

2023



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DENVER WATER OVERVIEW

CEO LETTER

To the Board of Water Commissioners and Our Customers:

We are pleased to present the Annual Budget Book for Denver Water for the fiscal year beginning Jan. 1, 2023 and ending Dec. 31, 2023.

The Report

This report is presented in six sections as follows:

- I. **Denver Water Overview**, which includes this letter of transmittal plus an overview of Denver Water and the City and County of Denver.
- II. **Organizational Structure**, which includes the organization chart, as well as information on the Board of Water Commissioners and Executive Leadership.
- III. **Strategy and Process**, which includes an overview of the Denver Water Strategic Plan, and details around our annual planning/budgeting process.
- IV. **Financial Section**, which contains the financial schedules (sources and uses, division budgets, FTE, fund structure, debt), and information on relevant financial policies.
- V. **Projects**, which includes an overview of the project prioritization process, the ten-year project plan, a project summary with budget, and updates on select capital projects.
- VI. **Water Rates and Usage**, which contains information on our current water rates, usage, and drought plan.

Annual Budget and Planning Process

Although Denver Water is not legally required to adopt budgetary accounting and reporting, the annual budget serves as the foundation for Denver Water's financial planning and control. The budget process involves:

Annual Business Plan and Strategic Plan Alignment

Annually, Denver Water analyzes progress toward its Strategic Plan goals and objectives and identifies key strategic priorities to help achieve these objectives. This exercise culminates in the creation of the Annual Business Plan. The Annual Business Plan is a high-level summary of the work the organization is committed to accomplish in the upcoming year. It describes the connection of each activity to a Strategic Plan perspective, goal and objective, the organizational metric the activity is intended to move, and the corresponding annual budget amount and estimated total cost. The Annual Business Plan includes organizational priorities, organizational

programs, and continuous improvement activities. Progress towards objectives of the Annual Business Plan is reviewed with the Board on a quarterly basis. A draft of the plan is shared with the Board each July and is the basis for the annual budget.

Capital and Financial Planning

Denver Water maintains multi-year operating, capital and financial plans that are aligned with the Strategic Plan and informed by the Integrated Resource Plan (IRP). The Infrastructure Master Plan takes a multidisciplinary look at Denver Water operations and facilities to identify projects in the Capital Plan. The Capital Plan forecasts additions, improvements, and replacements to system facilities based on projected demands for water, federal and state laws and regulations, and ongoing system requirements. Proposed projects in the Capital Plan follow the standard work of the Enterprise Project Management Office (EPMO) for evaluation, selection and prioritization of projects. The Operations and Maintenance Plan includes the ongoing costs of operating and maintaining the system and the impact of the Capital Plan on operations.

The Financial Plan combines the Capital and Operations and Maintenance plans and determines the level of revenue adjustments needed to meet annual revenue requirements and funding sources for capital improvements for the next several years. The annual revenue requirements include operating expenses, debt service on existing and proposed bonds and loans, and capital expenditures. These expenditures are offset through miscellaneous revenues such as hydropower, customer-related fees, system development charges, bond proceeds, participation and interest income. The net requirement is the amount recovered through the user rates. The multi-year Financial Plan helps keep year-over-year volatility in annual water rates to a minimum. Alternative financial plans that address potential revenue shortfalls are also analyzed as a part of the long-range planning effort. These long-range plans are used as the starting point for the annual budget.

Annual Budget Preparation

The budget development process is the formal method through which Denver Water ensures alignment between fiscal resources and organizational priorities for the upcoming year. It results in an Approved Budget, which is the defined plan of revenue and expense activities for the year. The Approved Budget is the main internal control document used to monitor and manage revenues and expenditures for Denver Water. The budget is presented to the Board in November at the annual Budget Workshop, and the official approval by the Board occurs in December.

Long-Term Financial Planning — Major Initiatives

Lead Reduction Program

- Denver Water is continuing to implement its Lead Reduction Program (LRP). In 2012, Denver Water's sampling showed an exceedance of 2 parts per billion over the lead action

level under the Safe Drinking Water Act (SDWA), which triggered a study of Denver Water's corrosion control treatment. As a result, in March 2018, the Colorado Department of Public Health and Environment designated orthophosphate as the optimal corrosion control treatment for Denver Water's system. Because of concerns with the impact of orthophosphate treatment on its system and the impact of increased phosphorus loading on the South Platte watershed and regional wastewater treatment plants, Denver Water applied for a variance from the SDWA to implement the LRP, which overall is more protective of public health than orthophosphate. In December 2019, this variance was approved by state and federal agencies. This program involves: adjusting the pH level in the water to reduce the risk of lead getting into the drinking water, replacing lead service lines that bring water from the mains to customer houses at no direct charge to the customer and providing water filters that are certified to remove lead to all customers with known or suspected lead services lines until six months after their line is replaced. The program was implemented in 202 with replacement of all lead service lines to be completed within 15 years. In 2022, Denver Water met or exceeded all regulatory targets by replacing roughly 5,000 lead service lines, over 500 more than required by the variance, bringing the total lead service lines replaced to date to over 15,000. The estimated cost of the program is approximately \$667.5 million.

The North System Renewal

Denver Water is investing over \$1.4 billion in renewing and expanding the North System to address supply vulnerability.

- The Gross Reservoir Expansion project will raise the existing Gross Dam by 131 feet, creating an additional 77,000 acre-feet of storage in Gross Reservoir and providing an estimated 18,000 acre-feet of annual water to the North System. The City of Arvada is a key stakeholder in the project and will provide funding for one-sixth of the project costs and receive one-sixth of the project's expected annual water supply. All federal and state approvals have been obtained, and Denver Water is proceeding with the construction of the dam per the Federal Energy Regulatory Commission's (FERC) order to start construction by July 16, 2022, and finish by July 16, 2027. A lawsuit filed at the end of 2018 by environmental groups against the U.S. Army Corps of Engineers (Corps) and the U.S. Fish and Wildlife Service (USFWS), regarding the Corps' National Environmental Protection Act (NEPA) process and the USFWS' Endangered Species Act (ESA) process, was dismissed by the U.S. District Court. Petitioners have appealed to the 10th Circuit Court of Appeals and the case was referred back to the lower court, however, petitioners have not sought to enjoin construction while litigation is ongoing. Construction began in 2022.
- The Northwater Treatment Plant (NTP) will supplement the existing Moffat Water Treatment Plant (Moffat) with a state-of-the-art facility designed to improve reliability

and operational flexibility. The NTP will be capable of treating 75 million gallons per day (MGD) with room to expand. A portion of the existing Moffat is projected to remain in service through 2040, and the project includes improvements at the Moffat site to convey treated water from both NTP and Moffat to the distribution system. The project is currently under construction and will be operational by 2024.

Awards, Recognition and Acknowledgements — 2022

Annual Comprehensive Financial Report

The Government Finance Officer's Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Denver Water for its Annual Comprehensive Financial Report for the fiscal year ended Dec. 31, 2021. This was the 34th consecutive year that Denver Water has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only.

Annual Budget

Denver Water received the GFOA's Distinguished Budget Presentation Award for its annual budget document for the fiscal year beginning Jan. 1, 2022. This is the 31st consecutive year Denver Water has received this prestigious award. To qualify for this award, Denver Water's budget document must be judged proficient as a policy document, a financial plan, an operations guide and a communications device.

The Innovation Award

This award was given from the American Water Works Association for the Northwater Treatment Plant project. This award is given to utilities that have inspired or implemented an innovative idea, best practice or solution to address a challenge facing the industry.

The Design Award

This award was given from the Colorado Chapter of the American Institute of Architects (AIA) to Stantec for the Operations Complex Redevelopment project. The award honors the most outstanding work of AIA Colorado members and their firms, reinforces the value of great architecture and highlights members' positive contributions to the community. The project received a merit award in sustainability.

Excellence in Concrete Award

This award was given from the American Concrete Institute for the Administration Building. The program recognizes excellence in architectural and structural design as well as the unique, innovative and sustainable uses of concrete.

National Safety Council Award

This award was given for the Northwater Treatment Plant project. The award recognizes a perfect safety record with a year or more of zero lost-time incidents. Kiewit Barnard also recognized the project for greater than 300,000 safe worker-hours worked between the start of construction in 2018 through June 2022.

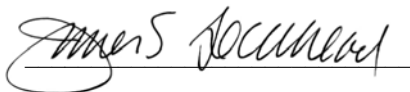
Public Relations Team of the Year Award

This award was given from the Colorado Chapter of the Public Relations Society of American to the Public Affairs department. The award recognizes outstanding results and achievement for the organization, demonstrating innovation and creativity in the public relations efforts, creating a positive impact on the communications profession, and exhibiting high professional and ethical standards.

Acknowledgments

We wish to express our appreciation to all members of Denver Water who assisted and contributed to the preparation of this report. Credit must also be given to the Board of Water Commissioners for unfailing support in maintaining the highest standards of professionalism in the management of Denver Water's finances.

Sincerely,



James S. Lochhead
CEO/Manager



Angela C. Bricmont
Chief Finance Officer

ABOUT DENVER WATER

Denver Water proudly serves high-quality water and promotes its efficient use to 1.5 million people in the city of Denver and many surrounding suburbs. Established in 1918, the utility is a public agency funded by water rates and new tap fees, not taxes. It is Colorado's oldest and largest water utility.



In 1918, Denver residents voted to create a five-member Board of Water Commissioners and to purchase the Denver Union Water Company's water system for approximately \$14 million, creating Denver Water. The structure of the five-member Board of Water Commissioners is still in existence, governed under the Charter of the City and County of Denver Article X.

Denver Water's service area covers more than 335 square miles, including Denver and several suburban distributors. The majority of Denver's water comes from rivers and streams fed by mountain snowmelt. The South Platte River, Blue River, Williams Fork River and Fraser River watersheds are Denver Water's primary water sources, but it also uses water from the South Boulder Creek, Ralston Creek, and Bear Creek watersheds. A system of reservoirs networked by tunnels and canals provides water to approximately 1.5 million people. Denver Water's major treatment plants — Marston, Moffat, Foothills, and soon Northwater — maintain water quality under the watchful eye of the Denver Water's water quality lab.

