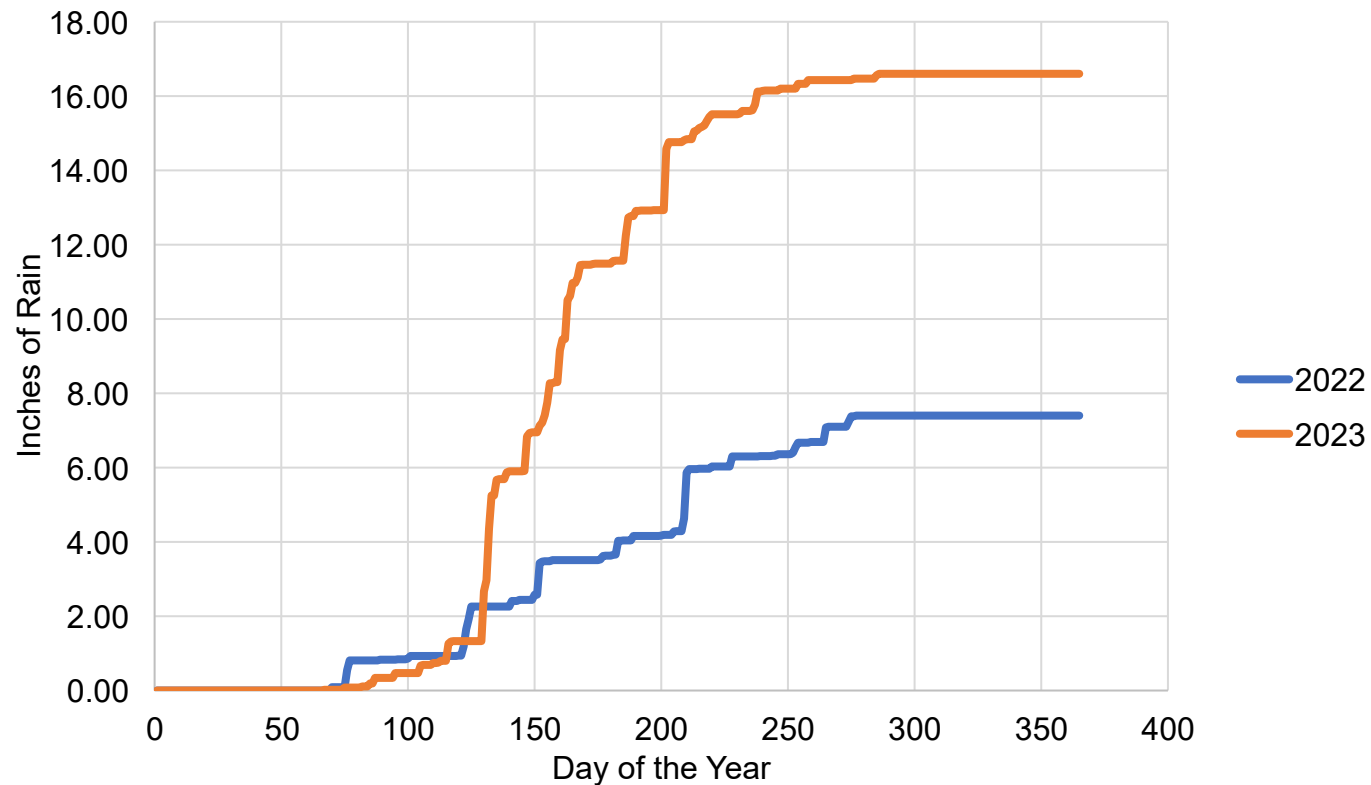
Water and Sewer 2023 Financial Report

February 2024

2023 Weather



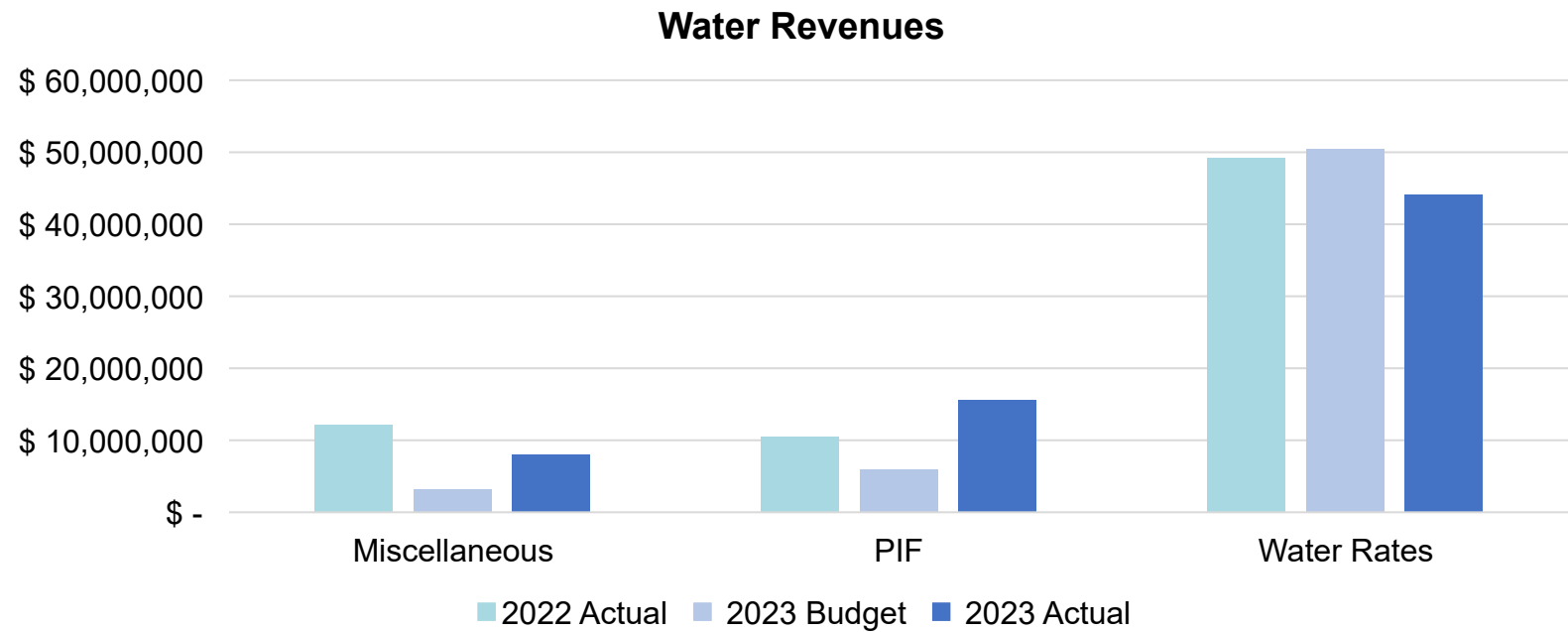
Cumulative Rainfall for Greeley, Colorado



Overall, we observed a 9% decrease in demand for treated water from 2022 to 2023.

An impact which appeared directly in the rate revenue collected for the year.

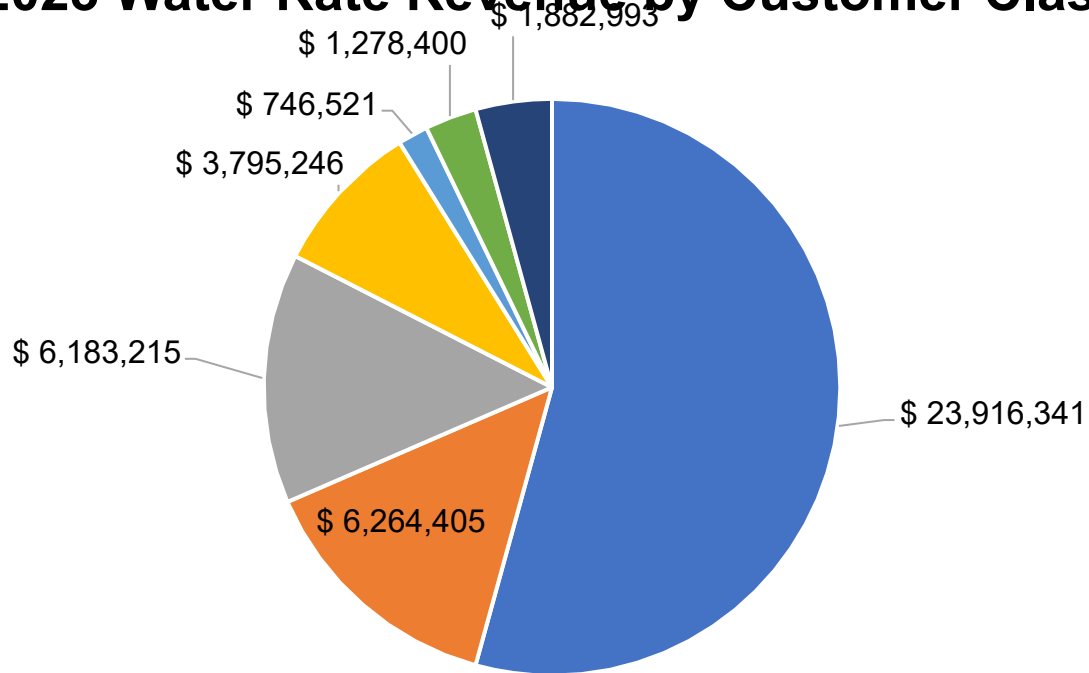
2023 Water Revenue at a Glance



- Water Revenue Distribution:
- Water Rates – 58%
- Miscellaneous – 10%
- PIF – 21%

Water Rate Customer Class Details

2023 Water Rate Revenue by Customer Class



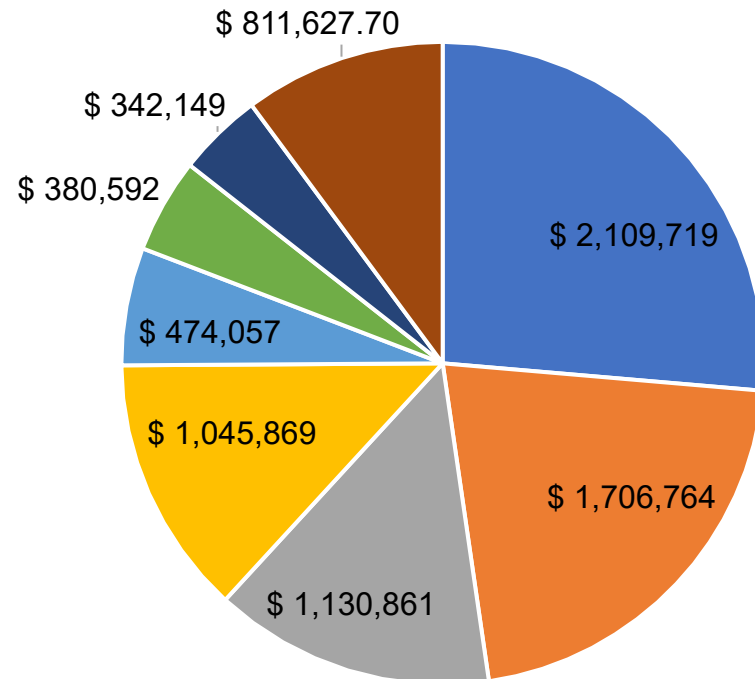
■ Inside Residential
 ■ Inside Commercial
 ■ Inside Industrial
 ■ City of Evans
■ Non-Potable
 ■ Town of Windsor
 ■ All Other Customers

Water Demand in 2023 was 9% lower than 2022.

Combined with approved rate increases rate revenue in 2023 was 13% lower than 2022.

Miscellaneous Revenue

2023 Top 8 Municipal Revenue Categories

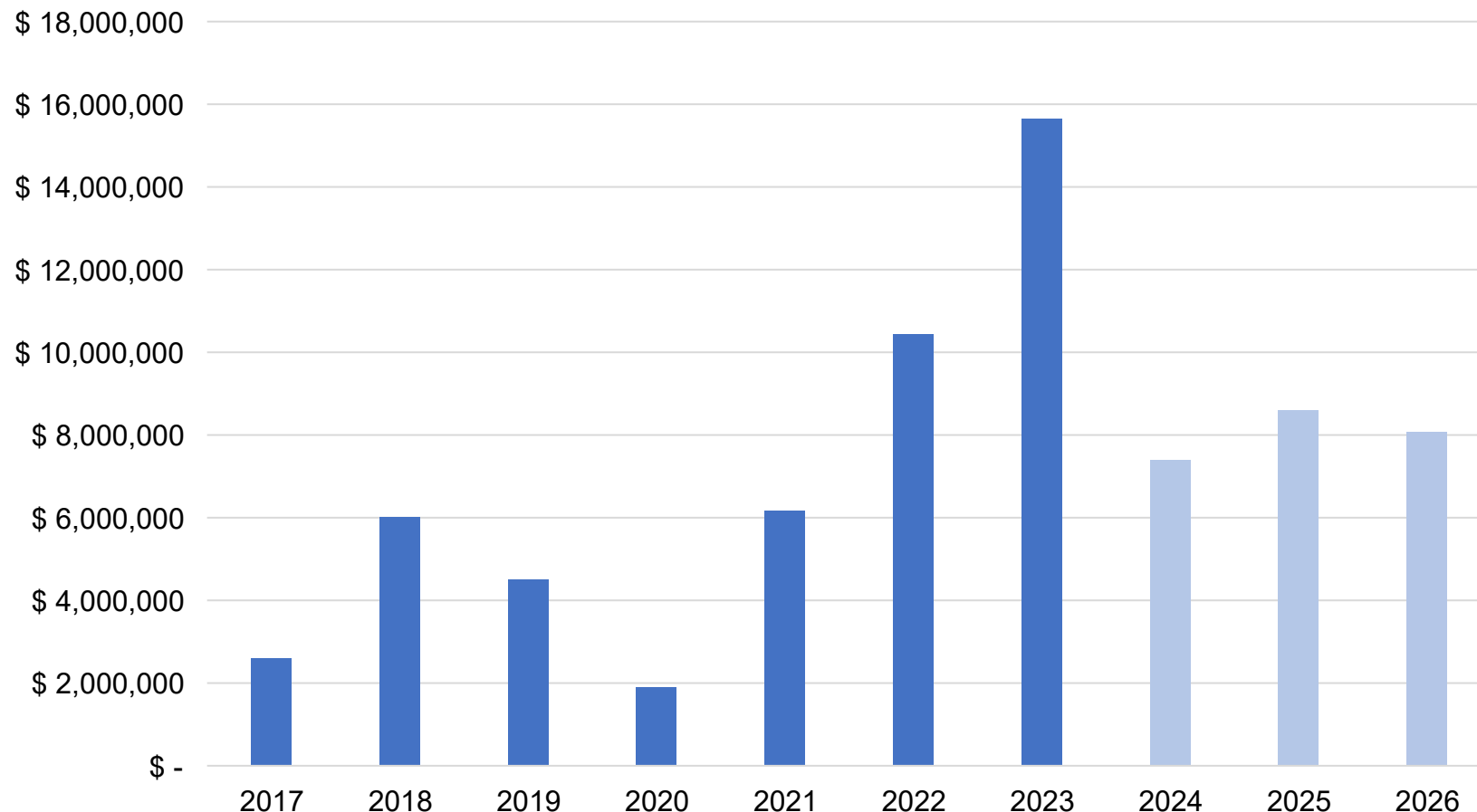


- Interest
- Augmentation Sales
- Raw Water Sales
- Re-Rent From Purchase
- Other Water Rentals
- Raw Water Surcharge
- Sales of Assets
- All Other

We note decreases in every miscellaneous category except for Augmentation Sales and Turn-On Charges from 2022 to 2023.