- Denver Water ensures a continuous supply of water to the City and County of Denver and nearly 50% of Denver Water customers who live in the surrounding suburbs (water service contracts).
- It is responsible for the collection, storage, quality control and distribution of drinking water to nearly one-fourth of all Coloradans.
- Its primary water sources include South Platte River, Blue River, Williams Fork River and Fraser River watersheds.
- Other water sources include South Boulder Creek, Ralston Creek and Bear Creek watersheds.
- Denver Water is a separate entity from the city of Denver.

Water efficiency efforts

Creating a culture of conservation and water efficiency in Denver dates to 1936 when Denver Water advertised on street trolleys asking customers to help save water. The modes of communication have changed, but the message remains the same, as does our commitment to helping customers use this precious resource wisely. Denver Water offers residential rebates and personalized water use reports to customers to help them use water wisely. Customers must adhere to summer watering rules and can access easy tips online to reduce their water use inside and out.



A Denver trolley displaying the conservation message: Help Save Water, 1936

Distribution system

- Miles of water mains (pipelines): More than 3,000, enough to stretch from Los Angeles to New York.
- Miles of non-potable pipes in system: 45.
- Number of pumping stations: 18 potable, three recycled and two raw water.
- Underground reservoirs in various city locations: 30.

Pump stations

Making use of the hilly terrain and the natural topography of the South Platte River valley, Denver Water uses gravity to provide water to approximately 60% of its potable water customers. The remaining 40% rely on pump stations to deliver them water. Denver Water has 18 potable, three recycled and two raw water pump stations in various locations throughout the distribution system, with a capability of pumping more than 1 billion gallons.



Denver Water's collection system covers roughly 4,000 square miles, which includes the South Platte River watershed.

Local economy

In 1858, Denver was founded during the peak of the Gold Rush. Now, Denver is a central hub of economic activity in the state of Colorado. With a population of approximately 720,000, it is also the most populous city within a 500-mile radius. Major industries include aerospace, broadcast and telecommunications, healthcare and wellness, financial services, bioscience, energy, and

technology. The statewide economy also includes agriculture and tourism. Denver Water proudly serves approximately 1.5 million people in Denver and the surrounding suburbs and is committed to serving the metro area as it grows. Water is essential in making Colorado beautiful and ensuring quality of life for communities.



Economic vitality

- The “World’s Best Cities 2023” by Resonance Consultancy ranked Denver as the 56th best city in the world. The rankings were based on scores in six core categories: place, product, programming, people, prosperity, and promotion. Denver scored highly in GDP per capita, overall prosperity and education levels.
- Employment in Metro Denver increased 4.1 percent between October 2021 and 2022, rising by 71,500 jobs across all super sectors. Employment in the Denver-Lakewood-Aurora MSA rose 4.1 percent, or by 63,800 jobs, during this period.
- All seven counties in metro Denver reported over-the-year decreases in the unemployment rate in October. The City and County of Denver reported the largest decrease, falling 1.3 percentage points, followed by Adams and Arapahoe counties (-1.2 percentage points) and Jefferson County (-0.9 percentage points). Boulder and Douglas counties reported the lowest unemployment rate of 2.8 percent, while Adams County reported the highest rate of 4.1 percent.
- Growth is expected across all 11 national industry sectors, with the strongest employment outlook reported in IT and technology (+56 percent), followed by banking and finance (+42 percent), and construction (+36 percent).

Labor Force Statistics
(000s, not seasonally adjusted civilian labor force)

	October 2022		2022 YTD AVG		2021 YTD AVG		2017	2012
	Total Labor Force	Unemployment Rate	Total Labor Force	Unemployment Rate	Total Labor Force	Unemployment Rate	Ann Avg Unemployment Rate	Ann Avg Unemployment Rate
Metro Denver	1,913.9	3.4%	1,893.9	3.4%	1,839.2	5.7%	2.5%	7.7%
Adams County	286.4	4.1%	283.5	4.0%	275.9	6.6%	2.8%	9.5%
Arapahoe County	380.4	3.7%	376.7	3.6%	366.7	6.1%	2.6%	7.8%
Boulder County	204.6	2.8%	201.8	2.7%	195.0	4.7%	2.2%	6.3%
Broomfield County	43.0	3.0%	42.5	2.8%	41.1	4.8%	2.4%	6.7%
Denver County	442.5	3.7%	438.2	3.7%	426.9	6.3%	2.5%	7.9%
Douglas County	209.9	2.8%	207.7	2.7%	200.3	4.3%	2.2%	6.1%
Jefferson County	347.1	3.2%	343.6	3.1%	333.5	5.3%	2.4%	7.5%
Colorado	3,260.7	3.5%	3,236.5	3.5%	3,150.4	5.7%	2.3%	6.8%
United States	164,753	3.4%	164,295	3.7%	161,065	5.7%	2.5%	7.9%

Source: Colorado Department of Labor and Employment, Labor Market Information. (p) =preliminary

(Source: Metro Denver Economic Development Corporation, for more information see: www.metrodenver.org.)

Milestone: More than 15,000 lead service lines have been replaced

Denver Water customers were key to first three years of Lead Reduction Program.

Denver Water has replaced more than 15,000 lead service lines in the first three years of its landmark Lead Replacement Program. While there is no lead in the water Denver Water delivers to customers, lead can get into drinking water as it passes through customer-owned service lines and internal plumbing and fixtures that contain lead.

Denver Water’s Lead Reduction Program is replacing an estimated 64,000 to 84,000 customer-owned lead service lines, which carry water from the water main in the street, with lead-free copper lines at no direct cost to the customer. In addition, the program adjusted the chemistry of the water, created an interactive map showing which buildings might have lead service lines, provided water pitchers and filters to customers to use until six months after their line was replaced —and communicated it all to customers by launching the biggest public health education campaign in the utility’s history.

In 2023, the pace of replacement work will pick up due to an infusion of \$76 million in federal funding the program received last year. The federal money will be spent through 2025 and is expected to help pay for replacing up to 7,000 lines, shortening the 15-year program by about 1.5 years. Thanks to this additional funding, up to 3,000 additional lines will be replaced in 2023 — on top of the nearly 5,000 lines already planned for replacement during the year.



Pieces of lead service lines installed by builders decades ago. Denver Water is replacing lead service lines with new, lead-free copper lines at no direct charge to the customer.

Life is better with water

Do you remember when Denver Water asked customers to “Use Only What You Need?”

That 10-year advertising campaign, launched a few years after the 2002 drought that reduced water levels in storage reservoirs statewide, urged customers to reduce the amount of water they used in their everyday lives.

And it worked. By the time the campaign ended in 2015, water use by Denver Water’s customers had dropped 22% compared to usage before the 2002 drought.

Denver Water’s new campaign, launched in 2020, takes a broader look at water and the issues around it, including uncertainty around climate change, population growth, infrastructure investment and the need to remove decades-old lead service lines buried in the community.

The campaign’s main message is simple: Water is everything.

“Life is better with water” is a year-round campaign, in contrast to the “Use Only What You Need” campaign, which ramped up during the summers.



Follow Us



HISTORY



Long before the city of Denver was established, the South Platte River and Cherry Creek were oases for people who traveled the dry Great Plains. These early travelers could do without many things, but not water. That's why pioneers, and the American Indians before them, camped along the banks of Cherry Creek and the South Platte River. The first residents of the area drank water directly from the creek

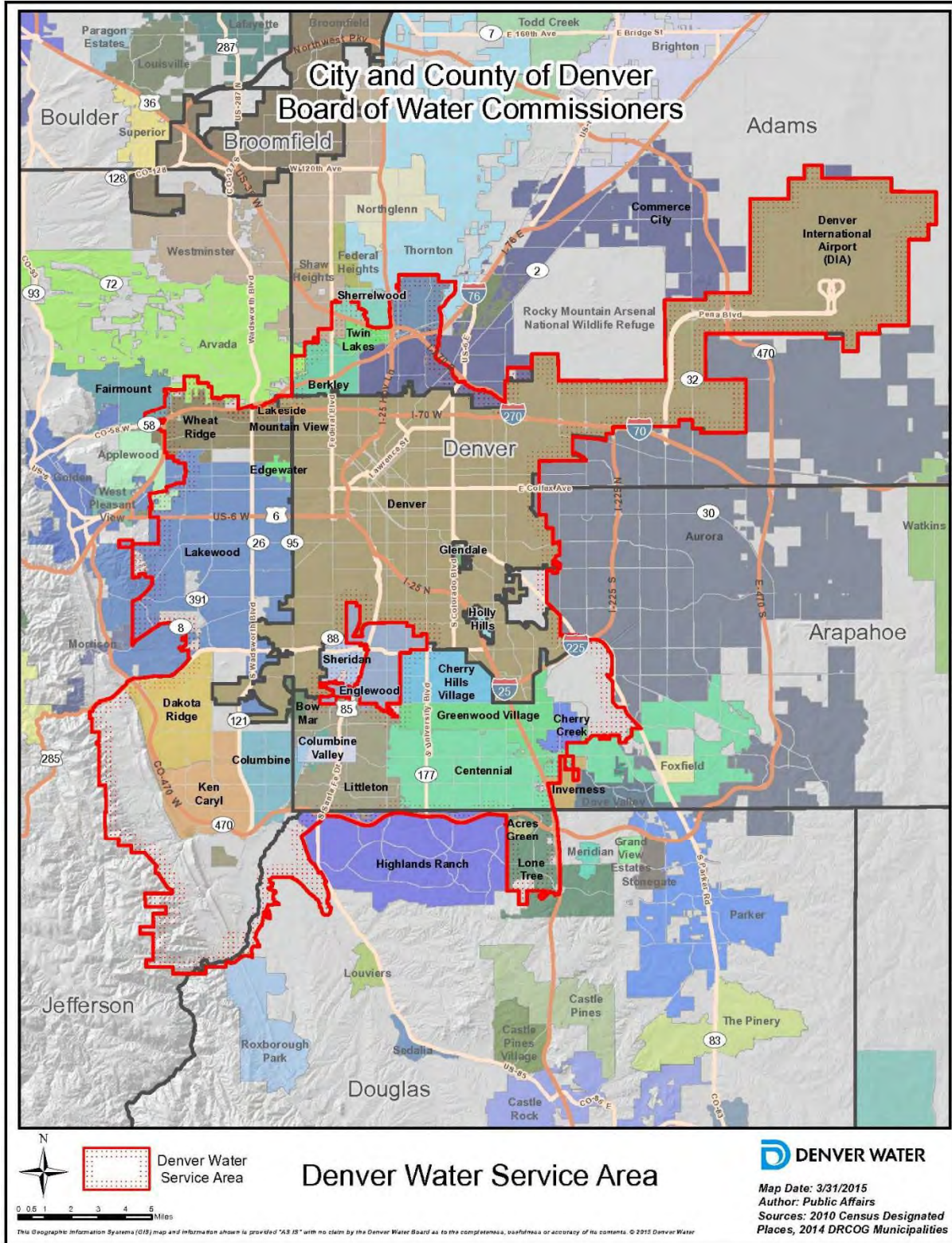
and river. Surface wells and buckets of water sufficed for a while as a delivery system, but they soon proved inadequate. Irrigation ditches were the next step forward.

Soon, water companies began offering service to settlers. By the late 1800s, several water companies had fought, collapsed, or merged. In 1918, Denver residents voted to buy the Denver Union Water Company and form the municipal agency now known as Denver Water. In doing so, voters created an entity that would operate independently from city government, thereby keeping water service separate from local politics.



Today, Denver Water is the largest and oldest water utility in the state. Its service area covers more than 335 square miles, including the City and County of Denver and several suburban distributors.

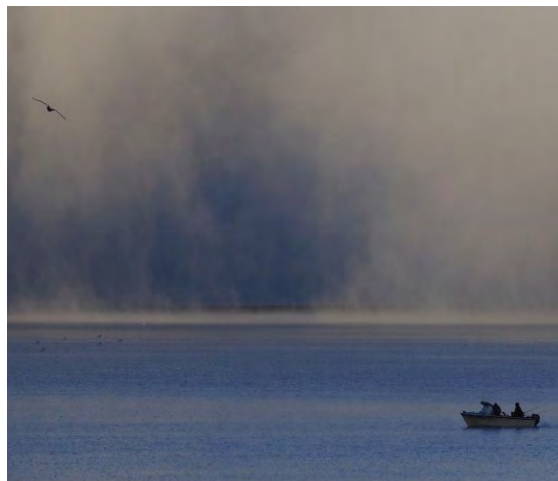
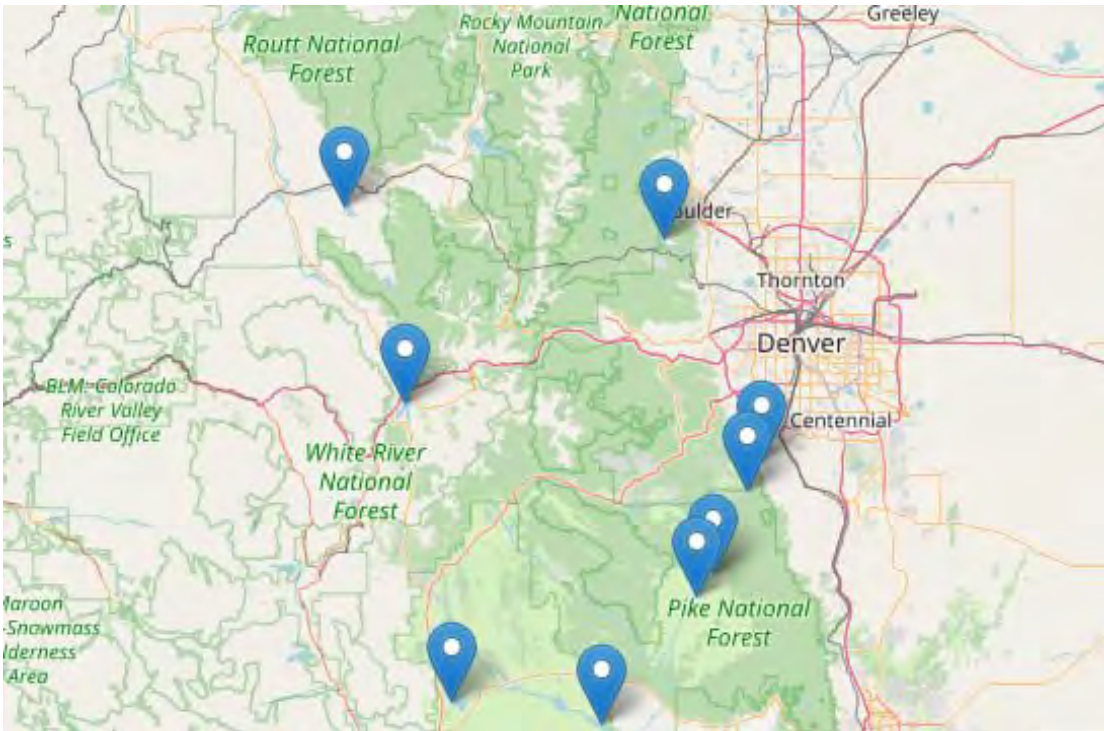
SERVICE AREA MAP



DENVER WATER RECREATION

There's more to water than drinking it.

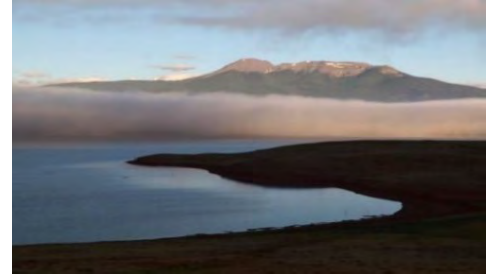
Denver Water's reservoirs, canals and canyons offer lots of opportunities to hike, fish and enjoy a peaceful afternoon in the mountains.



Antero Reservoir

Large trout call this place home.

Antero is Denver Water's first collection reservoir on the South Platte River. Geologists believe Antero Reservoir occupies the site of a former lakebed. While Green Lake lies submerged within the reservoir, an extinct volcano, Buffalo Peaks, looms above (as seen below).



Cheesman Reservoir

A breathtaking engineering landmark.

Named for Denver water pioneer Walter S. Cheesman, the dam was once the world's tallest at 221 feet above the streambed when completed in 1905. Denver Water purchased the reservoir and related facilities in 1918. Cheesman was the first reservoir of Denver's mountain storage facilities and has been designated a National Historic Civil Engineering Landmark.



Dillon Reservoir

Play on and around Denver Water's largest reservoir.

Completed in 1963, Dillon Reservoir has an earth-fill dam, 5,888 feet long by 231 feet above the Blue River streambed. The entire town of Dillon and a hydroelectric plant were relocated to build the dam, which diverts water from the Blue River basin through the Harold D. Roberts Tunnel under the Continental Divide into the South Platte River basin.



Eleven Mile Canyon Reservoir

Secluded spot with fishing, trails and camping.

Completed in 1932 after two years of construction, Eleven Mile stands 135 feet above the South Platte riverbed. The 6-mile-long reservoir is the second largest in Denver Water's system and one of the largest bodies of water east of the Continental Divide.

Gross Reservoir

Treasure tucked away in a quiet canyon.

Named after Denver Water former Chief Engineer Dwight D. Gross, the reservoir was completed in 1954. It serves as a combination storage and regulating facility for water that flows under the Continental Divide through the Moffat Tunnel. A major construction effort – the Gross Reservoir Expansion Project – is underway, which will raise the height of the existing dam 131 feet.



South Platte River

Fishing destination and scenic mountain terrain.

This stretch of the South Platte River has been a popular fishing spot for decades, earning it Gold Medal Waters status by the Colorado Wildlife Commission. In the 1890s, Stephen Decker built a general store and later a saloon in this area. The confluence is now a popular fishing and kayaking area.



River sections and access:

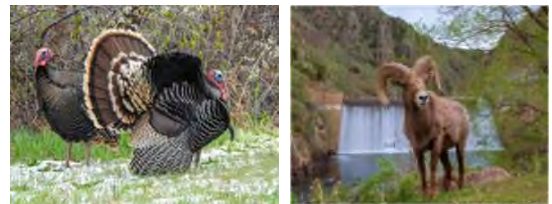
- Cheesman Canyon to Strontia Springs: From Cheesman Reservoir (elevation 6,800 feet), the South Platte River descends 6 miles through Cheesman Canyon to Deckers, a world-renowned fly-fishing area. The river then bends north for about 17 miles to the confluence with the North Fork of the South Platte (elevation 6,100 feet).
- Buffalo Creek to confluence: The North Fork flows approximately 10 miles east from Buffalo Creek (elevation 6,600 feet) to the confluence. From the confluence, the river flows east to Strontia Springs Reservoir above Waterton Canyon at an elevation of 6,000 feet.

Waterton Canyon and Strontia Springs Reservoir

From bighorns to bike trails, a great place to play.

Strontia Springs Dam is 6.5 miles upstream of the mouth of Waterton Canyon on the South Platte River. Water is diverted from the reservoir into a 3.4-mile tunnel under the mountains to the Foothills Water Treatment Plant. Completed in 1983, this dam rises 243 feet above the South Platte streambed.

Waterton Canyon is home to many different types of wildlife, including the popular Rocky Mountain bighorn sheep herd. There are also mule deer, black bears, mountain lions, elk, lizards, turkeys and snakes, including the prairie rattlesnake.



Williams Fork Reservoir

A peaceful, secluded place to recreate.