Water PIF Revenue

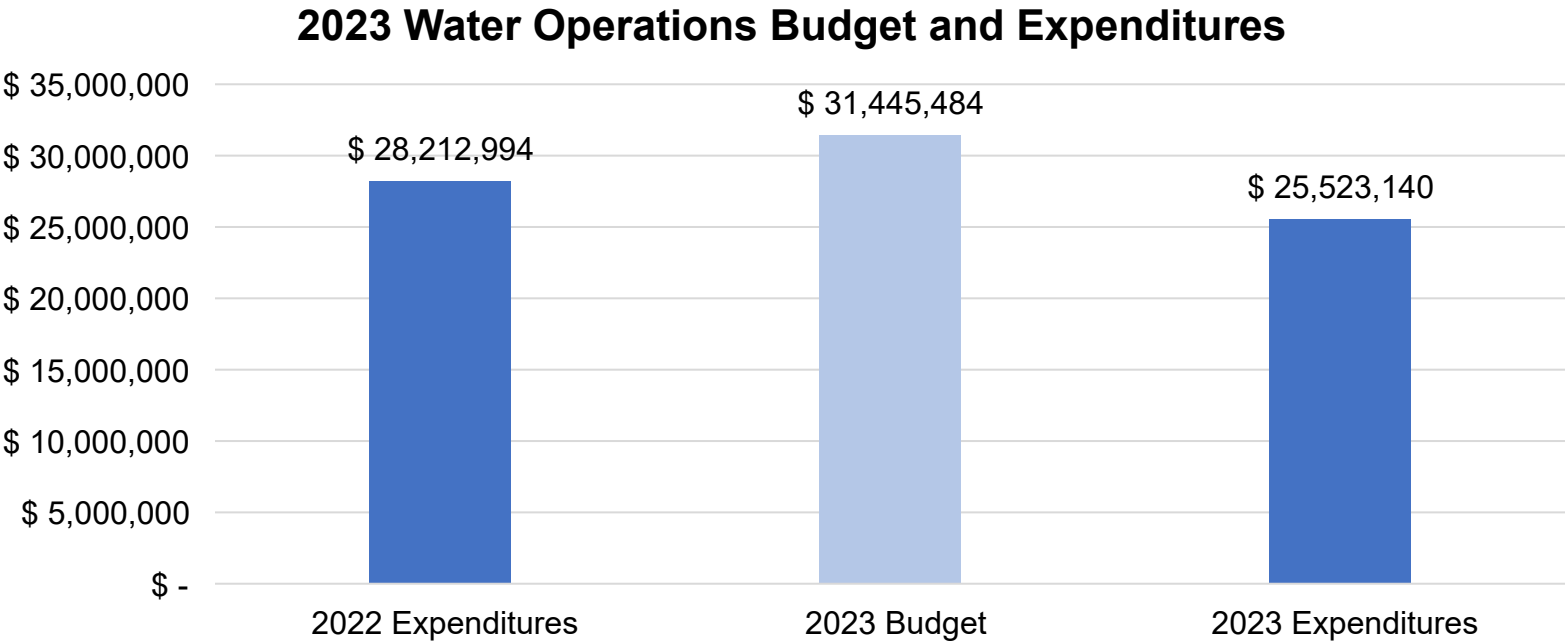
Actual and Projected Development Charge Revenue



2023 Water Development Charges included an \$11M payment from one of our wholesale customers. Plant Investment Fee (PIF) revenue was lower than 2022.

* Lightly shaded bars are forecasted PIF amounts

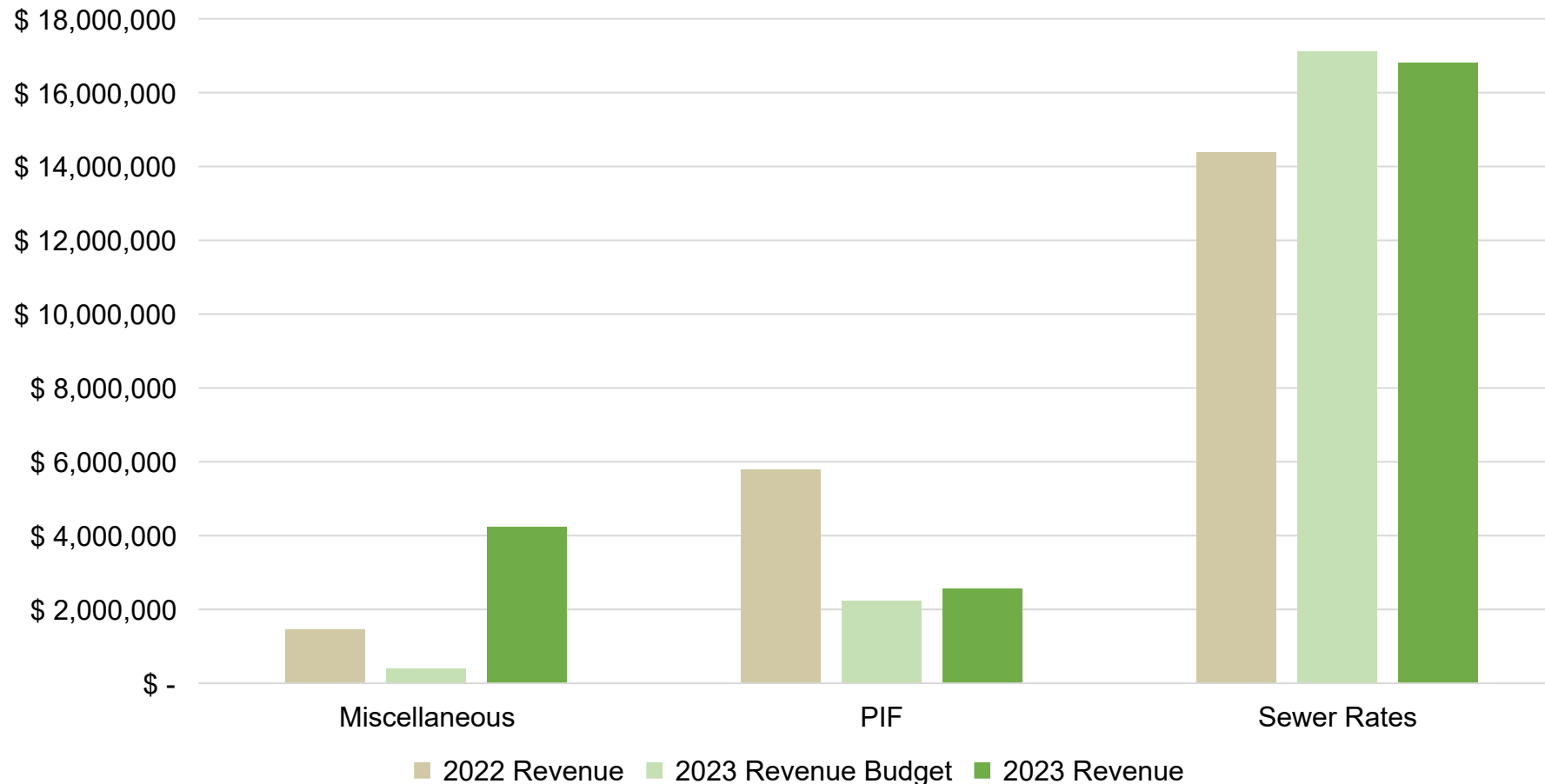
Water Operating Expenditure s



- Not included in the water operating budget here are the Cameron Peak Fire Mitigation grant funded activities.
- 2023 Expenditures were lower than 2022 Expenditures* and under the budgeted amount.
- Unspent budget arose from vacant positions and decreases in non-fixed costs due to less water production demand.
- *Oracle does not have the entire chargeback amounts paid as of February 2024 and so as of now these expenditures have not been completely applied.

2023 Sewer Revenue at a Glance

2023 Sewer Revenues

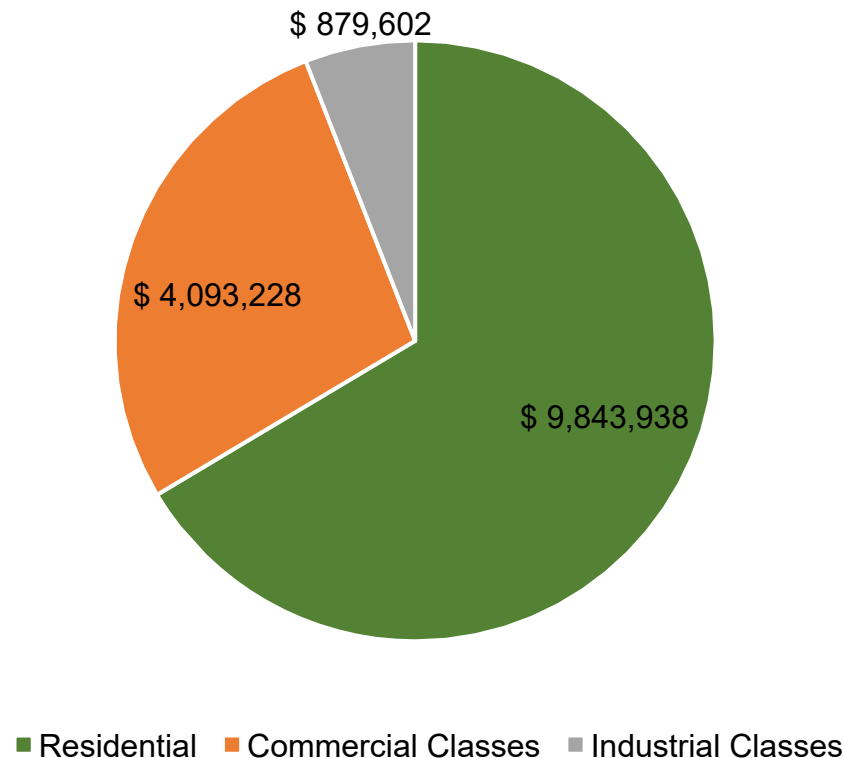


Sewer Revenue
Distribution:

Sewer Rates – 71%
Miscellaneous – 18%
PIF – 11%

Sewer Rate Customer Class Details

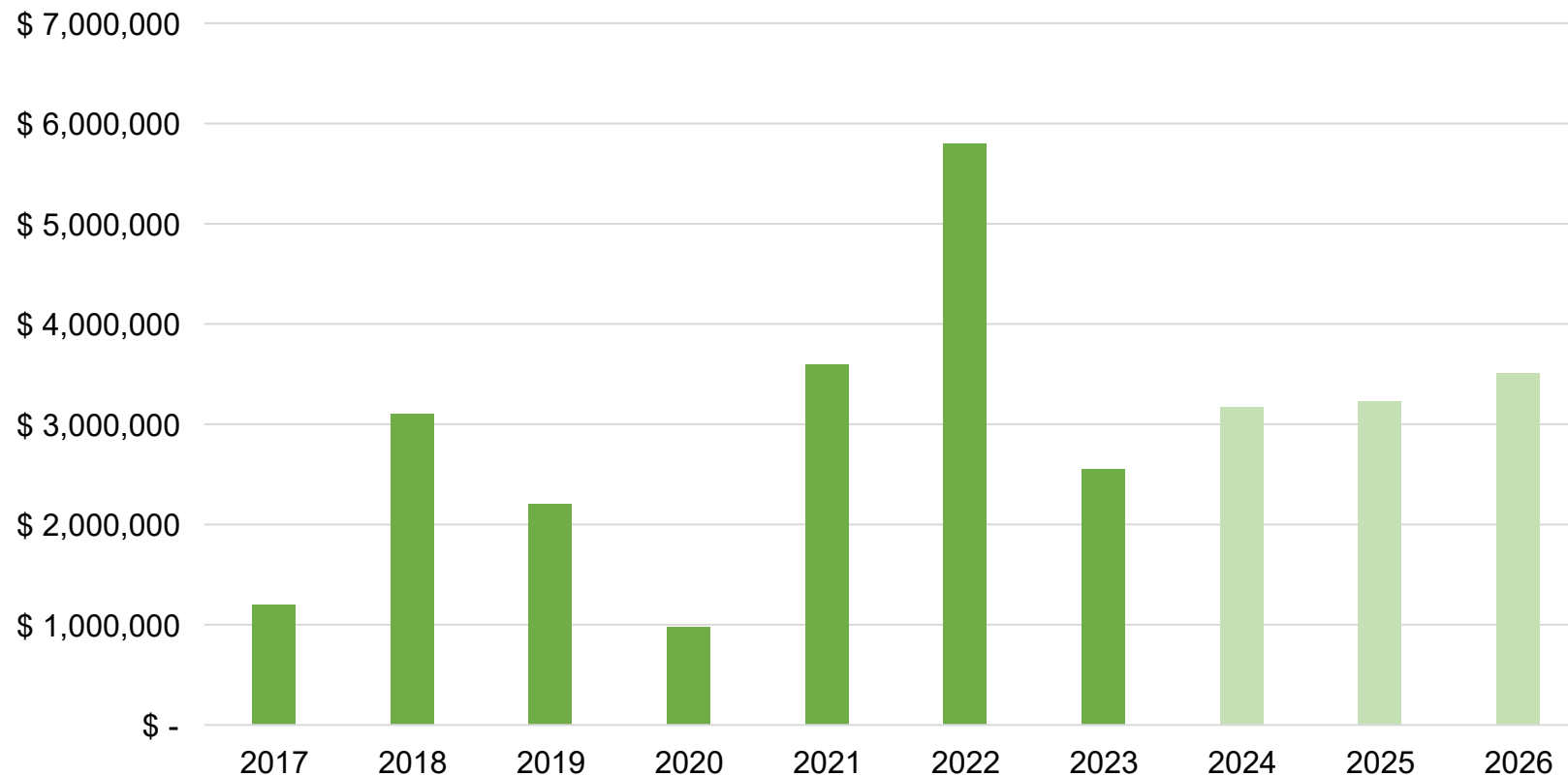
2023 Sewer Rate Revenue Distribution by Class



Residential rate revenue (as well as some other classes) did not meet budgeted targets. However, amounts were 17% above 2022 actual revenue.

Sewer PIF Revenue

Sewer Actual and Projected Development Charge Revenue

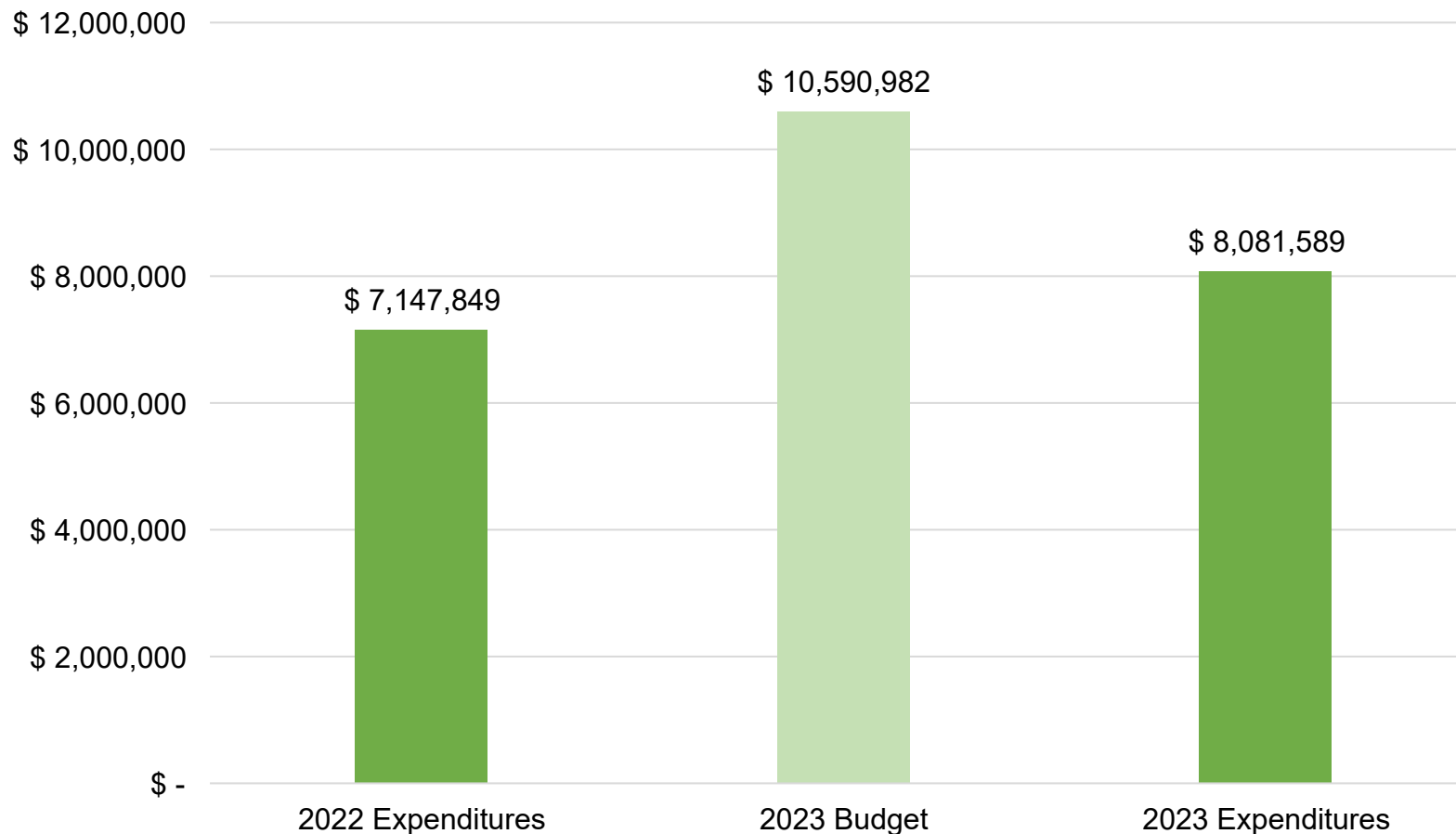


2023 Sewer PIFs were 14% above budget and 56% lower than 2022 PIFs.

* Lightly shaded bars are forecasted PIF amounts

Sewer Operating Expenditures

2023 Sewer Operations Budget and Expenditures



2023 Sewer operating expenditures were \$900K more than in 2022 and used 76% of 2023's budget. Significant differences were due to salary savings from vacant positions and project management charges for capital projects.



Questions?

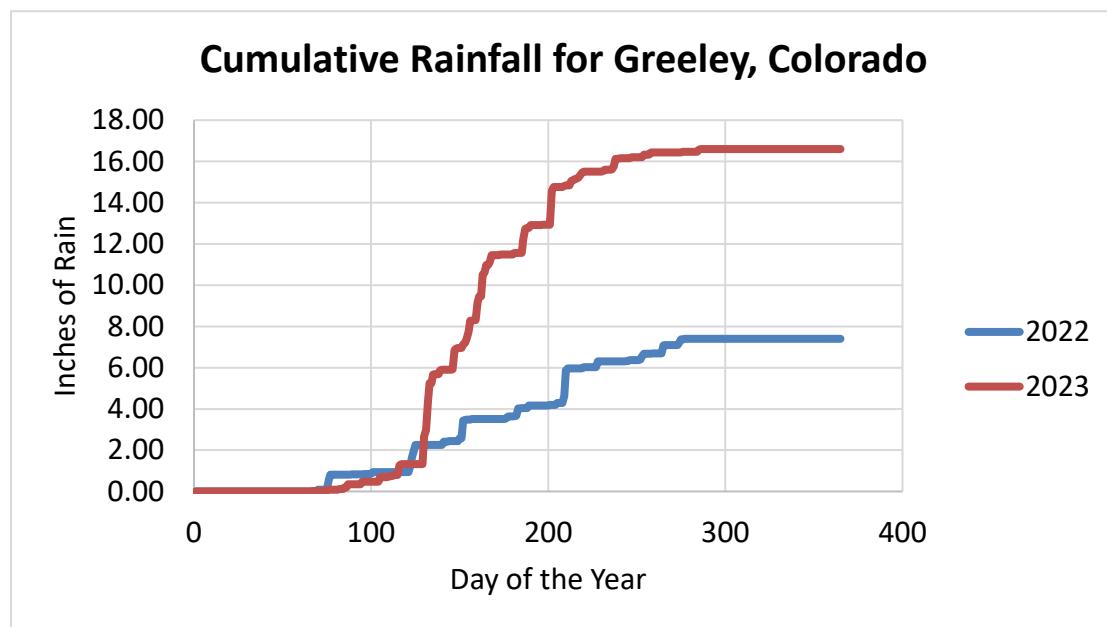


MEMORANDUM

TO: Water and Sewer Board
FROM: Virgil Pierce, Rates and Budget Analyst
DATE: February 14, 2024
RE: 2023 Year-End Financial Report

Overview

The year-end 2023 water and sewer revenue and expenditure report is enclosed with all additional detail available in the attached appendices. The 2023 water year was marked by an extreme amount of rainfall.



Driven by this level of precipitation, treated water demand for the city as a whole was 9% lower than forecasted and 8% lower than in 2022. As a result water rate revenues missed both the 2022 Actual Revenues by \$5M and 2023 Budgeted Revenues by \$6M. A reduction in use was observed in every customer class, reductions were largest in the use by wholesale customers and residential customers, and smallest from the industrial customers. Miscellaneous water revenues were ahead of budgeted projections, but \$4M lower than miscellaneous water revenues in 2022. Development revenue for water was higher than both forecast and 2022 development revenue due to an \$11M payment from one of the city's wholesale customers to increase their base usage in 2022. Overall water revenues were down 9% from 2022.

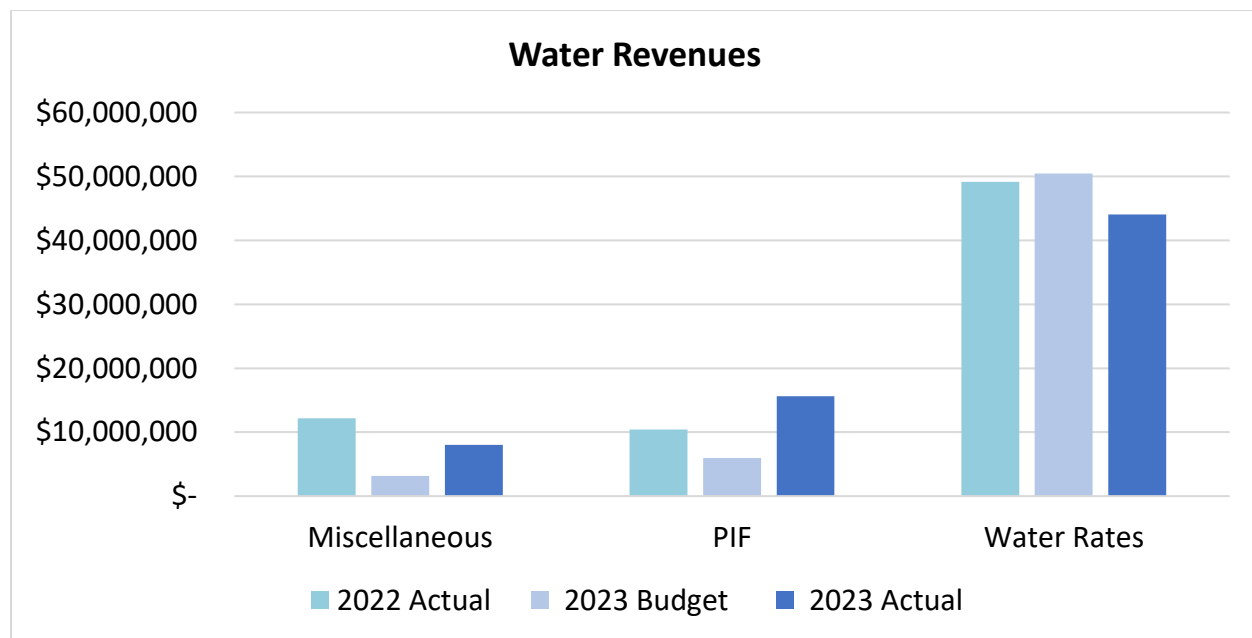
2023 Sewer rate revenues were behind the budget forecasts by 2%, but ahead of 2022 rate revenues by \$2.4M. Sewer miscellaneous revenue benefited from a handful of large royalty payments and were ahead of both forecasts and 2022 revenues which offset a lower development fee revenue for 2023. Overall sewer revenues were 9% higher than in 2022.

The department continued to receive significant federal and state funding for Cameron Peak Fire Mitigation efforts and other grant projects. These numbers are reported separately in the appendices as they do not reflect anticipated long term operational expenses or revenues, and the department is functioning as a pass-through. The department also began receiving regular reimbursements from the Terry Ranch sale's escrow account for the construction costs in the Terry Ranch Water Development capital project. The escrow account is currently made up of 20% payments from the city and 80% payments from Wingfoot, as well as interest earned on the deposited amounts. Due to the special nature of this arrangement these revenues are also separated in the report in the appendices.

Water Revenues

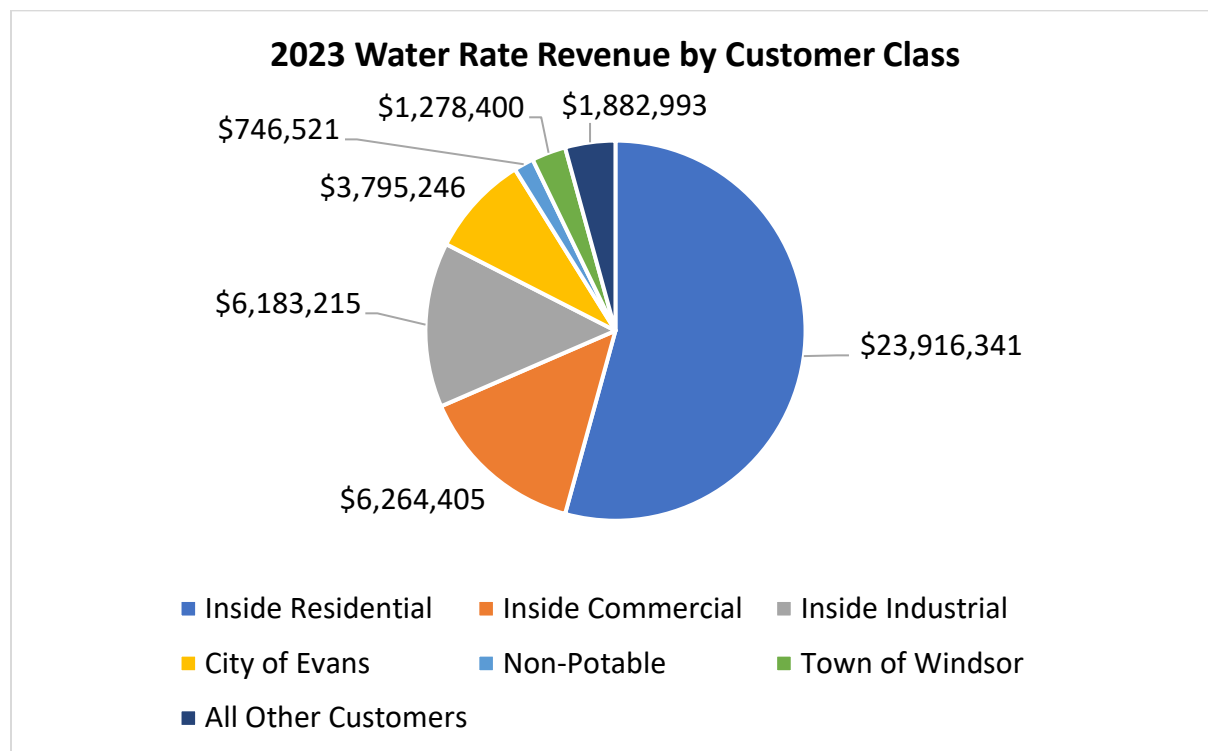
Water revenues can be grouped into three main categories: Water Rates, which made up 58% of total 2023 water revenue, Miscellaneous Revenues like water rentals and raw water sales, which made up 10% of total water revenue, and Development Charges such as Plant Investment Fees (PIFs), which made up 21% of total water revenue. 2023 year-end revenue compared to budget and 2022 year-end revenue for each of these categories can be seen in the chart below.

Both Miscellaneous Revenues and Development Charges revenue were well above budget, while rate revenue was 13% below budget. The net total for water revenues (excluding grant and escrow reimbursements) was 14% higher than total budget and the net total of just the rate and miscellaneous revenues was 3% lower than the budget targets meaning that the one-time development charges of \$10M more than budgeted were responsible for the water funds as a whole being higher than budgeted.



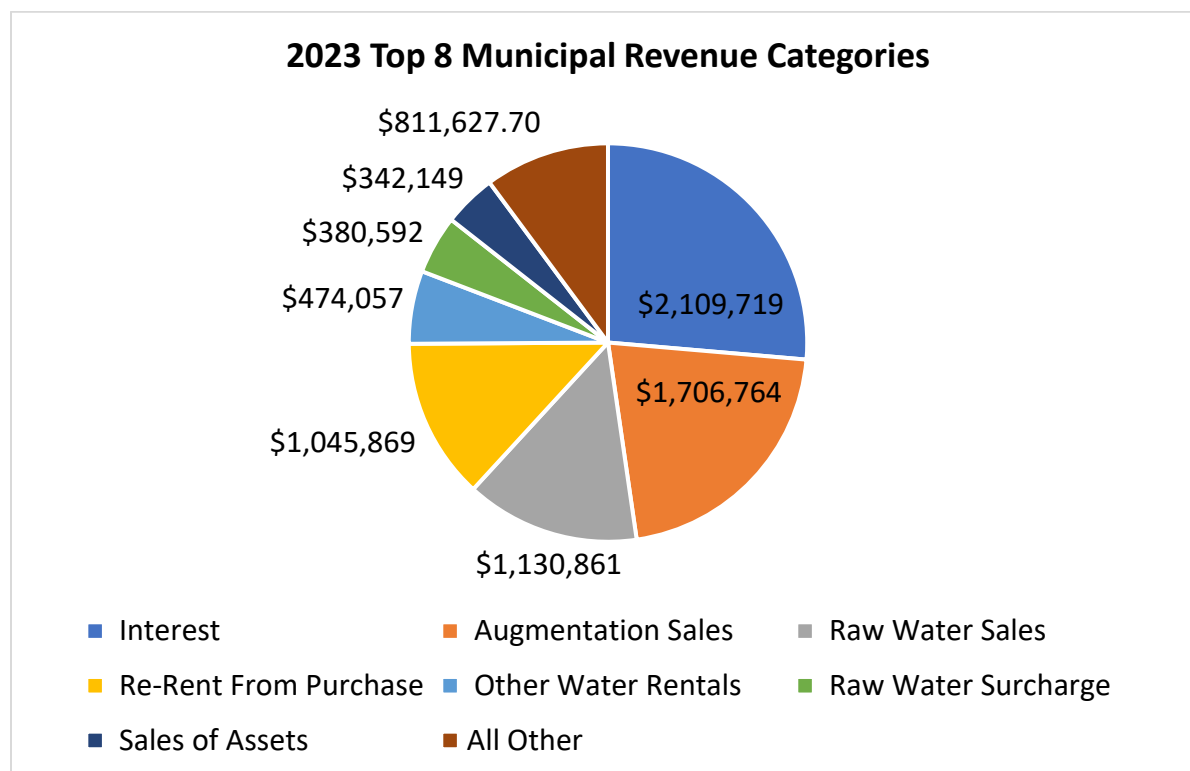
Water Rate Revenue Detail:

The following charts show the share of the \$44M in water rate revenue made up by each class. System wide, water use was down 9% from 2022, strongly indicating the importance weather plays in water rate revenue. Residential customers make up more than half of the collected rate revenue.



Miscellaneous Water Revenue Detail:

Miscellaneous revenues are budgeted conservatively due to their variable nature. In total, the miscellaneous revenue category was 34% below 2022 miscellaneous revenue and 152% over budgeted targets. The chart below illustrates the proportion of the miscellaneous revenue collected from various sources. A full listing of miscellaneous revenues is available in Appendix B.