Completed in 1959, Williams Fork Dam and its power plant send water and electricity to the West Slope when Denver diverts water. Standing 217 feet above the Williams Fork River streambed, the dam backs up a reservoir of nearly 97,000 acre-feet of water, and the power plant contains a 3,158-kilowatt generator.



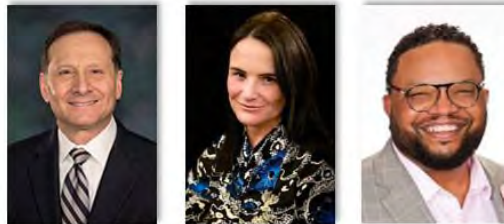
Denver Water released water from Williams Fork Dam in Grand County as part of the Coordinated Reservoir Operations program, June 2019



ORGANIZATIONAL STRUCTURE

BOARD OF WATER COMMISSIONERS

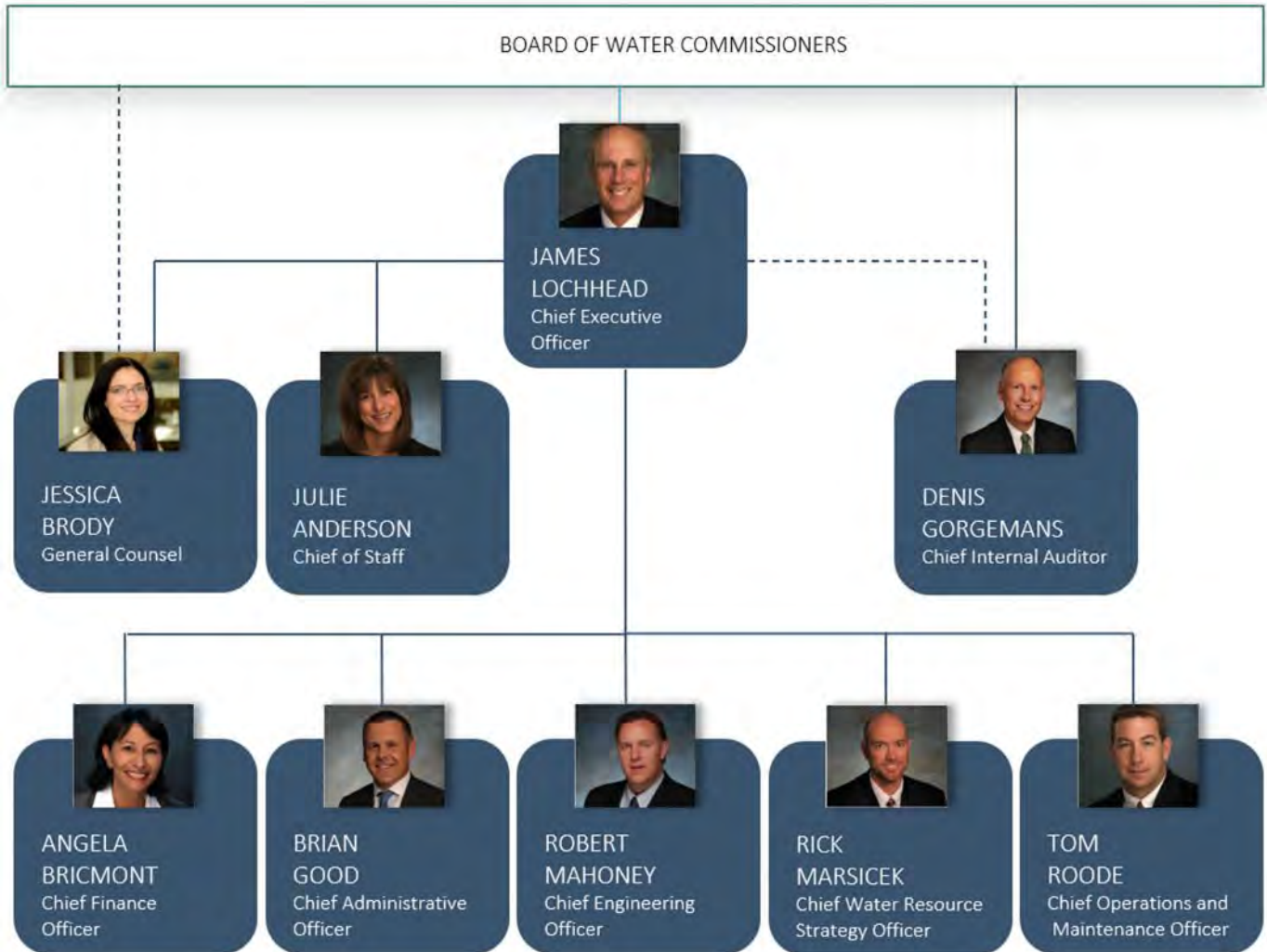
The mayor of Denver appoints Denver's five-member Board of Water Commissioners to staggered six-year terms. When a commissioner's term expires, they continue to serve until the mayor reappoints or replaces them. The Board's purpose is to ensure a continuous supply of water to the people of Denver and its suburban customers. Among other duties, commissioners are responsible for setting water rates and monitoring the cost and maintenance of the system. The Board holds its public meetings generally twice a month.



*From left to right (top): Craig Jones, Dominique Gómez
From left to right (bottom): Gary Reiff, Stephanie Donner, Tyrone Gant*

Craig Jones, President Managing director, The Colony Group's Rocky Mountain Region and co-president, Colony Sports and Entertainment	Commissioner since October 2017 Term expires 2029
Dominique Gómez, First Vice President Deputy director, Colorado Energy Office	Commissioner since July 2021 Term expires 2025
Gary Reiff, Vice President Senior Advisor, UC Health	Commissioner since September 2017 Term expires 2029
Stephanie Donner, Vice President General counsel and head of government relations, Inspire Clean Energy, LLC	Commissioner since July 2021 Term expires 2025
Tyrone Gant, Vice President Director of Treasury Management and Commercial Banking Fee Income Manager, Vectra Bank Colorado	Commissioner since August 2021 Term expires 2027

ORGANIZATIONAL CHART AND EXECUTIVE LEADERSHIP



*Additional full-time and limited-term employee information is included in the organizational rollup tables in the subsequent divisional sections and the Regular Employees section.

Manager & Staff



CEO

- Office of CEO

Operations
Budget:
\$3.3M

Employee Count:
FTE – 8.0
LTE – 0.0

The CEO/Manager is the chief executive officer for Denver Water, secretary to the Board of Water commissioners and custodian of all records. He carries out all other duties and responsibilities as assigned by the Board as it fulfills its charter obligations.

The CEO/Manager executes the policies and decisions of the Board and reviews and recommends to the Board changes in rules and regulations with respect to all matters appropriate for its action.

In addition, the CEO/Manager gives overall direction to employees and oversees the work necessary to provide an adequate supply of water to the residents of the City and County of Denver, and areas economically and socially integrated with the city with whom Denver Water has a water service contract.

The CEO/Manager represents the Board in ongoing relationships with all levels of government, community organizations and the public served, and recommends to the Board a rate structure and other income producing procedures that will assure adequate revenues to meet operating and maintenance costs, finance of ongoing capital improvement programs, and the principal and interest payments on long-term debts.

Five division chiefs, the general counsel, the chief internal auditor and the chief of staff report directly to the CEO/Manager.

In December 2022, Jim Lochhead announced his plans to leave the utility once the Denver Board of Water Commissioners completes the process of bringing on a successor.

Lochhead's collaborative and visionary approach was a catalyst for many major initiatives, including the signing of the Colorado River Cooperative Agreement, the WISE agreement, the From Forests to Faucets program, the Lead Reduction Program, the High Line Canal transformation, and a recent water conservation pledge among 30 municipal water utilities throughout the Colorado River Basin.

Lochhead oversaw the largest capital development program in Denver Water's history, with over \$2.3 billion of investment in renewing the system. The Board is expected to hire a new CEO in 2023.



Manager & Staff

Internal Audit

- Internal Audit

Operations
Budget:
\$0.8M

Employee Count:
FTE – 3.0
LTE – 0.0

The Internal Auditor reports directly to the Board of Commissioners and administratively to the CEO/Manager. This structure allows Internal Audit to provide independent and objective assurance and consulting services to Denver Water, as indicated in the Internal Audit Charter. Internal Audit conducts audit engagements that review and evaluate whether appropriate risk management,

governance and internal control procedures are in place and functioning. Owing to its unique position in the organization, Internal Audit provides advice and recommendations to improve internal controls but is not permitted to make operational or policy decisions.

Each year, Internal Audit works closely with the Board of Commissioners and Denver Water’s management to develop an internal audit plan, which follows a structured audit planning process. These engagements are scheduled and executed throughout the year, following the internal audit process.



Manager & Staff

Office of General Counsel

- Office of General Counsel
- Insurance and Legal Claims

Operations
Budget:
\$4.4M

Employee Count:
FTE – 15.0
LTE – 0.0

The Office of General Counsel works closely and proactively with employees and managers at all levels of Denver Water and has a direct reporting responsibility to the CEO/Manager and the Board. Several areas of legal practice are involved in providing legal counsel to Denver Water, including water rights, contracts, civil rights, tort claims, real estate, natural resources, municipal, employment, construction, environmental and regulatory law. The office

represents Denver Water in litigation, administrative and regulatory hearings, and internal appeal hearings.

Manager & Staff



Office of People and Strategy

Human Resources

- Benefits Administration
- Compensation
- Talent
- Wellness

Chief of Staff

- Continuous Improvement
- Learning and Organizational Development

Public Affairs

- Government Relations
- External Communications
- Organizational Communications
- Integrated Marketing
- Youth Education
- Sponsorships

Operations
Budget:
\$14.5M

Employee Count:
FTE – 60.6
LTE – 2.0

The chief of staff reports directly to the CEO and has the full authority to lead, direct and resolve day-to-day operational and organizational issues. The chief of staff oversees the successful implementation of key strategic initiatives and is responsible for monitoring and attaining organizational goals.

The chief of staff also oversees the Office of People and Strategy, which aligns work and projects to organizational strategy, provides a standardized support mechanism to efficiently complete work and projects, creates a framework and practice for organizational change management, develops employees to ensure they are equipped to lead us into the future, and provides a governing mechanism to ensure sustainment of past and future organizational changes, through our people and processes.

In addition, the chief of staff recommends related policy changes for Board approval, represents Denver Water in water and community associations, and acts as a backup in the absence of the CEO/Manager when required.

Reporting to the chief of staff are the following sections: Human Resources; Learning and Organizational Development; Continuous Process Improvement; and Public Affairs.



Administrative Services

Administrative Services

- Clinic
- Emergency Management, Access Control and Safety
- Facility Maintenance
- Geographic Information System
- Information Security Office
- Print Shop / Mailroom
- Procurement
- Records & Document Administration
- Recreation Management
- Sustainability

Information Technology

- Project Management Office
- Customer Information Systems
- Enterprise Asset Management
- Enterprise Resources Planning
- IT Client Services
- IT Data Services
- Infrastructure and Technology Services
- IT Asset Management
- Network & Industrial Control Systems

Operations
Budget:
\$48.8M

FTE – 168.8
LTE – 3.0

Administrative Services allows Denver Water to deliver services internally efficiently and effectively and to customers. The division oversees facilities management, including Sustainability, Environmental Compliance, Security and Recreation. It also oversees organizational functions, including Purchasing and Contracting, Records and Document Administration, Safety, Emergency Management, Risk Management, Information Technology, the Clinic, and the Print Shop/ Mailroom.



Finance

- Accounting
- Financial Planning and Performance
- Rates
- Treasury
- Contract Control

Customer Relations

- Contact Center
- Tap Sales
- Quality Assurance and Reporting

Operations
Budget:
\$15.3M

FTE – 106.3
LTE – 0.0

Finance manages financial resources and acts as the disbursing authority for the CEO/Manager. The division is responsible for creating long-range financial plans, controlling and disbursing funds, and for planning, developing and administrating water rates, as well as managing the customer experience.

Finance functions include Accounting, Financial Planning and Performance, Rate Administration, Treasury Operations, Enterprise Project Management, Customer Care and Water Sales.



Engineering

- Hydraulics Engineering
- Technical Support Services
- Asset Recording and Drafting
- Infrastructure Engineering
- Water Treatment Engineering
- Mechanical Engineering
- Electrical Engineering
- Dam Safety
- Design Drafting
- Survey
- Construction Project Management
- Construction Inspection
- Materials Lab
- Distribution and Property Management

Operations
Budget:
\$22.7M

FTE – 172.8
LTE – 5.0

Engineering is responsible for the design, construction and related engineering aspects of physical additions or improvements to the water system. It provides surveying and mapping services, engineering functions, contract administration support, as-built drawings, land acquisition services and GIS database administration for system assets, among other duties. Engineering is composed of seven sections: Survey, Programs and Projects, Construction Management, Distribution and Property Management, Asset Recording, Administration, and Technical Support Services.



Water Resource Strategy

Water Resource Strategy

- Demand Planning and Efficiency
- Environmental Planning
- Raw Water Supply
- Water Rights
- Water Resource Analysis
- Water Resource Planning
- Watershed Planning

Operations
Budget:
\$10.6M

FTE – 43.0
LTE – 0.0

Water Resource Strategy is responsible for ensuring a secure water future for the people being served now and in the future. It plans for long-range water supply and climate change, protects watershed health, undertakes environmental permitting, forecasts for demand planning, examines water efficiency and recycling, supports our water rights, undertakes water hydrology modeling, and directs the collection and management of water in our source of supply system.

The team also is critical in building partnerships with other Front Range utilities, the West Slope, and state and federal

agencies. Water Resource Strategy is composed of six sections: Demand Planning and Efficiency, Environmental Planning, Raw Water Supply, Water Rights, Water Resource Analysis, and Water Resource Planning.



Operations & Maintenance

Source of Supply

- South Boulder
- Winter Park
- Metro
- South Platte
- West Slope

Support Services

- Fleet
- Trades
- Warehouse
- Westside Campus Facilities

Water Distribution

- Construction and Maintenance
- Field Services
- Distribution Assets

Water Quality and Treatment

- North System
- South System
- Project Support

Customer Service Field

- Meter Shop
- Meter Reading and Inspections
- Central Dispatch

Operations and Maintenance is responsible for operating and maintaining the physical and natural assets used to deliver water to Denver Water customers. These assets include rivers, canals, reservoirs, dams, tunnels, pipelines, valves, hydropower, tanks, pump stations and treatment plants. Operations and Maintenance establishes and implements criteria for the proper operation of all assets to the satisfaction of outside regulating agencies and Denver Water customers.

It is composed of six sections: Source of Supply, Water Quality and Treatment, Water Distribution, Support Services, Business Operations, and Customer Service Field. Support Services provides fleet services, warehouse and trade shop functions, including mechanical, electrical, plumbing, welding, carpentry and grounds maintenance to Denver Water.

Operational
Budget:
\$114.8M

FTE – 583.0
LTE – 21.0



The executive team during the Strategic Plan Refresh Continuous Improvement Event. The plan refresh, informed by a survey of Denver Water’s Leadership Connection group, along with board members and an advisory committee discussed the significant progress and challenges since the plan’s last refresh in 2017.



STRATEGY AND PROCESS

 DENVER WATER

Strategic Plan

Updated 2022





VISION AND MISSION

Our Vision: To sustain vibrant communities that value water for future generations.

Denver Water is the nation's premier water resource manager. Through our service, we enrich the lives of the people in the diverse communities of the Denver metropolitan area and surrounding mountains. The water we provide is a priceless resource. Everything we do – serving and engaging our customers, planning, developing and operating our system, interacting with our neighbors and the environment – fosters the value of water for future generations.

Our customers are our top priority. They rely on us to deliver a clean, reliable water supply every day, without fail. In turn, we depend on our customers to use our precious supply with the utmost efficiency. This partnership requires that we continually earn our customers' trust by listening to them and acting in their best interest. We exist to serve them.

Our vast and complex system includes the watersheds, rivers and streams that sustain our water supply. As a result, we develop and operate our system, facilities and properties to sustain a healthy environment and produce clean energy.

We face challenges – known and unknown – such as a warming climate, pandemics, population growth, periodic drought, competition for water resources, security threats, and changing regulatory and political environments. We are prepared for any possible event. To meet these challenges, we build the trust and support of local, regional and national interests by engaging and doing the right thing. In an ever-changing world, we continuously improve, we step up, and we lead.

Financial strength is a cornerstone to our success. We employ accountable governance and control mechanisms to maintain a financial

plan that supports long-term capital investments and ensures effective and efficient operations. We prudently manage rates and ensure they are equitable across customer classes. We are fiscally responsible; we will not sacrifice long-term interests for short-term expediency.

Our people, our families and our friends live in and are part of the diverse cultures and neighborhoods throughout our water system. This sense of community, family and friendship drives our passion for service. We care about each other and the community we serve. We collaborate, we engage, and we partner.

Our Mission

To serve our customers by being a national leader in delivering clean water, operating and maintaining a reliable and resilient system, and protecting the water resources of the West.



GUIDING PRINCIPLES

We use the following guiding principles to evaluate all of our decisions and purposefully move us toward our vision to sustain vibrant communities that value water as a legacy for future generations.

We are customer-centric.

We strive to earn the support and trust of our customers – everyone who pays for our service or uses our water. They are our top priority, and we are motivated to serve them.

We are industry leaders.

We understand, help develop, implement and share best industry practices. We are forward-thinking – we anticipate future trends and look for and responsibly implement progressive solutions. We are adaptable, resilient and experts in our work.

We take the long-term view.

We weigh the consequences of our decisions and actions against multiple scenarios to preserve future options and the sustainability of our community and the environment. We provide the best possible outcome for our customers and future generations.

We are inclusive.

We embrace and promote an inclusive and diverse culture where all employees play a role in speaking openly, listening to understand and suspending judgement. Because we are better together through our unique backgrounds and perspectives, we intentionally seek multiple points of view to ensure the best possible outcomes.



EXCELLENT OPERATIONS

Advance resilient infrastructure and efficient processes to deliver clean water, reliably.

Goal	Objectives
Plan, build, operate and sustain our infrastructure to meet customers' current and long-term water needs, given a warming climate and uncertain future.	<p>Apply scalability to capital and long-range planning to preserve options and maintain flexibility under multiple future scenarios.</p> <p>Anticipate and proactively address infrastructure needs to ensure safety, reliability and resiliency.</p>
Apply new insight and best business practices to drive customer value and continuous improvement in our day-to-day operations.	<p>Use and evolve standard work plans, asset and risk management practices, metrics and operational reporting to drive efficiency.</p> <p>Listen to and incorporate insight from customers, employees and peers to anticipate future needs and drive continuous improvement.</p> <p>Invite new ideas and appropriate technologies for adapting to changing business needs.</p>
Plan and operate our system and facilities to strengthen our resiliency.	<p>Advance environmental stewardship within system operations and capital and long-range planning.</p> <p>Optimize operating efficiency and increase sustainability of all new and existing facilities.</p> <p>Expand our clean energy and green infrastructure portfolio.</p>



INSPIRED PEOPLE

Foster a passionate and purpose-driven culture rooted in inclusion, adaptation and excellence.