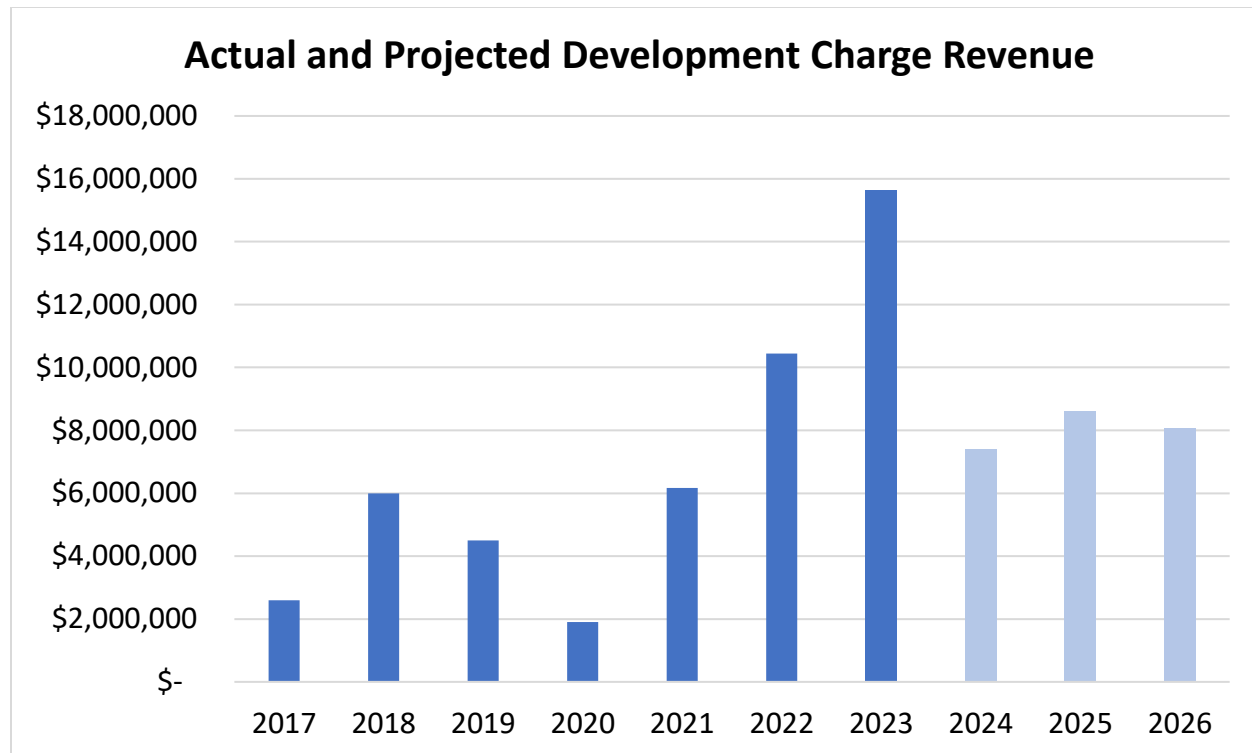
All miscellaneous accounts except for Augmentation Sales and Turn-on-Charges had decreases from 2022 revenues.

Cash-in-Lieu of Raw Water Revenue Detail:

Cash-in-lieu revenue, counted in the miscellaneous group and labeled in the chart above as “Raw Water Sales” was predicted to be minimally used going forward, and was budgeted at just \$350K in 2023. Customers elected to use cash-in-lieu payments instead of purchasing Terry Ranch credits as forecasted. Water staff will continue to monitor the water dedication contributions and adjust future forecasts as appropriate.

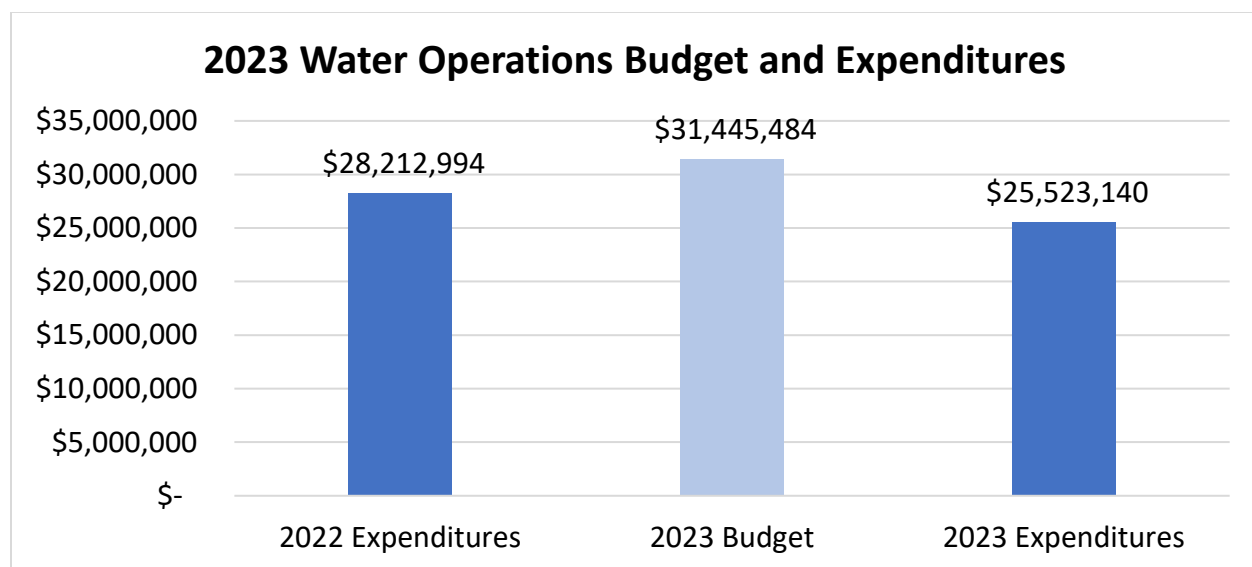
Water Plant Investment Fee Revenue Detail:

2023 Development Charges were made up of Plant Investment Fees (PIF) and a System Development Charge (SDC) from one of our wholesale customers for increasing their base water usage in the 2022 year. As a result of this SDC revenue of \$11M the development charge revenue surpassed both budget forecasts and 2022 development charges. PIF revenues on their own were substantially lower than in 2022. The chart below shows actual PIF revenue for the past few years with a look ahead at modeled figures. The PIF revenue estimates for 2024 and beyond will be re-evaluated during the modeling process this spring and will be monitored closely to track recent changes to the structure of PIF charges.



Water Operating Expenditures

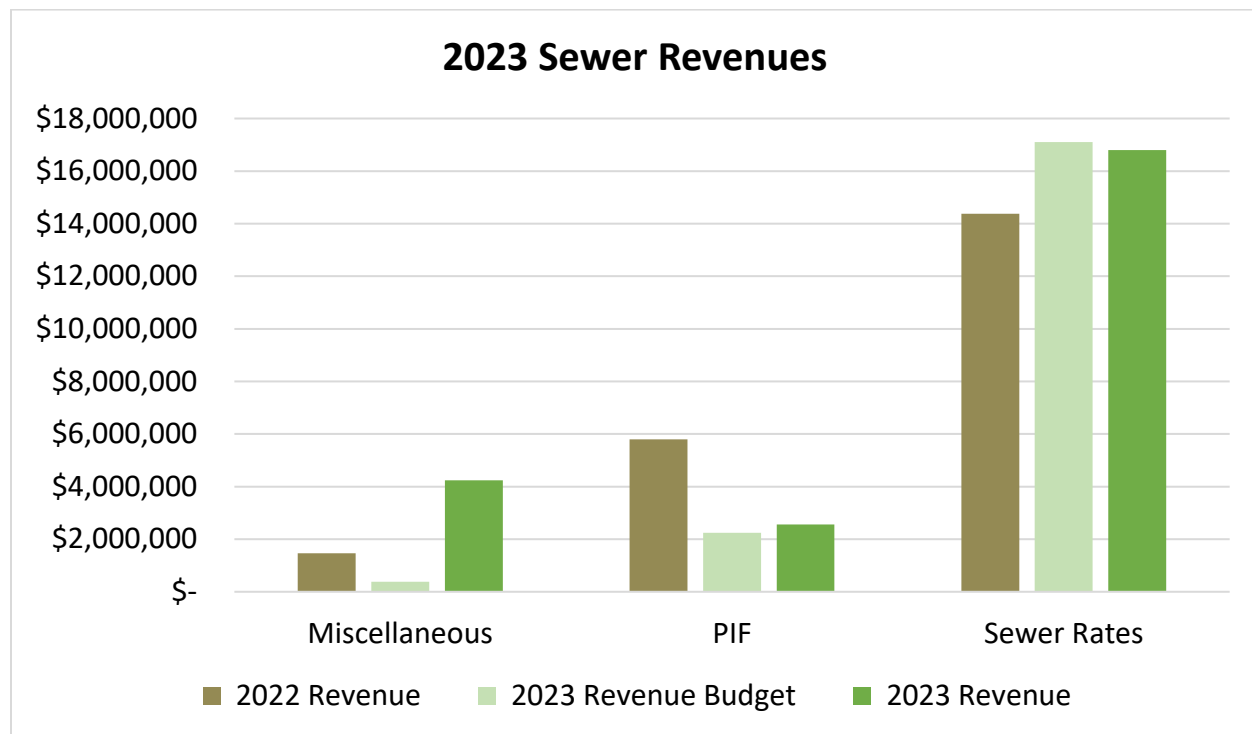
The water operating budget for 2023 was \$31.4M. Expenditures were at \$25.5M, with the differences being largely felt in unspent salary budget from vacant positions and unspent chemical budgets. Overall, 2023 expenditures were less than 2022 expenditures partially due to decreased water demands lowering the non-fixed expenses for the department. Details of expenditures can be found in Appendix D. Overages are noted in Cash Operations, Water Distribution, Instruments and Controls, and Water Resources. Overall, the department spent 82% of its 2023 operating and maintenance budget.



Sewer Revenues

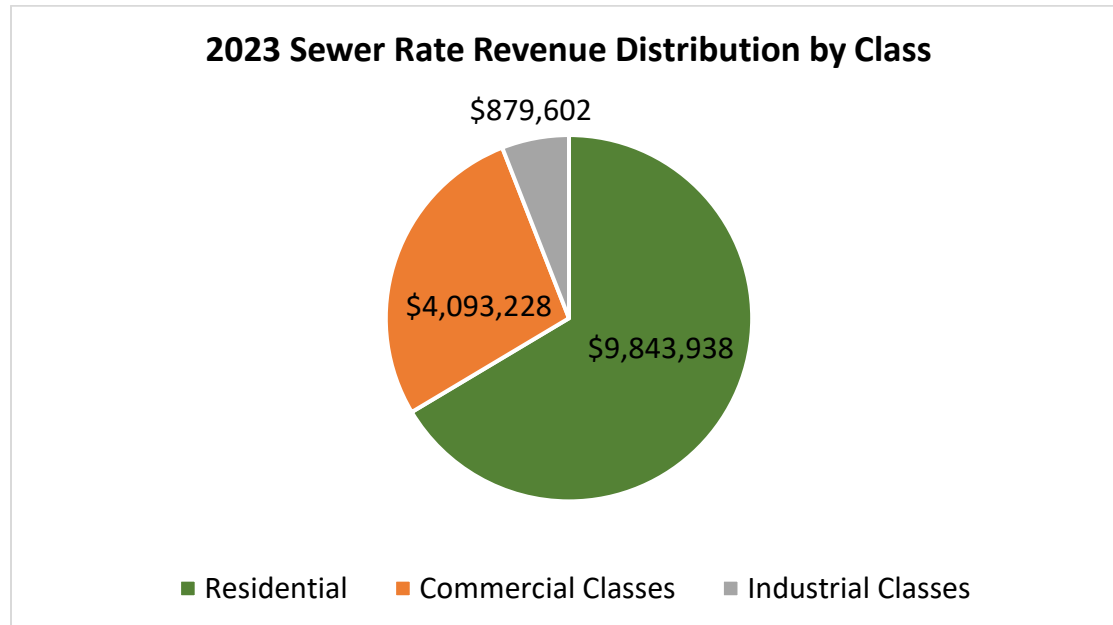
Like water revenues, sewer revenues can be grouped into the same three categories which comprise similar percentage shares of total revenue. Sewer rates made up 71% of total 2023 revenue while miscellaneous made up 18% and plant investment fees made up 11%. 2023 year-end revenue compared to budget and 2022 revenue are compared below. Increases from the 2022 revenue are noted for both the budget targets and the 2023 revenues.

Unlike on the water side, sewer production is not as impacted by weather. In total, sewer revenues exceeded budgeted revenue by nearly \$3.8M, primarily because plant investment fees and miscellaneous revenues exceeded expectations. Sewer rate revenue collected came in slightly under budget targets.



Sewer Rate Revenue Detail:

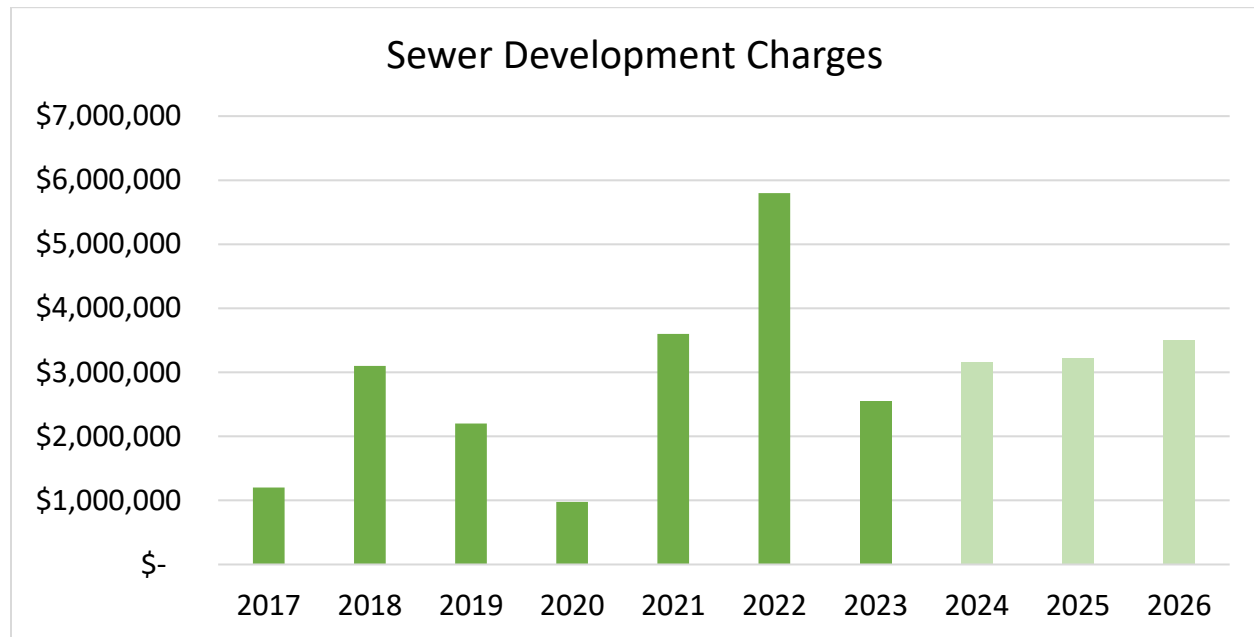
The following chart gives the distribution of sewer rate revenues among the customer classes. Residential customers make up a larger proportion of sewer rate revenue than for water rates. We also note that because the industrial classes are relatively small, small changes in their rates have a big percentage impact on the revenue collected from year to year.

Miscellaneous Sewer Revenue Detail:

Like on the water side, miscellaneous sewer revenues are budgeted conservatively. Full detail on miscellaneous sewer revenues is available in Appendix C. Sewer miscellaneous revenue saw significant royalty payments again in 2023 above the forecasted amount by \$3M.

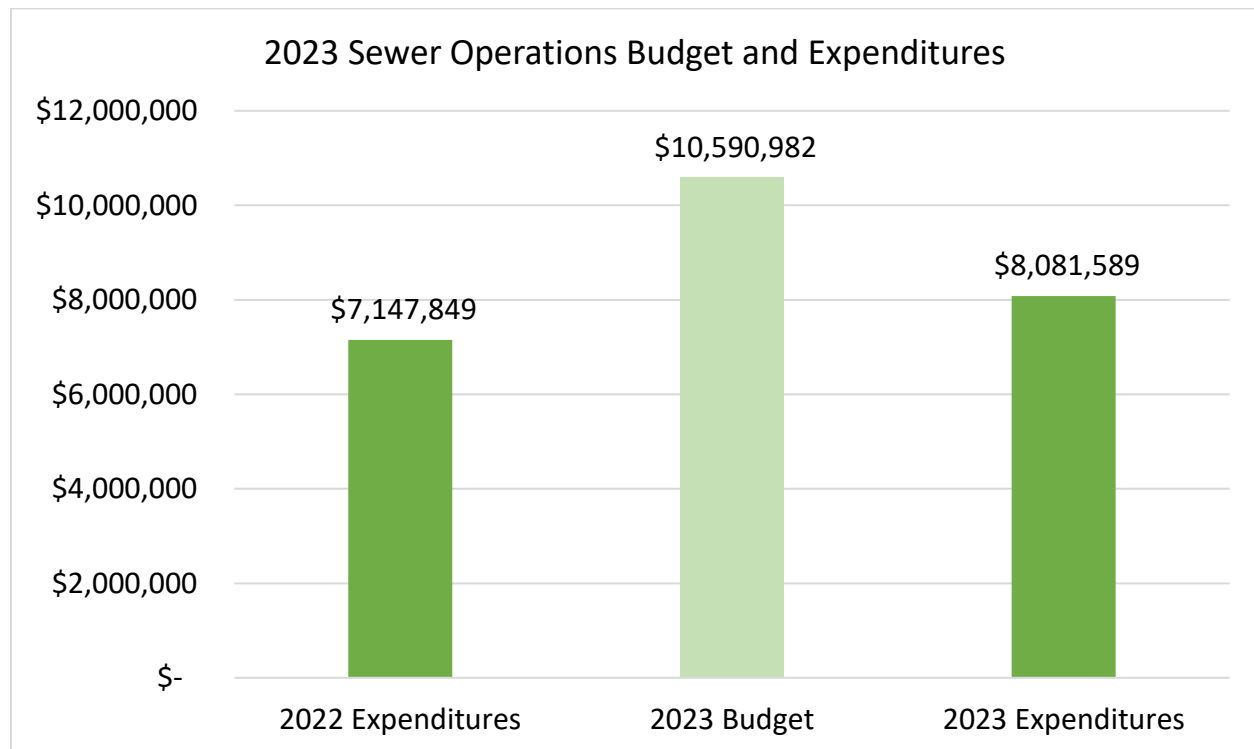
Sewer Plant Investment Fee Revenue Detail:

Sewer PIF revenue was 14% above the 2023 budgeted target and below the 2022 revenue amount. The forecast for the next three years is included.