Goal	Objectives
Encourage all staff to pursue meaningful opportunities to deliver on our mission.	<p>Foster a people-first, safety-always environment, where employees discuss hazards and concerns with candor and make sound, risk-based decisions to accomplish work safely.</p> <hr/> <p>Ensure a comprehensive approach to training and skill development that enables employee growth.</p> <hr/> <p>Build employee leadership competencies at all levels to drive a culture of servant leadership in both spirit and execution.</p>
Model inclusion and willingness to try new approaches in our pursuit of excellence.	<p>Develop and grow practices that value and draw strength from the diversity of our people.</p> <hr/> <p>Promote diversity in leadership by addressing systemic, cultural and organizational barriers to hiring and career advancement at all levels of the organization.</p> <hr/> <p>Facilitate a culture of continuous improvement with an emphasis on creating efficiencies, removing barriers and taking calculated risks.</p>



STRONG FINANCIALS

Balance near-term investment with sound long-range planning to ensure good value for our customers.

Goal	Objectives
Manage our financial plan in a manner that supports our strategic objectives.	<p>Manage debt and cash reserves to ensure successful execution of our long-range plans, meet short-term needs and prepare us for an uncertain future.</p> <hr/> <p>Proactively manage rates and fees to optimize revenue stability from year to year, ensure good value, equity and affordability across customer classes, and promote water-use efficiency.</p>
Make financial decisions keeping in mind the best long-term interests of our customers.	<p>Maintain a strong control environment by effectively tracking, managing and transparently reporting our financial resources, transactions and performance.</p> <hr/> <p>Develop and execute our budget to ensure alignment with our strategic priorities.</p>



TRUSTED LEADER

Lead the water industry in serving our communities and protecting the water resources of the West.

Goal

Objectives

Advance local, statewide and Western region efforts to protect Colorado’s water.

Align and activate key government, business, nonprofit and academic influencers to advance our strategic positions.

Leverage our successes and influence as a force for change toward a sustainable future.

Collaborate and partner to sustain vibrant, healthy and water-smart communities.

Develop and share best practices across the water industry and in the communities we serve.

Partner with customers and community leaders to advance public health and water conservation.

Build strategic partnerships to inform and influence water-smart growth.

Build trust within our communities by engaging customers and doing the right thing.

Act with integrity, transparency and accountability, always.

Build and nurture relationships with the diverse communities we serve.

Engage our customers, employees and partners in sharing our stories.

ANNUAL PROCESS

Each year, Denver Water undergoes a detailed process to develop the annual business plan and corresponding annual budget — including the ongoing governance cycle. The Business Plan’s foundation is Denver Water’s Strategic Plan, which is evaluated and refreshed every three to five years, with the most recent refresh occurring in 2022. The Strategic Plan is the overarching document that defines the vision, perspectives, goals and objectives of the organization.

To help identify progress, the Executive Team developed a Balanced Scorecard and Organizational Dashboard, which contains metrics that correlate to each objective in the Strategic Plan. The Executive Team reviews these metrics during the monthly organizational performance review and discusses opportunities and implements countermeasures. The dashboard is reviewed with the Board quarterly to share successes and discuss opportunities and the countermeasures that we are taking to improve.

The Annual Business Plan is a high-level summary of the work the organization has committed to accomplish in the upcoming year. It connects each activity to a Strategic Plan perspective, goal and objective, the corresponding organizational metric and its estimated total cost. The Annual Business Plan is composed of organizational priorities, organizational programs, and continuous improvement activities (elements are described below). The plan is developed in conjunction with a review of key organizational risks and potential risk-mitigation strategies, which are tracked in the organization’s risk matrix. Progress toward plan implementation is reviewed with the Board quarterly. The plan is developed annually by the end of the second quarter. A draft of the plan is shared with the Board in July and forms the basis for the annual budget that is presented to the Board at the budget workshop in November.

- **Organizational Priorities:** During April, within each division, the Executive Team sources strategic ideas and builds business cases for organizational priorities for the upcoming year. Team members share these ideas during a series of meetings in May to vet the business cases and prioritize highly strategic goals that will move us closer to our vision. The organizational priorities are finalized by the end of May.
- **Divisional Programs and Continuous Improvement:** In June, divisions develop strategies, continuous improvement activities and corresponding budgets around ongoing programs for budget consideration.
- **Capital and Operating Projects:** Projects are selected annually based on Denver Water’s Strategic Plan, Integrated Resource Plan, long-term capital plan, capital budgeting philosophy, and a business-driven process directed by the Enterprise Project Management Office. The long-term

project plan is updated quarterly. Potential projects are requested using a business case form, which includes details about the evaluation process for a business need or problem, comparison of alternative solutions, risk and asset management data, and strategic alignment. Projects are categorized and prioritized by the end of August.

After the Annual Business Plan is developed, the organization begins the Annual Budget Development process. This process is the formal method through which Denver Water ensures alignment between fiscal resources and organizational priorities for the upcoming year. It results in an Approved Budget, which is the defined plan of revenue and expenses for the upcoming year. Updates to the multi-year financial plan determine the level of revenue adjustments needed to meet annual revenue requirements and financial performance measures. From this, operating and capital budget targets are developed. Based on the Annual Business Plan, the organization uses these targets to plan the budget for the upcoming year. The budget is presented to the Board in November at the Annual Budget Workshop; approval by the Board occurs in December.

The Approved Budget is the main internal control document used to monitor and manage revenues and expenditures for Denver Water. The organization takes an active role in management of the budget to ensure proper fiscal governance and controls via the monthly budget management process, comprehensive quarterly performance reviews, and the Annual Comprehensive Financial Report, described below.

- **Monthly Budget Management:** Each division reviews its budget for accuracy and potential variances, and forecasts future expenditures every month. The Financial Planning and Performance section works with the divisions to review forecasts, identify exceptions to the forecast, and provide reporting on the forecast. Once this review is complete, the forecast is reviewed with the Executive Team. Variances are discussed and addressed in the context of the organizational strategy. After Executive Team review, a monthly reporting package is provided to the Board.
- **Comprehensive Quarterly Performance Reviews:** The Financial Planning and Performance section, with assistance from the Executive Team, creates a comprehensive report of the organization's performance every quarter. The report includes a detailed review of financial performance, the Balanced Scorecard, Organizational Dashboard and annual Business Plan. The report also details information about procurement and contracting, including performance toward supplier diversity goals. The Quarterly Performance Report communicates progress toward organizational metrics (both financial and organizational) to the Board.
- **Annual Comprehensive Financial Report:** The Accounting section, with assistance from various areas of the business, compiles the Annual Comprehensive Financial Report. The report is a set of government financial statements that complies with the Governmental Accounting Standards Board's accounting requirements. External auditors audit the financial information and review

supporting data in March through April. Management reviews the annual financial report and management letter from the external auditors in April through May. The external auditor presents the report to the Board by the end of second quarter for acceptance.

Workflow for Strategic Plan and Annual Plan

Denver Water's Strategic Plan establishes direction, informs decisions and guides actions by providing common goals and objectives for all employees so they may effectively and efficiently align resources and operations toward achieving Denver Water's vision. In response to an ever-changing environment, the Strategic Plan was refreshed in 2022 using feedback from the Board and an advisory committee made up of the Executive Team and a diverse group of employees representing various functions across the organization. From this input, Denver Water refreshed its vision, mission, guiding principles, goals and objectives that compose the revised Strategic Plan. Denver Water's customers remain at the center of the revised version, and many of the concepts from the previous plan were incorporated. However, there are some noteworthy differences:

- The vision changed from "Becoming the best water utility in the nation." This was to acknowledge broader support of and engagement with the communities served. The new vision is "To sustain vibrant communities that value water for future generations."
- This mission was designed to speak to all employees about the incredible importance of their role in sustaining communities for the long term. More broadly, the mission also addresses Denver Water's role in western water policy.
- Denver Water's guiding principles have increased from three to four and now reference an "inclusive culture" as integral to the ability to make informed decisions that benefit our workforce and community.
- While maintaining its emphasis on efficiency, delivery of capital projects, strong financials and continuous improvement, the framework places a greater emphasis on sustainability, Denver Water's role in engaging as a leader in developing water-smart communities and protecting Colorado's water. The framework also highlights the value of a diverse and inclusive culture to decision making, adaptation and the pursuit of excellence.

The plan was shared with all employees and a gap analysis was conducted that informed the three-year implementation strategy and the 2023 Annual Business Plan. This analysis confirmed the need to be proactive beyond Denver Water's core business by continuing large strategic projects and identifying key organizational priorities and programs starting in 2023. Project charters were created for each priority and program, and were prioritized and sequenced for the upcoming year, while taking organizational capacity into consideration. The organizational scorecard and dashboard metrics were also updated to align with the Plan's goals and objectives to help navigate Denver Water's progress.

Organizational Business Plan

Denver Water 2023 Business Plan					
TYPE	STRATEGIC PERSPECTIVE	DURATION	ANNUAL PRIORITY	ORGANIZATIONAL METRIC	DIVISION(S)
Top Priority	Trusted Leader	1918 - Current	Provide high-quality water and outstanding service to our customers	Balanced Scorecard Performance	Executive Team
Strategic Projects	Trusted Leader	2020-2032	Lead Reduction Program	Project Execution Metric	Operations & Maintenance, Manager & Staff
	Excellent Operations	2017-2027	Gross Reservoir Expansion	Project Execution Metric	Engineering
	Excellent Operations	2017-2024	Northwater Treatment Plant	Project Execution Metric	Engineering, Operations & Maintenance
	Trusted Leader	2017-2030	High Line Canal Transformation	Project Execution Metric	Operations & Maintenance
Organizational Priorities (Value Streams)	Inspired People	2017-2025	Safety	Safety Maturity Index	Administrative Services
	Trusted Leader	2017-2025	Customer Experience	Brand Engagement	Finance
	Excellent Operations	2020-2024	Enterprise Project Management Office	Financial Plan Performance	Finance, Manager & Staff
	Excellent Operations	2022-2024	One Water Strategy	Water Efficiency	Water Resources, Manager & Staff
	Excellent Operations	2022-2025	Asset Availability	Unplanned Projects	Operations & Maintenance, Engineering
	Trusted Leader	2023-2025	Protecting Colorado's Waters	Legislative, Regulatory and Policy Outcomes	Manager & Staff
	Excellent Operations	2023	Sustainability	Resource Use	Administrative Services
	Excellent Operations	2024	Innovation and Technology	Operating Cost Per Account	Operations & Maintenance