Sewer Operating Expenditures

The sewer department's operating budgeted expenditures are detailed in Appendix E. The following chart compares the 2022 expenditures, 2023 budget, and 2023 expenditures. 2023 Expenditures for sewer operating were 9% higher than 2022 expenditures, and under the 2023 budget. Significant balances were in salaries and wages due to both vacant positions and the implementation of project management charges for capital projects.



Year-End 2023 Water & Sewer Finance Report
Appendix A: Water Demands

Prepared February 2024

	2023 Actual Water Demand v Modeled Demand							2023 Water Demand v 2022		
	% Total Water Use	Water Use (Kgal)	Taps	Use/Tap	Modeled Use/Tap	Modeled Use (Kgal)	% Change Total Use v Modeled	Kgal Change v 2022	% Change v 2022	
Inside Residential	34%	2,377,688	24,121	99	123	2,966,883	-20%	(494,723)	-17%	
Inside Commercial	15%	1,026,750	2,032	505	590	1,198,880	-14%	42,920	4%	
Inside Multi-Family	14%	974,476	2,356	414	462	1,088,472	-10%	(40,800)	-4%	
Industrial User	10%	678,142	2	339,071	229,867	459,733	48%	(18,002)	-3%	
Industrial User	10%	681,792	2	340,896	214,617	429,234	59%	(41,077)	-6%	
Inside-City Sub-Total:	82%	5,738,848	28,513			6,143,202	(7%) ▼	(551,682)	(9%) ▼	
City of Evans	11%	757,433	14	54,102	59,670	835,380	-9%	(66,550)	-8%	
Town of Windsor	4%	255,198	3	85,066	124,910	374,730	-32%	59,513	30%	
Outside Industrial User	2%	137,581	1	137,581	160,000	160,000	-14%	(35,451)	-20%	
Town of Milliken	1%	75,619	1	75,619	105,000	105,000	-28%	(29,907)	-28%	
Outside Residential	0%	34,191	450	76	95	42,750	-20%	(8,771)	-20%	
Ag-Special Contract	0%	24,749	49	505	500	24,500	1%	(2,728)	-10%	
Outside Commercial	0%	11,076	105	105	105	11,025	0%	(868)	-7%	
Outside Multi-Family	0%	3,738	18	208	250	4,500	-17%	(502)	-12%	
Outside-City Sub-Total:	18%	1,299,585	641			1,557,885	(17%) ▼	(85,264)	(6%) ▼	
Total Water Demand:		7,038,433	29,154			7,701,087	(9%) ▼	(636,946)	(8%) ▼	

Year-End 2023 Water & Sewer Finance Report

Appendix B: Water Revenues

Prepared February 2024

	2023 Water Revenues v Budget				2023 Revenues v 2022	
	% of Total Rev	\$ Revenue	\$ Budget	% Change v Budget	\$ Change v 2022	% Change v 2022
Inside Residential	31.3%	23,916,341	29,043,704	(18%)	(3,298,436)	(12%)
Inside Commercial	8.2%	6,264,405	6,891,176	(9%)	(527,226)	(8%)
Inside Industrial	8.1%	6,183,215	6,452,313	(4%)	(19,816)	(0%)
City of Evans	5.0%	3,795,246	4,126,964	(8%)	(185,034)	(5%)
Town of Windsor	1.7%	1,278,400	1,094,152	17%	(593,231)	(32%)
Non-Potable	1.0%	746,521	750,000	(0%)	(178,396)	(19%)
Outside Residential	0.7%	570,858	501,734	14%	(36,286)	(6%)
Town of Milliken	0.6%	453,851	631,109	(28%)	(205,275)	(31%)
Outside Industrial User	0.7%	551,751	646,572	(15%)	(14,608)	(3%)
Ag-Special Contract	0.2%	150,099	165,450	(9%)	(7,387)	(5%)
Outside Commercial	0.2%	156,434	163,117	(4%)	(20,503)	(12%)
Rate Revenue Sub-Total:	58%	44,067,121	50,466,291	(13%) ▼	(5,086,199)	(10%) ▲
Re-Rent From Purchase	1.4%	1,045,869	500,000	109%	(80,268)	(7%)
Raw Water Sales	1.5%	1,130,861	350,000	223%	(2,692,593)	(70%)
Other Water Rentals	0.6%	474,057	400,000	19%	(367,669)	(44%)
Raw Water Surcharge	0.5%	380,592	412,000	(8%)	(203,603)	(35%)
Augmentation Sales	2.2%	1,706,764	150,000	1038%	1,309,723	330%
Rents From Equipment	0.2%	161,039	104,131	55%	(102,394)	(39%)
Sales To Outside Agencies	0.0%	-	75,000	(100%)	(19,210)	(100%)
Royalties	0.0%	7,243	90,000	(92%)	(153,544)	(95%)
Rents From Land	0.2%	147,388	60,000	146%	(376,660)	(72%)
Meter Sales	0.2%	135,305	120,000	13%	(206,503)	(60%)
Other Miscellaneous	0.3%	229,700	300,992	(24%)	(1,696,290)	(88%)
Interest	2.8%	2,109,719	253,208	733%	(11,450)	(1%)
Sales of Assets	0.4%	342,149	-		342,149	
Chargebacks for Customer Service	0.1%	90,473	344,021	(74%)	90,473	
Turn On Charges	0.1%	40,480	20,000	102%	10,105	33%
Misc Revenue Sub-Total:	10%	8,001,639	3,179,352	+ 152% ▲	(4,157,733)	(34%) ▲
Development Revenue:	20.5%	15,640,223	5,952,033	163%	5,202,246	50%
Grant Reimbursement	0.9%	662,099			502,142	
Fire Reimbursement	1.2%	880,891			(10,846,152)	
Escrow Reimbursement	9.3%	7,080,538			6,583,677	
Total Water Revenues:		76,332,510	59,597,676	+ 28% ▲	(7,802,021)	(9%) ▲
Total Water Revenues less Reimbursements		67,708,982	59,597,676	+ 14% ▲	(4,041,687)	

Year-End 2023 Water & Sewer Finance Report

Appendix C: Sewer Revenues

Prepared February 2024

	2023 Sewer Revenues v Budget				20223 Revenues v 2022	
	% of Total Rev	\$ Revenue	\$ Budget	% Change v Budget	\$ Change v 2021	% Change v 2021
Residential	50.1%	11,821,985	12,119,175	(2%)	1,978,047	20%
Commercial I (Non-Food Svs)	7.6%	1,789,582	1,760,801	2%	(39,774)	(2%)
Commercial II (Bars)	4.2%	982,976	1,041,402	(6%)	133,103	16%
Commercial III (Restaurants)	4.4%	1,040,339	1,076,967	(3%)	92,503	10%
Commercial IV (Markets)	1.1%	252,660	301,717	(16%)	29,345	13%
Commercial V (Mfg)	0.1%	27,671	24,055	15%	(711)	(3%)
Ind Sic 2013 (Food Mfg)	1.3%	308,764	268,175	15%	110,313	56%
Ind Sic 7218 (Ind Laundries)	0.7%	159,506	126,578	26%	29,736	23%
Ind Sic 2034 (Dehydrated Foods)	0.2%	40,721	51,023	(20%)	1,260	3%
Ind SIC 2873 (Nitrogen Fertilizer)	0.1%	13,711	16,867	(19%)	(769)	(5%)
Ind SIC 4212 (Local Trucking)	0.0%	2,190	2,036	8%	(617)	(22%)
Ind SIC 2047 (Pet Food)	1.0%	234,391	219,349	7%	37,554	19%
Ind SIC 5169 (Chemicals Products)	0.0%	7,009	13,650	(49%)	(1,643)	(19%)
Ind SIC 7542 (Carwashes)	0.5%	113,310	84,403	34%	49,798	78%
Rate Revenue Sub-Total:	71.2%	16,794,816	17,106,198	(2%) ▼	2,418,143	+ 17% ▲
Other Sewer Charges	0.2%	47,149	46,350	2%	23,871	103%
Engineering	0.0%	240	61,974	(100%)	(237,062)	(100%)
Interest	4.3%	1,019,332	122,654	731%	52,151	5%
Royalties	13.4%	3,172,649	155,000	1947%	2,940,252	1265%
Misc Revenue Sub-Total:	18.0%	4,239,371	385,978	+ 998% ▲	2,779,212	+ 190% ▲
Development Revenue:	10.8%	2,555,600	2,237,285	+ 14% ▲	(3,241,000)	(56%) ▼
Total Sewer Revenues:		23,589,786	19,729,461	+ 20% ▲	1,956,355	+ 9% ▲

Year-End 2023 Water & Sewer Finance Report
Appendix D: Water Operating Expenditures

Prepared February 2024

	% of Total Budget	\$ Budget	\$ Expenditure	\$ Remaining	% Budget Utilized
Administration	5%	1,943,474	1,126,375	817,099	58%
Engineering	3%	1,091,316	828,629	262,687	76%
Computer/Phone User Chrgs	2%	781,318	781,318	0	100%
Utility Billing	2%	763,300	654,319	108,981	86%
Cash Operations	0%	59,034	88,535	(29,501)	150%
Chargeback for Services	9%	3,410,742	2,273,828	1,136,914	67%
Liability Insurance	1%	314,125	314,125	0	100%
General Management:	21%	8,363,309	6,067,128	2,296,181	73%
Service And Meters	2%	987,421	669,165	318,256	68%
Transmission-Reservoir	2%	948,857	887,237	61,620	94%
Distribution	6%	2,261,295	2,323,231	(61,936)	103%
Inventory	1%	275,000	126,871	148,129	46%
Non-Potable Operations	3%	1,001,065	788,469	212,596	79%
Instrument & Control	3%	1,348,692	1,399,739	(51,047)	104%
Transmission & Distribution:	17%	6,822,330	6,194,711	627,619	91%
Water Resources	19%	7,676,366	7,677,382	(1,016)	100%
High Mountain Reservoirs	2%	602,154	403,371	198,783	67%
Water Conservation Prgm	2%	898,611	609,853	288,758	68%
Water Resources:	23%	9,177,130	8,690,606	486,524	95%
Bellvue Filter Plant	11%	4,385,106	3,089,017	1,296,089	70%
Boyd Lake Filter Plant	4%	1,727,042	1,382,981	344,061	80%
Water Quality	2%	970,567	376,358	594,209	39%
Cameron Peak Fire	21%	8,290,000	1,490,098	6,799,902	18%
Treatment:	39%	15,372,715	6,338,454	9,034,261	41%
Incorrect Accounting			36,463	(36,463)	
Total Water Operating:		39,735,484	27,327,362	12,408,122	69%
Total Water Operating w/o CPF		31,445,484	25,837,265	5,608,219	82%

Year-End 2023 Water & Sewer Finance Report
Appendix E: Sewer Operating Expenditures

Prepared February 2024

	% of Total Budget	\$ Budget	\$ Expenditure	\$ Remaining	% Budget Utilized
Engineering	4%	408,046	199,646	208,400	49%
Sewer Administration	4%	406,680	417,334	(10,654)	103%
Computer/Phone User Chrgs	2%	202,269	202,269	0	100%
Chargeback for Services	9%	987,637	532,475	455,162	54%
Liability Insurance	3%	314,124	314,124	0	100%
General Management:	22%	2,318,756	1,665,847	652,909	72%
WTRF Administration	5%	510,539	761,411	(250,872)	149%
Laboratory	4%	422,296	345,117	77,179	82%
Maintenance	9%	921,959	712,005	209,954	77%
Operations	25%	2,612,797	1,918,559	694,238	73%
Industrial Pretreatment	4%	397,735	360,751	36,984	91%
Wastewater Treatment:	46%	4,865,326	4,097,842	767,484	84%
Wastewater Collection	16%	1,653,773	1,126,682	527,091	68%
Instruments and Controls	0%	49,677	32,019	17,658	64%
Wastewater Collection:	16%	1,703,450	1,158,701	544,749	68%
Incorrect Accounting:			498	(498)	
Total Sewer Operating:		10,590,982	8,081,589	2,509,393	76%



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Adam Prior, Chief Engineer

Title:

Bi-Annual CIP Report

Summary:

Staff will provide an update on some CIP projects that are in progress or completed since the last Bi-Annual CIP Report. The CIP projects discussed will include:

- 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 12th Street outfall project and infrastructure installed for Water & Sewer system
- 47th Ave Highlands Hill sewer capacity improvements project

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

1. Bi-Annual CIP Report



Bi-Annual CIP Report

Adam Prior, Chief Engineer

Adam.Prior@greeleygov.com, 970-573-0218

Water & Sewer Board – February 21, 2024



Infrastructure & Mobility

Lead Service Line Inventory & Replacement



Water Capital Replacement Funds

TOTAL 2023 BUDGET: \$8,116,800

Non-Potable Water Expansion



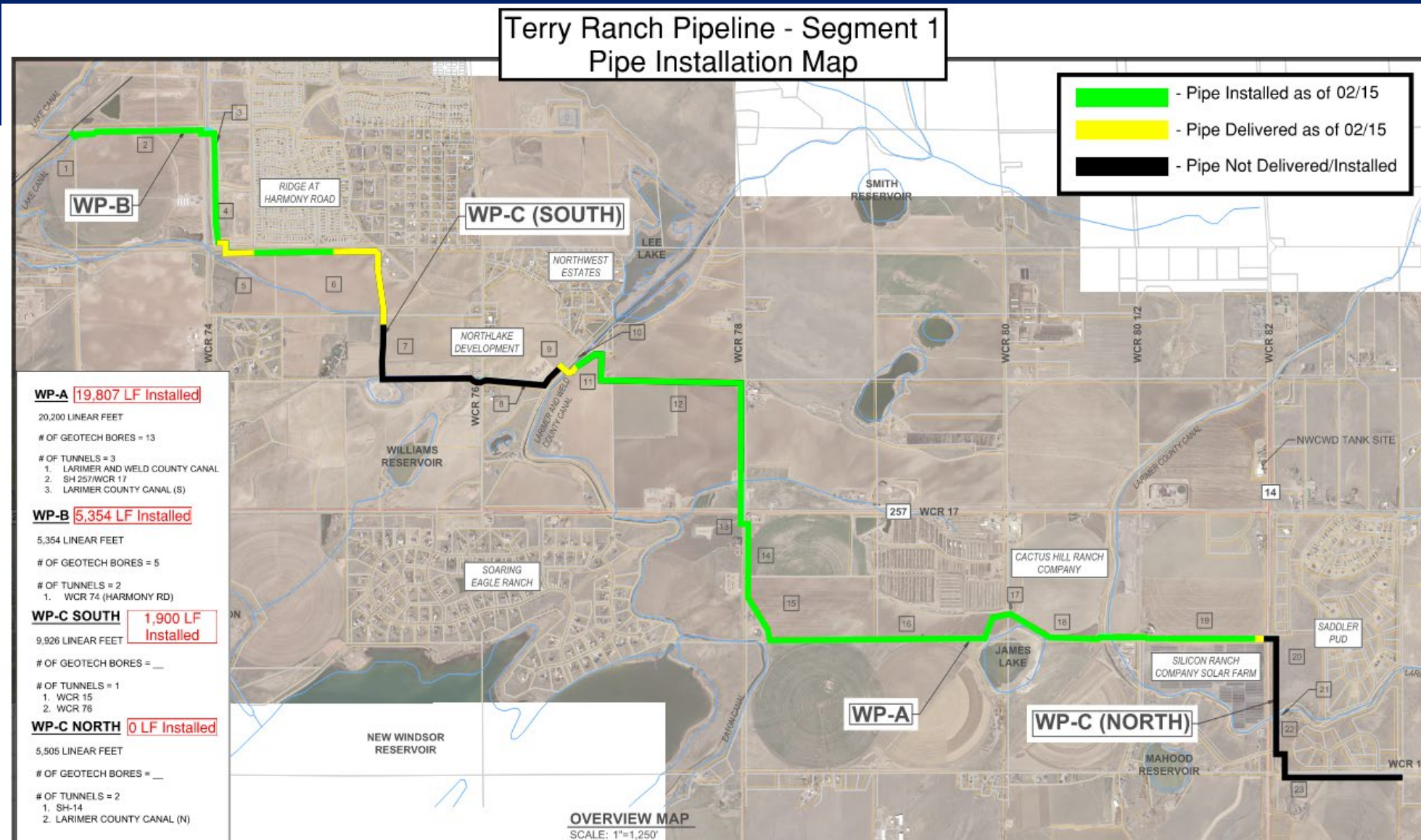
Water Capital Fund



TOTAL BUDGET: \$3,036,00



Terry Ranch Water Pipeline Construction



Terry Ranch Water Pipeline Construction



WPA:

- 36" Pipe Installed 19,807 LF of 20,200 LF, 98% Complete

WPB:

- 36" Pipe Installed 5,354 LF of 5,354 LF, 100% Complete

WPC South:

- 36" Pipe Received 3,992 LF of 9,840 LF, 41 % Complete
- 36" Pipe Installed 658 LF of 9,840 LF, 7% Complete

WPC North:

- 36" Pipe Installed 0 LF of 5,590 LF, 0% Complete
- 36" Pipe Installed 0 LF of 5,590 LF, 0% Complete

NWCWD Interconnect:

- 24" pipe installed 650 LF of 650 LF, 100% Complete

TOTAL BUDGET: \$39,077,484

Terry Ranch Water Pipeline Construction

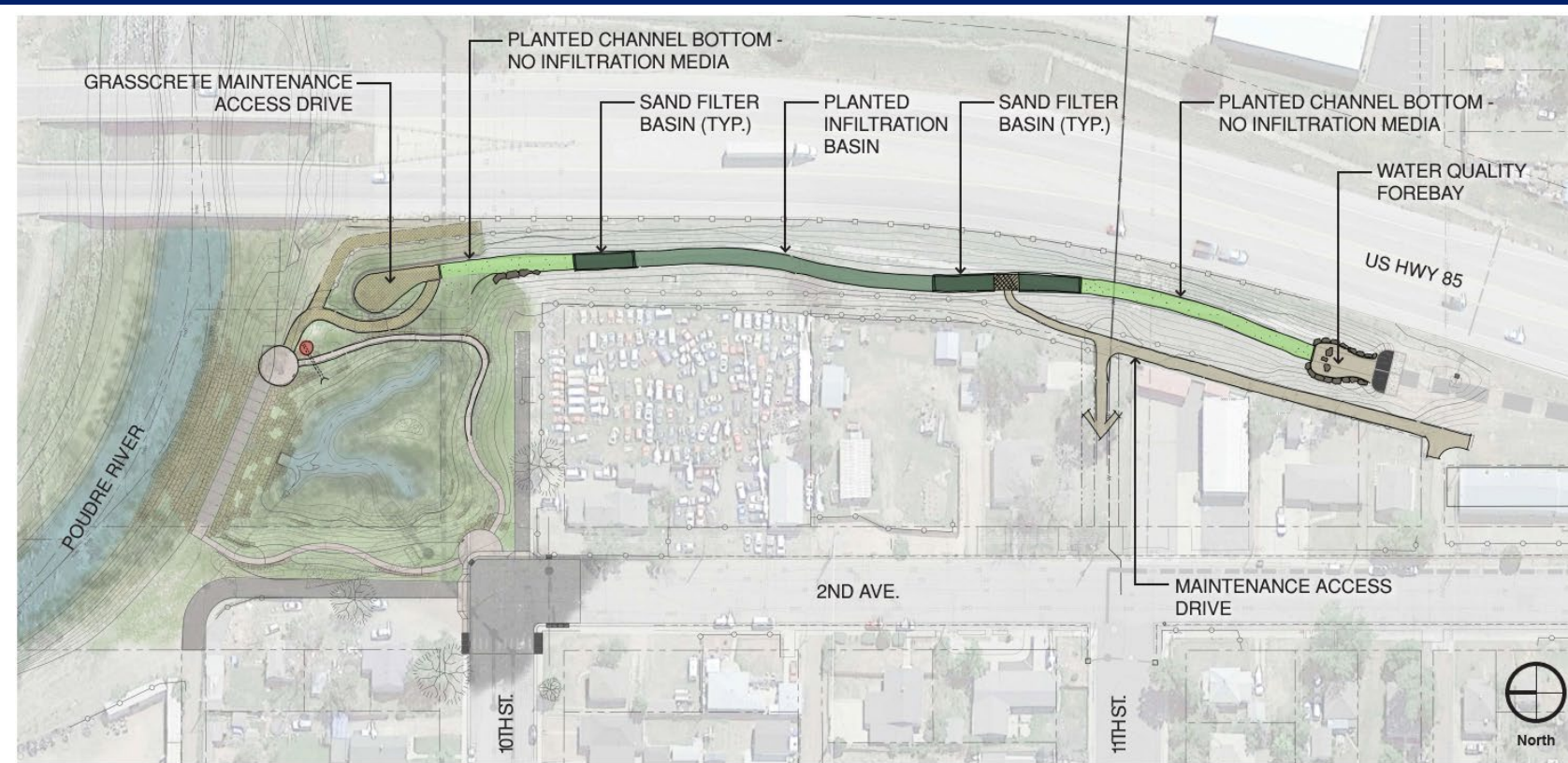


Terry Ranch Water Pipeline Construction

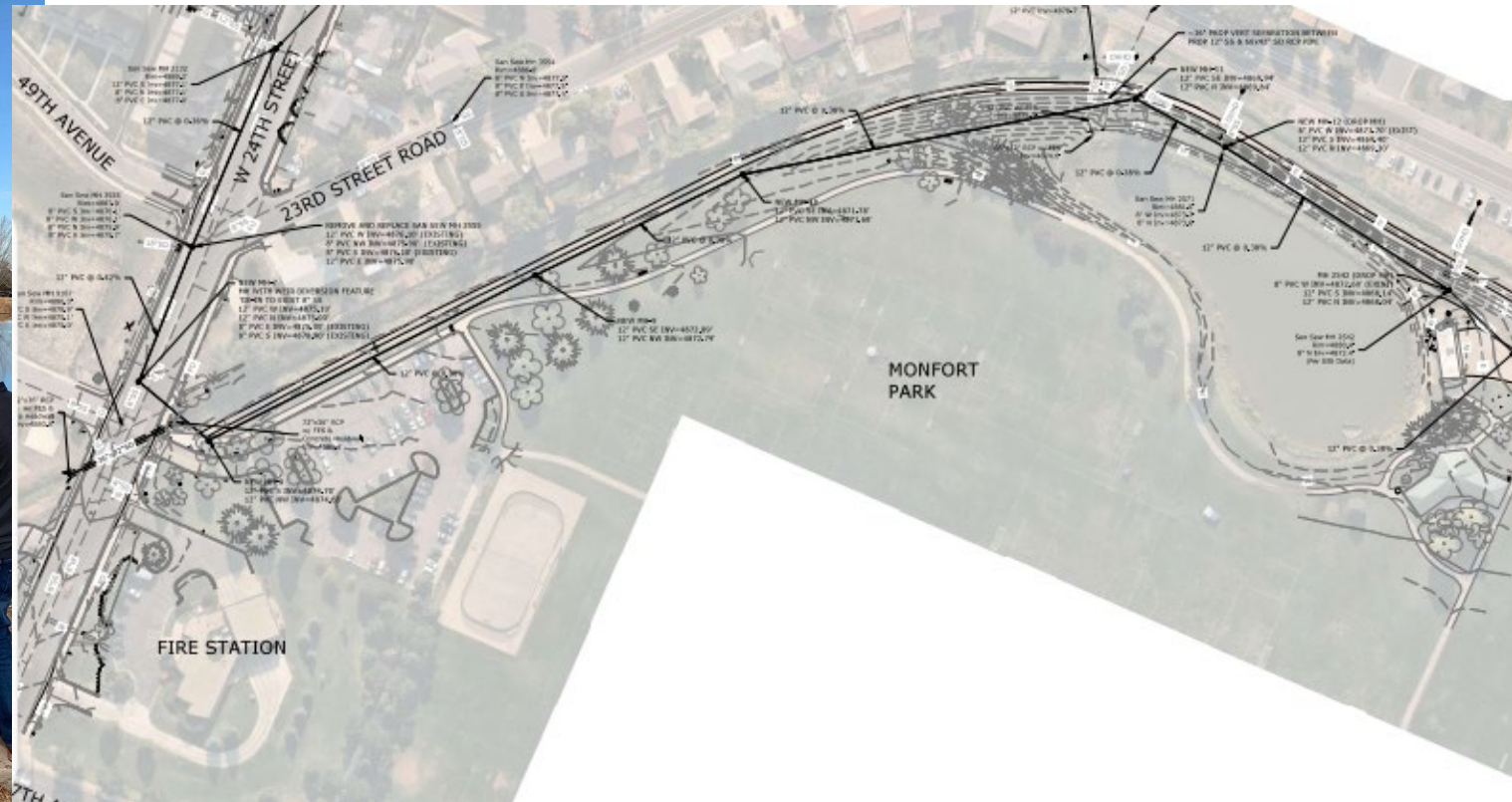


- Planned for 9 Tunnels, currently only 7 tunnelling
- WP-A
 - HWY 257 - Completed
 - CR 78 – Changed to Open Cut, Completed
 - Larimer County Canal (WSSC) – Completed
- WP-B
 - Harmony Road – Changed to Open Cut - Completed
- WP-C South
 - Larimer and Weld County Canal – Completed
 - CR 15 – Planning to start on 2/16/24
 - CR 76 – 1st Qtr 2024
- WP-C North (Projected)
 - Larimer County Canal – March 2024 (Open Cut now)
 - HWY 14 – 3rd Qtr 2024

12th Street Outfall



47th Ave Highlands Hills Capacity Sewer Improvements



Thank You!

Questions?





Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Leah Hubbard, Water Resource Operations Manager

Title:

Legal Report

Summary:

This report has been provided by James Noble, outside counsel for the Greeley Water & Sewer Board.

Update on Division 1 Case No. 20CW3011: Counsel will provide a brief overview of this case, which is an application by the Town of Johnstown to change water rights on the Big Thompson River. This case is set for trial to begin March 18, 2024.

Update on Varra Well Settlement Agreement: Counsel will provide an overview of a settlement agreement between Greeley and Varra Companies, Inc., which was executed on January 19, 2024.

Proposed Statements of Opposition: Based on our review of the December, 2023 Water Division 1 Resume, staff and water counsel recommend 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:

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. Staff recommends participating in this case to ensure that the claimed absolute amounts are properly quantified and to protect Greeley's water rights from injury.

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. Staff recommends participating in this case to ensure that appropriate terms and conditions are included and to protect Greeley's water rights from injury.

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

Recommended Action:

Staff and water counsel recommend authorizing filing statements of opposition in Division 1 Case Numbers 23CW3169 and 23CW3171, and 23CW3181.

Recommended Motion:

“I move 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.”

Attachments:

None



Water & Sewer Agenda Summary

February 21, 2024

Key Staff Contact: Sean Chambers, Water & Sewer Director

Title:

Director's Report

Summary:

The Director will provide 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. 22nd and 23rd, 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 27th 9 am – 4 pm
Golden, CO

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

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

Poudre River Forum – March 1st 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

Recommended Action:

Informational only

Recommended Motion:

N/A

Attachments:

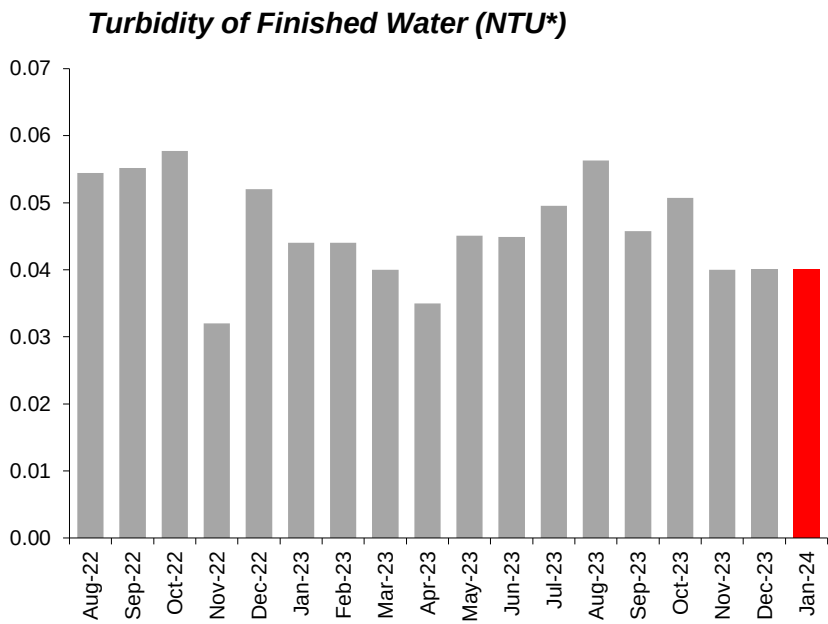
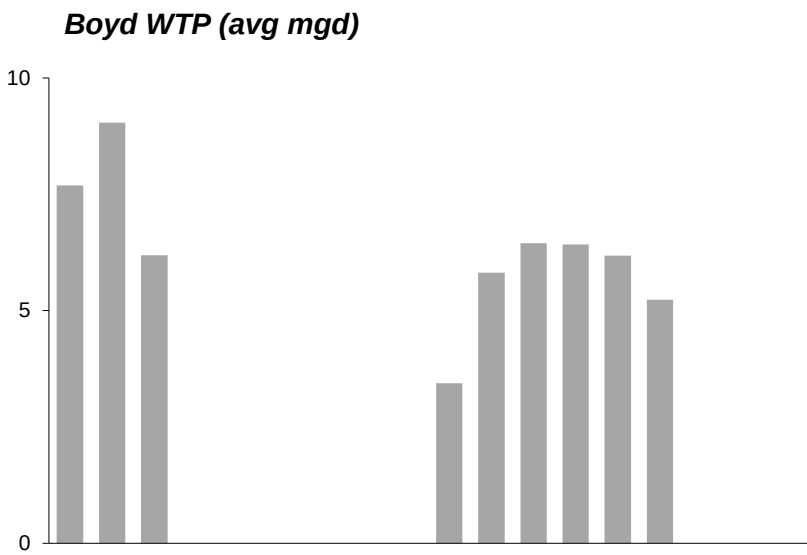
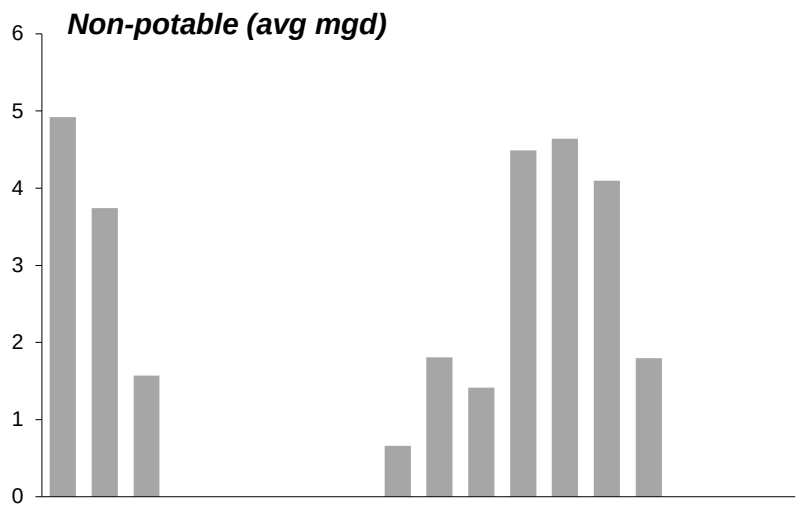
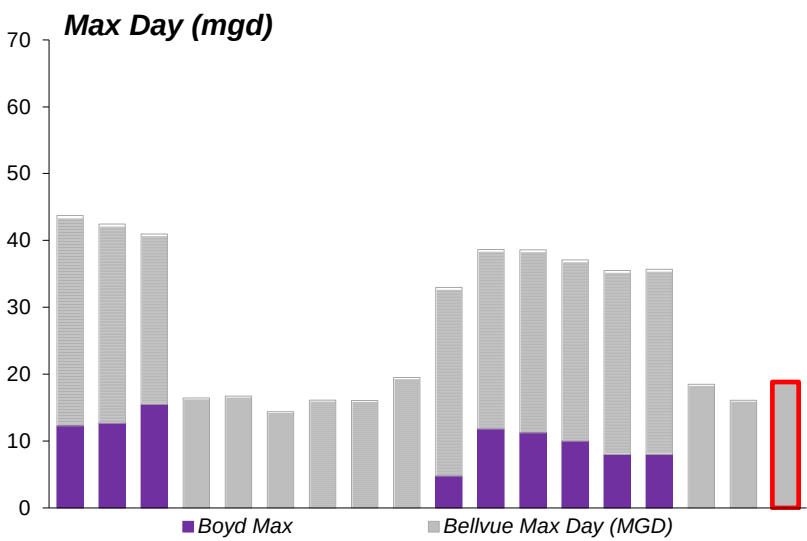
1. Board Meeting Charts_2024

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 platte 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).

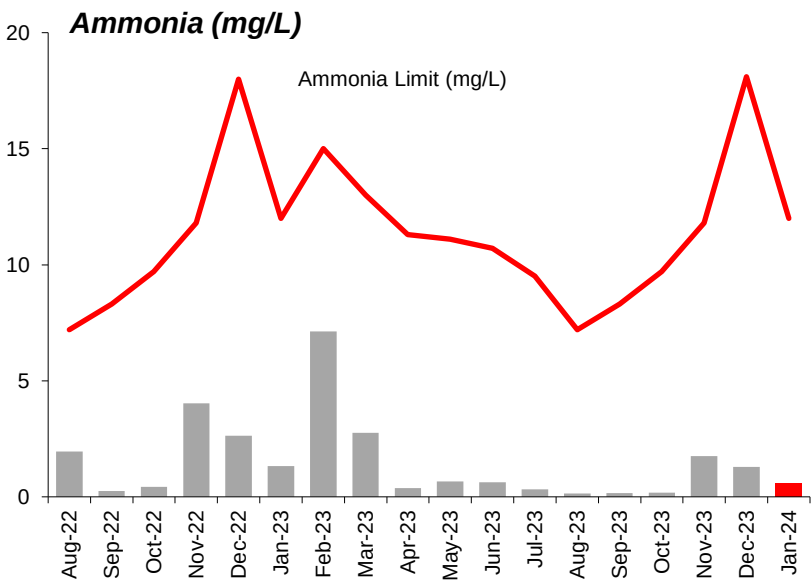
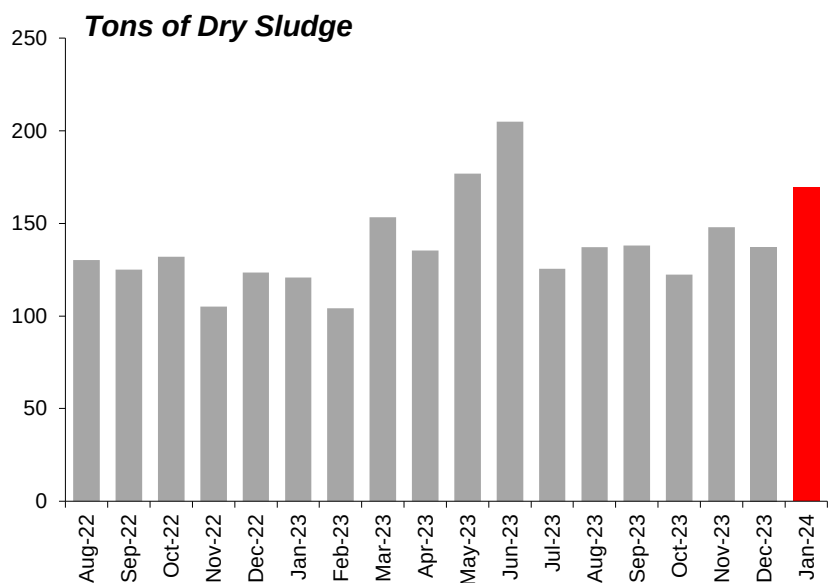
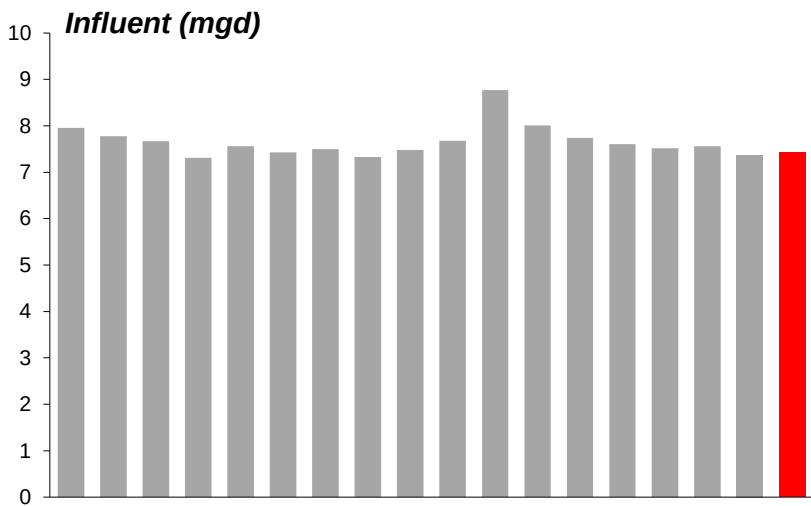
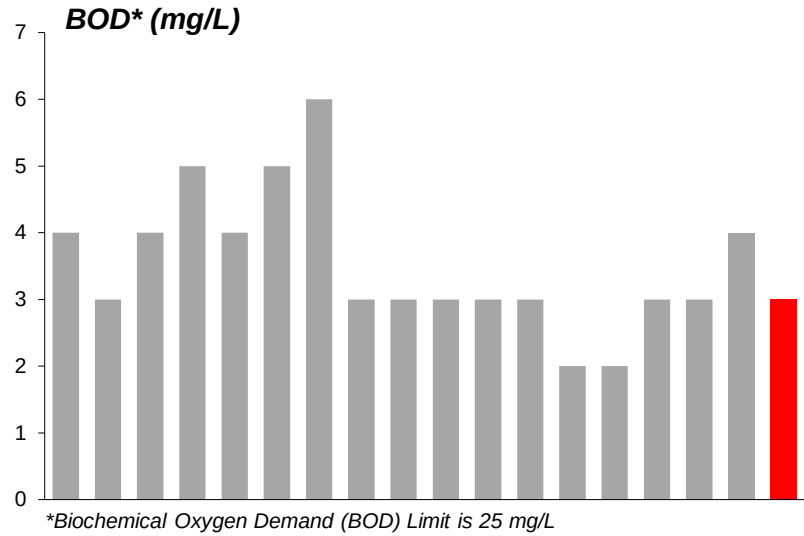
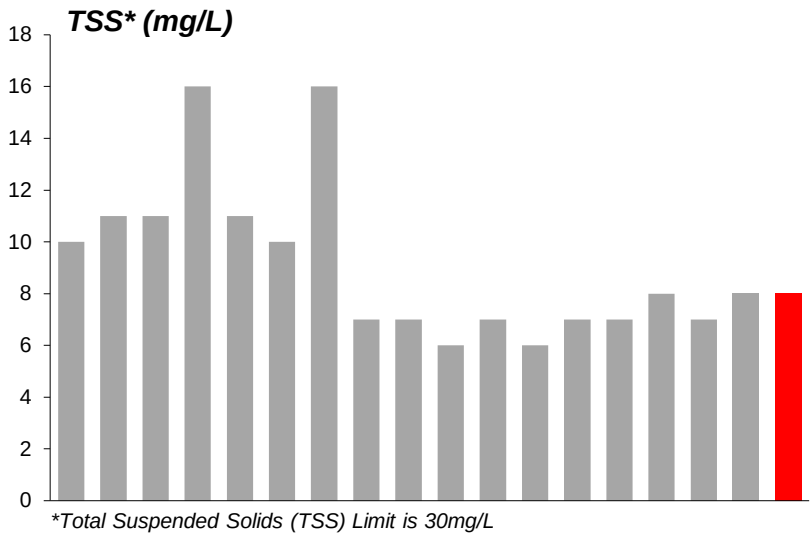


Wastewater Treatment

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.



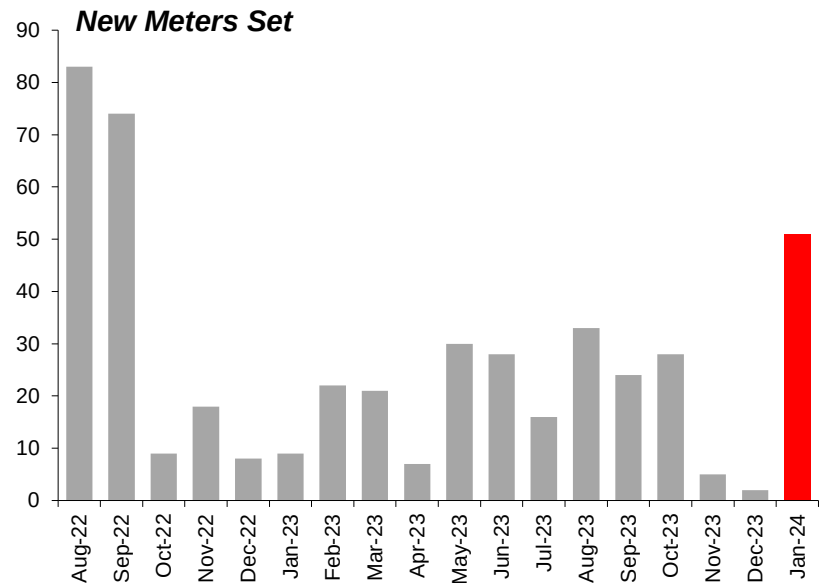
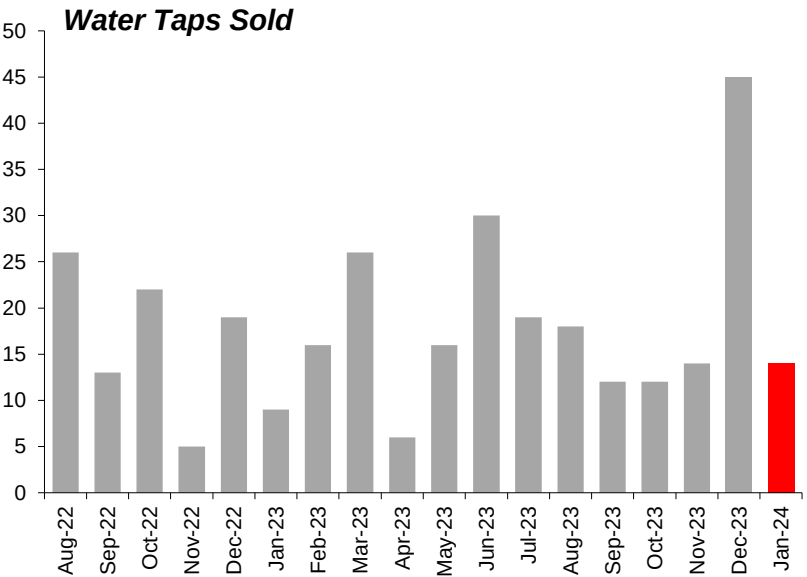
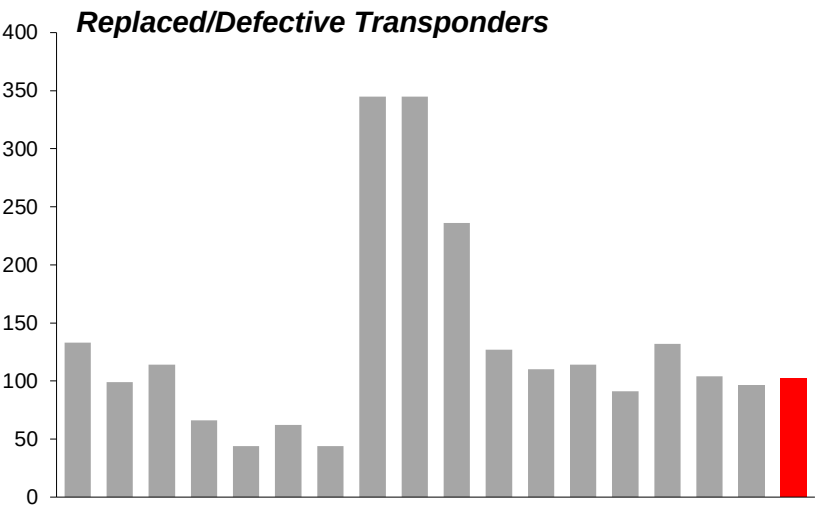
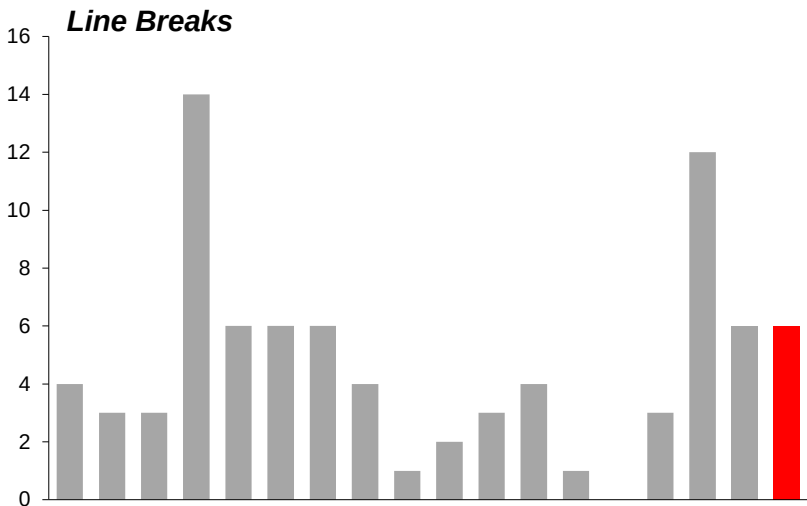
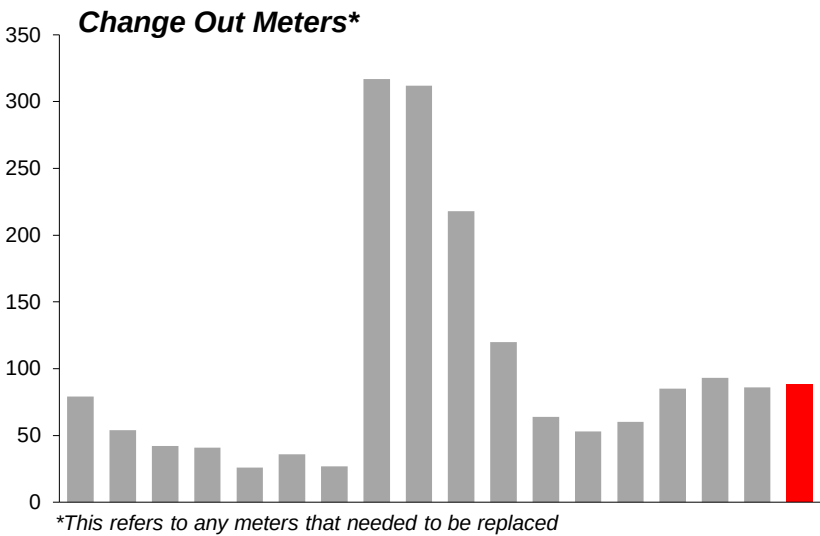
Water Distribution

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.