Organizational Performance Measures



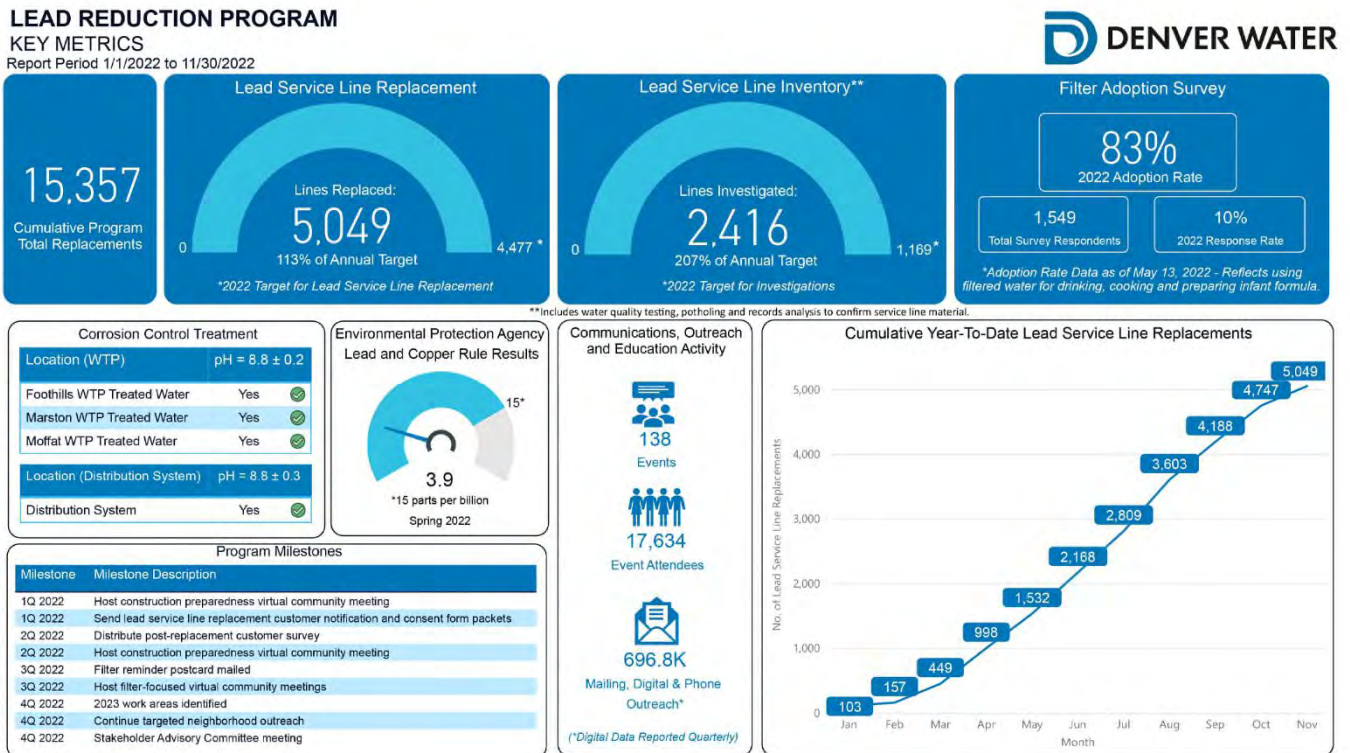
2023 Balanced Scorecard

MEASUREMENT	
EXCELLENT OPERATIONS Advance resilient infrastructure and efficient processes to deliver clean water, reliably.	Asset Availability
	Operating Cost per Account
	Resource Use
INSPIRED PEOPLE Foster a passionate and purpose-driven culture rooted in inclusion, adaptation and excellence.	Safety Maturity Index
	Employee Net Promoter Score
STRONG FINANCIALS Balance near-term investment with sound long-range planning to ensure good value for our customers.	Debt Service Ratio
	Financial Plan Performance (in Billions)
TRUSTED REPUTATION Lead the water industry in serving our communities and protecting the water resources of the West.	Legislative, Regulatory and Policy Outcomes
	Water Efficiency
	Brand Engagement

Denver Water measures performance at an organizational level; individual divisional performance measures are not utilized. The organizational dashboard is used to assess performance against Denver Water’s Strategic Plan. This dashboard employs metrics that align to each objective, goal and perspective under the plan. The Executive Team reviews this dashboard monthly to find opportunities for improvement and to take corrective action.

The team also has chosen two to three metrics under each Strategic Plan perspective that best represent achievement toward the perspective’s goals. These metrics make up the balanced scorecard and represent Denver Water’s performance at the highest level. Although the organizational dashboard is intended to remain static over the life of the Strategic Plan, at times the metrics are adjusted to reflect a better measurement or assessment.

Additionally, Denver Water tracks the Lead Reduction Program’s key metrics. Customers are provided updates on the Lead Reduction Program’s progress and milestones. Updated dashboards have been posted on a monthly basis beginning in June 2020.



The dashboard reflects activity around the five main components of the Lead Reduction Program:

1. **pH adjustment:** Increase the pH level of the water to reduce the risk of lead and other metals from getting into drinking water from lead service lines or household plumbing.

2. **Inventory:** Develop and maintain a publicly accessible inventory of all customer-owned lead service lines in Denver Water’s service area. The service line is the pipe that brings water into the home from the main in the street.
3. **Lead Service Line Replacement:** Replace all lead service lines with copper lines at no direct charge to the customer.
4. **Filter Program:** Provide a free water pitcher, filter and replacement filters, certified to remove lead, to all customers suspected of having lead services lines until six months after their line is replaced.
5. **Ongoing:** Communication, outreach and education programs.





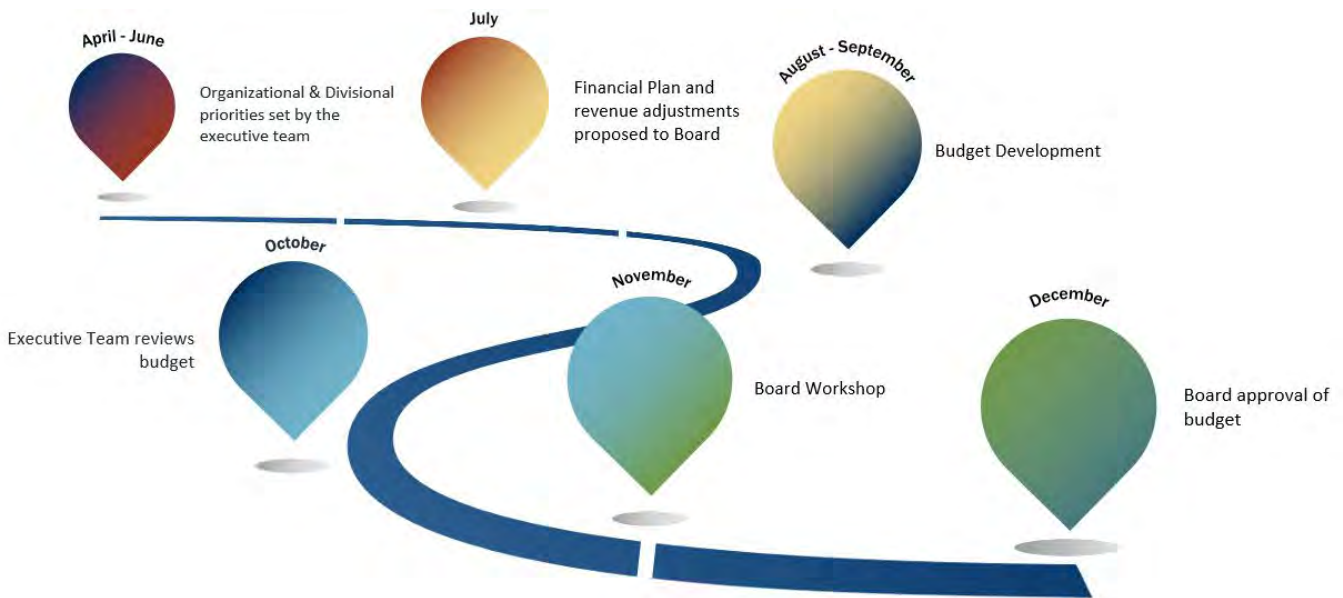
FINANCIAL

BUDGET SUMMARY

Budget Development

The budget development process is the formal method through which Denver Water aligns fiscal resources with organizational priorities for the upcoming year. It results in an Approved Budget, which is the defined plan of revenue and expenses for the year. It is not legally required for Denver Water to formally adopt a budget; therefore, the Approved Budget serves as the final budgetary document for the organization.

The general timeline for budget development is as follows:



When the division and project budgets are complete, the Financial Planning and Performance Team compiles the budgets into a draft and analyzes all revenue and expenditure projections to ensure that they meet organizational goals and objectives, adhere to budget guidelines, and that no expense category is overlooked. The Financial Planning and Performance Team then presents the completed draft budget, called the Proposed Budget, to the Executive Team, along with a list of new projects, programs and/or expenditures, as well as any items removed from the budget. During the Executive Team’s review, each division is given the opportunity to discuss its proposed budget and provide justifications for new expenditures. The Executive Team review ensures that the Proposed Budget aligns with the organizational strategies and priorities for the next year. After the Proposed Budget is approved by the Executive Team, any adjustments or changes are shared with division leaders and budget coordinators for their information and acknowledgement.

Each November, the Financial Planning and Performance Team, along with the Executive Team, present the Proposed Budget to the Board in the annual Budget Workshop. The workshop is used to gather feedback and input from the Board on the Proposed Budget. Based on the Board's comments, the Financial Planning and Performance Team may subsequently revise the Proposed Budget. The final version of the Proposed Budget is formally presented to the Board in December for approval. After it is approved, the budget becomes the official plan for the next fiscal year.