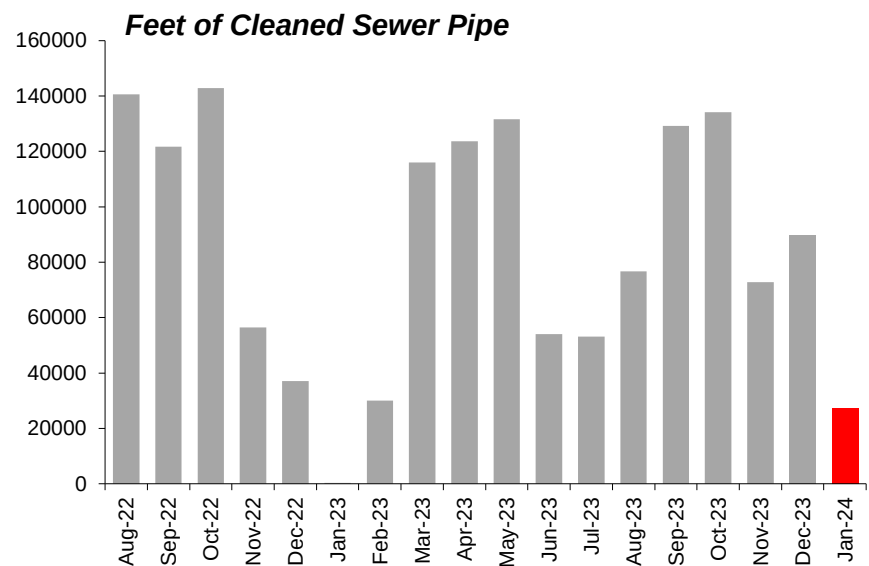
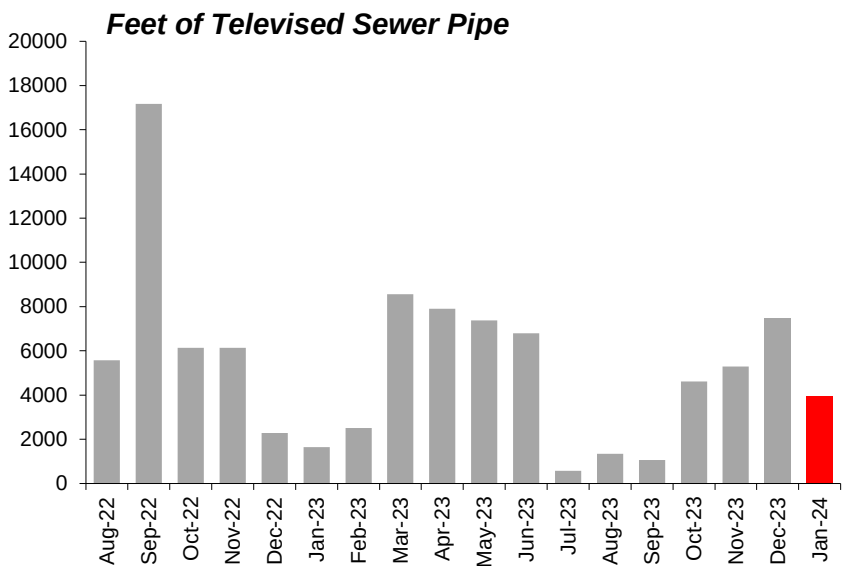
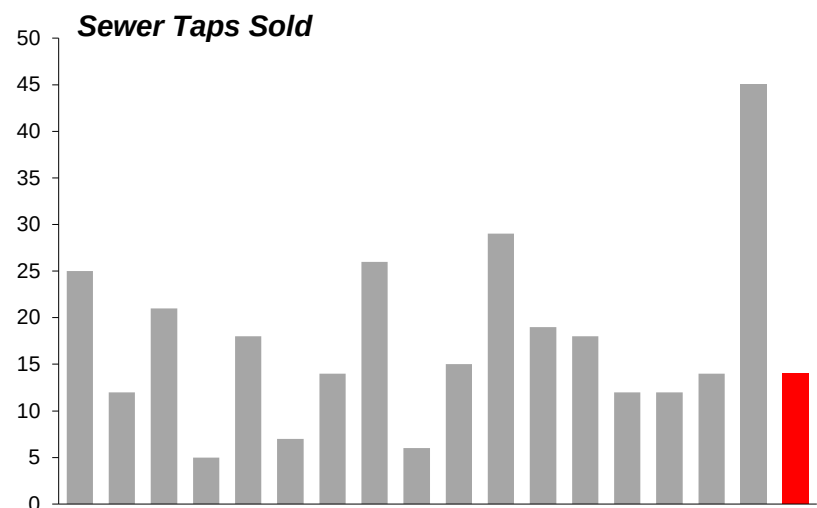
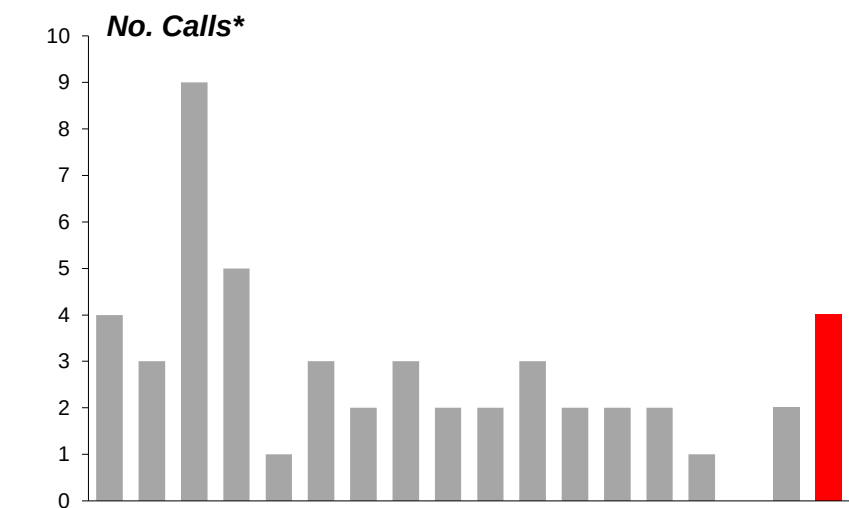
Wastewater Collection

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.

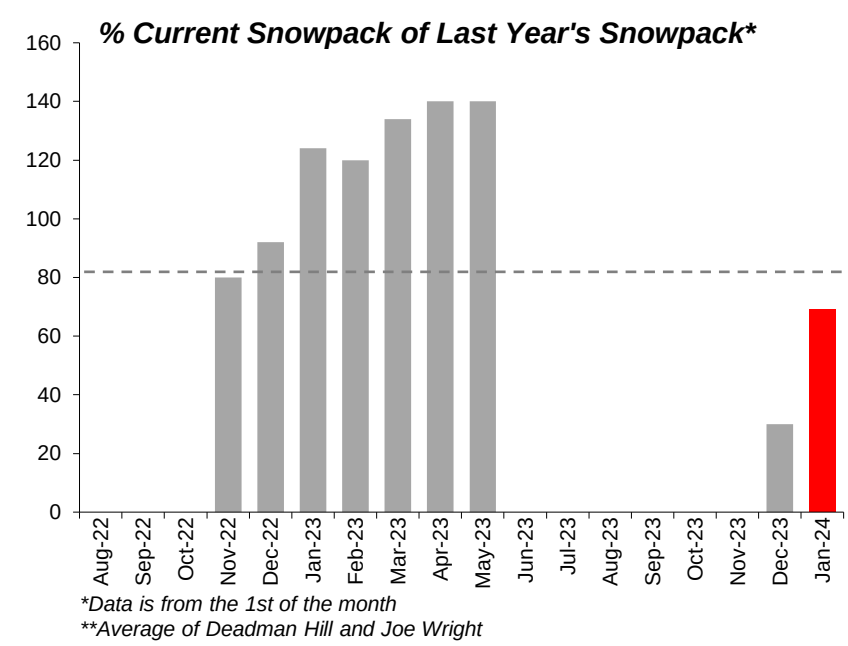
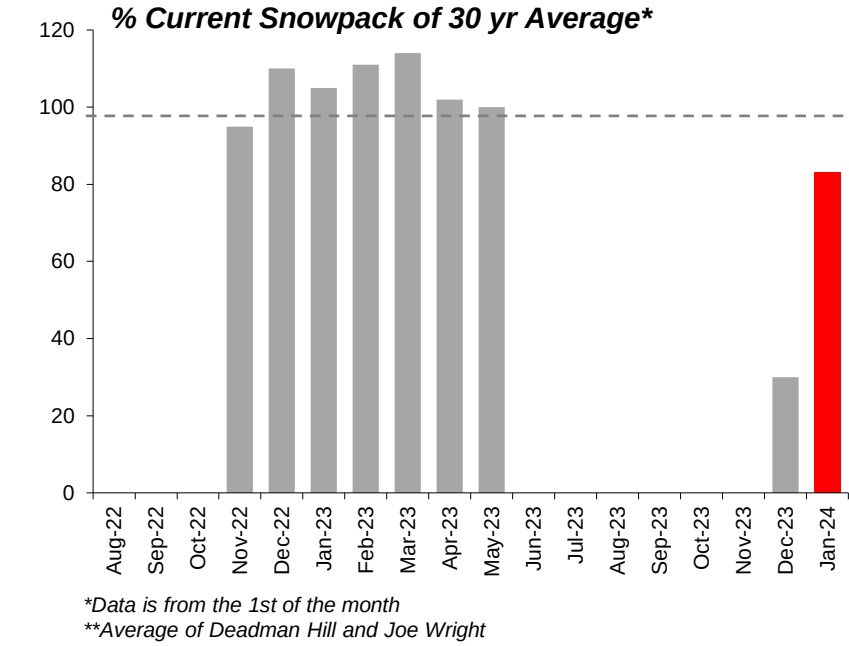
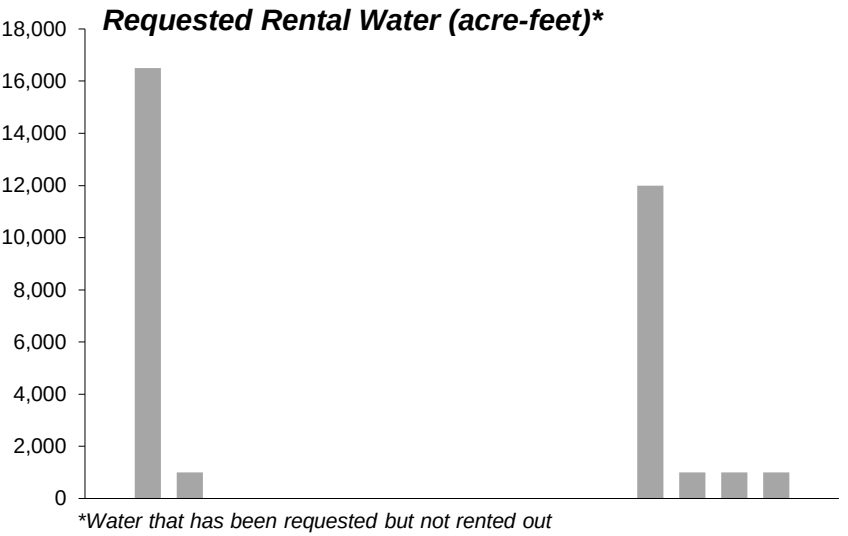
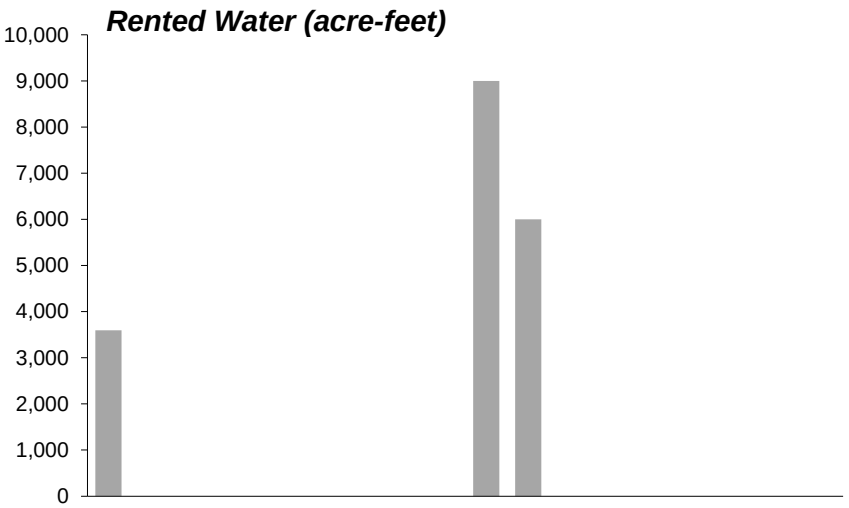
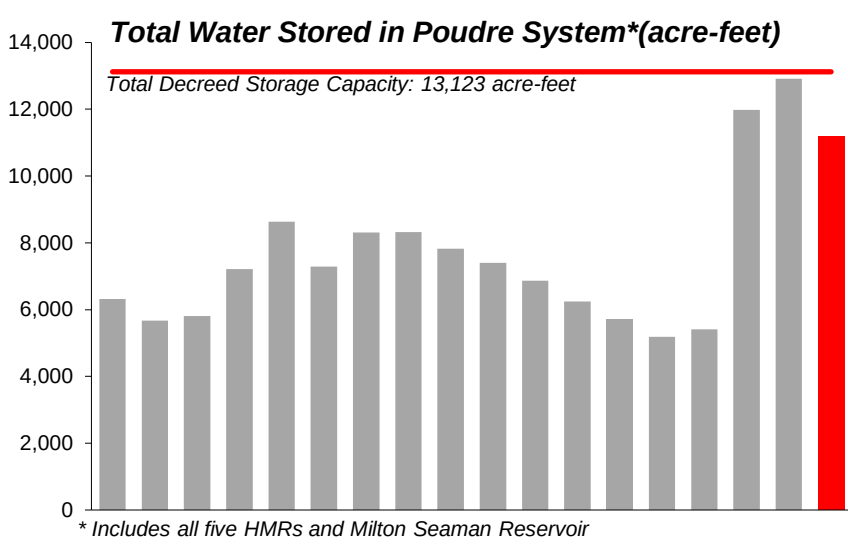
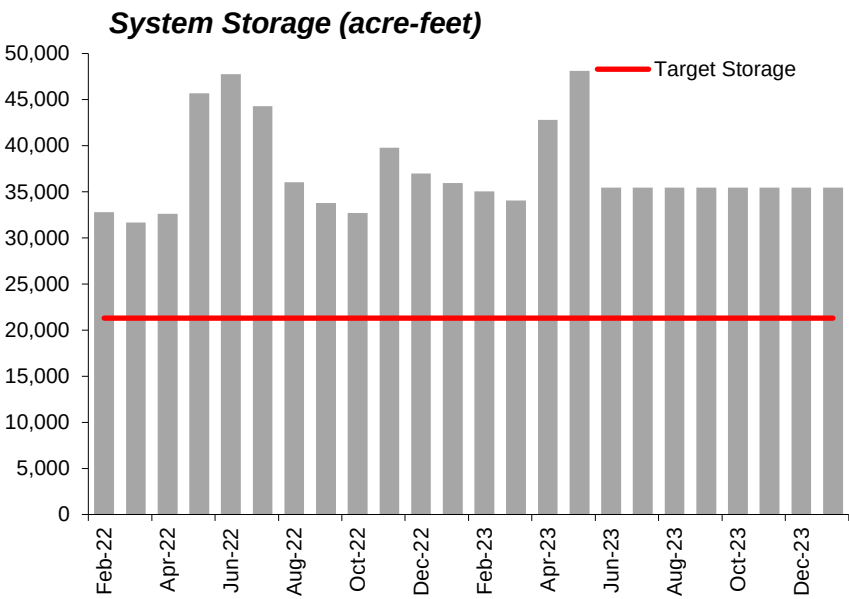


Water Resources

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.



*Data is from the 1st of the month
**Average of Deadman Hill and Joe Wright

*Data is from the 1st of the month
**Average of Deadman Hill and Joe Wright

Treated Water and Weather Data

January was a cold month with an aveage temperature of 24°F.

Greeley received 0.35 inches of precipitation in January.