Multi-year Financial Plan

Denver Water utilizes a multiyear financial plan to determine the level of revenue adjustments needed to meet annual revenue requirements for each year of the plan.

Operating expense budgets capture the day-to-day, ongoing expenses incurred to run the business. Budget targets for operating expenses are developed annually by reviewing prior year expenditures, determining which expenditures are no longer needed and adding new expenditures for the upcoming year. For this review, expenditures are classified into expense categories and are evaluated to ensure alignment with organizational goals.

Project budgets, which are generally capital expenditures but can also include operating costs, are funded by debt, system development charges or reserves. They are incurred with the intent of improving future operations. Budget targets for capital projects are based on the prioritized list of projects found within the long-term capital forecast.

Approach to 2023 Budget Development

Each year, before annual budget development, the operating and capital costs are updated in the long-range financial plan. Multiple financing scenarios are run to determine how to fund the plan with a combination of revenues, debt and cash. Two financial planning scenarios were presented to the Board in fall 2022 to show the impacts of annual revenue increases on financial targets over the long-range plan. Denver Water has undertaken its largest capital plan in history, which includes the North System Renewal, Lead Replacement Program and Gross Reservoir Expansion Project. The plan is driving the need for multiyear revenue increases. The largest strategic projects are included in the Annual Business Plan that was approved by the Board in July 2022. In addition to strategic projects, the project plan includes planned maintenance projects and ongoing programs, such as main replacements, conduit improvements and vault improvements.

A majority of the projects included in the 2023 budget are underway. This provides some certainty as to the timing of funding needs in the long-range plan; however, significant risks and unknowns remain. Although the health impacts of the pandemic have diminished, supply-chain disruptions and inflation on labor, materials and supplies continues. And there are unknowns related to wildfires, drought and Colorado River shortages. As a result, Denver Water recommended a 5% revenue increase in 2023 to avoid deferring maintenance, to undertake important resiliency projects and to ultimately maintain a safe and reliable water supply for customers.

Strategic Projects

Below are Denver Water's strategic projects for 2023. Project dashboards track each priority's performance and will be updated for the Board on a quarterly basis for oversight.

Lead Reduction Program

Denver Water is entering the fourth year of the Lead Program, having successfully met every regulatory metric established for the program. A renewal of the variance effective Jan. 1, 2023 extended the program beyond the initial three years. The renewed variance allows the program team flexibility to redirect efforts toward value-adding components of the program, including performance of lead line removals, improving the inventory and predictive model, increasing filter adoption and increasing focus on community outreach.



The Lead Reduction Program kicked off in 2020 and has now replaced more than 15,000 lead service lines.

Denver Water will receive approximately \$76M in federal funding over each of the next three years to complete additional lead service line replacements. This will nearly double the amount of lead service lines replaced annually and allow us to tackle more challenging replacements, such as multifamily units and those located in high traffic volume streets. The program team will focus on coordinating this work with City of Denver departments, community partners and customers to minimize the impact and ensure Denver Water achieves the targeted levels of replacements.

North System Renewal

Gross Reservoir Expansion

Construction activities will continue through 2023, focusing on completing the dam foundation work, which is critical to begin the dam raise in 2024. Specifically, work will focus on completing the foundation excavation, foundation treatment concrete, dam surface preparation and foundation grouting. Additional key work areas include completing the quarry development, on-site access roads, on-site materials testing laboratory, Gross Dam Road improvements, and the Gross Dam Road and State Highway 72 intersection reconstruction.

Northwater Treatment Plant

All major construction activities at NTP are expected to be completed in 2023. Denver Water is planning facility commissioning and startup activities from April through December 2023, with an anticipated facility-potable-water-production test in January 2024. Denver Water is working to ensure the plant is ready to come online during the first quarter of 2024 to match a scheduled outage at Moffat Treatment Plant.

Mitigating major risks for 2023 include supply chain issues, delivery dates for large HVAC and electrical switchgear and variable subcontractor schedules to install necessary equipment. The construction schedule accommodates the delays in the equipment deliveries, but not a lack of performance by the subcontractors.

High Line Canal Transformation

In 2023, Denver Water will continue working with the jurisdictions where the High Line Canal is located to maximize recreational and stormwater uses of the canal, ensure maintenance of the canal and work on its permanent protection as a public greenway.

The Canal Collaborative, a group formed in 2022, includes representatives from the 11 jurisdictions, the High Line Canal Conservancy and Denver Water. A target date for full transition of the canal has been set for 2026. Denver Water will continue to remove customers from the canal at a pace that has modest impacts to the budget and is aligned with the customers' willingness to negotiate termination of the contracts. This work will allow for the full transition of the canal.



Organizational Priorities (Value Streams)

Below are Denver Water's organizational priorities for 2023. It is important to note that these value streams are designed to implement the Strategic Plan objectives over a period of several years. Although these value streams will start in 2023, they will be prioritized and sequenced based on capacity, budget and other competing priorities. Therefore, they will proceed at different paces. Priority dashboards track each priority's performance and will be updated for the Board on a quarterly basis for oversight:

Safety

The goal of this organizational priority is to ensure safety for all Denver Water's employees and members of the public. Some Denver Water work is inherently dangerous, while other work is conducted in an office environment. No matter where employees conduct business, it must be ensured they have access to tools and training and can make good decisions to allow all functions to be completed safely, without harm to employees or to the public. In the past, the Safety team was the main source of information and decision-making for difficult tasks. But recently, a selective group of employees piloted a program called "I AM SAFETY." In 2023, Denver Water will roll out this program to the entire organization, with a goal of creating an environment in which all employees discuss ways to work safely and feel comfortable raising issues and stopping work when needed. Denver Water will focus metrics less on counting accidents and injuries and more on trust, accountability, ownership, resilience and vigilance.

Customer Experience

This value stream launched in 2014 with customer-facing employees from across the organization. It uses customer survey data and employee knowledge and expertise to minimize customer pain points while reducing operating costs and creating positive customer interactions. In 2023, Denver Water will remap the customer experience “lifecycle,” measure customers’ experiences at multiple touchpoints and track customer’s complaints to improve their experiences. Opportunities to simplify transactions and reduce costs through a better understanding of the communication channels customers find most valuable also will be outlined.

Enterprise Project Management Office

The first phase of the EPMO established a framework for project governance across the organization, created standard work and strengthened the annual planning process by implementing a consolidated business case, project prioritization and selection process. The team completed this phase in 2022 with the successful launch of the Enterprise Reporting Tool for projects, providing standardized reporting and metrics for all projects in the organization. The team will begin the next phase in 2023, focusing on optimizing resources by deepening the strategic alignment of projects in the Denver Water portfolio. A refreshed project scoring model will reflect the new Strategic Plan and measure the impact of projects on key service levels and organizational metrics.

One Water Strategy

This value stream looks to develop policy and strategies related to One Water – using the right water for the right use – and how Denver Water coordinates those programs with the City of Denver and other regional stakeholders. The organization will have three focus areas for 2023:

- Water use efficiency: Denver Water will update and integrate landscape and indoor water fixture standards into the Denver Green Code and Denver Water’s system development charges rebates.
- The right water for the right use: Denver Water will identify new and innovative ways to use different water sources such as rain, storm, grey and black water to stretch our fresh water supply.
- The urban ecosystem: Denver Water will work with regional partners and the Board to develop policies and practices that consider water quality and quantity impacts on the ecosystem.

Asset Management

Denver Water has always practiced asset management. However, this work has not always been well coordinated. The Asset Management Value Stream will help facilitate and operationalize a more

coordinated and structured approach to asset management across the organization. There are three goals of the value stream:

- Coordinate the Integrated Resource Plan, Infrastructure Master Plan and the Strategic Asset Management Plan.
- Address gaps in asset management identified in the recently completed internal audit.
- Ensure daily decisions and work practices support the asset management strategy.

This work also will include the business process improvements necessary to ensure we are getting the most out of our asset management technology and will establish a foundation for an evaluation of these systems, which is scheduled in 2024 as part of the overall IT strategy.

Protecting Colorado's Waters

Denver Water is a leader locally and nationally in water resource management. In the past, lobbying efforts were ad hoc and limited to specific policy asks, such as support for the Lead Reduction Program, federal funding requests and Colorado River. In 2023, Denver Water will develop a coordinated strategy to achieve policy objectives. Denver Water will align this effort with our External Stakeholder Engagement Plan to activate key government, business, nonprofit and academic influencers. Denver Water will identify targeted areas to advance local, statewide and Western-region efforts to protect Colorado's water and will track our successful outcomes of legislative, regulatory and policy efforts of interest to Denver Water.

Sustainability

Our goal is to integrate sustainability efforts and goals across the organization to protect the water supply, reduce Denver Water's environmental impact, and lower costs. Denver Water has a Sustainability Guide with clear goals, commitments and standards. The Sustainability team has made progress within its area of influence and in conjunction with other programs, such as watershed health and climate adaptation/mitigation. However, this work operated largely in isolation. There is a tremendous opportunity to integrate these efforts so that sustainability is threaded through all Denver Water operations from design, operation and retirement of assets/facilities (new and remodels), to how assets are used and how watersheds are managed.

In 2023, Denver Water will better define "net-zero energy" and "net-zero carbon" and will finalize a plan and timeline to achieve both metrics and quantify costs and benefits. The organization will start a value stream to identify other steps the organization can take to achieve goals related to water, energy and waste. Finally, the Sustainability Team will explore opportunities to collaborate with Xcel Energy, and potentially other partners, to achieve common goals with shared resources.

Innovation and Technology

This value stream focuses on changing the culture of the organization to encourage more innovation and adopt best-practice technology to allow Denver Water to be more efficient and better serve customers. The goal is to encourage risk-taking with the right level of oversight. Failure is acceptable while trying new things, if learning is achieved and there is a good return on investment for customers. Denver Water also needs to modify some processes and systems to allow this change to occur. It needs to be transparent and focused on addressing the most important needs that will deliver better service to our customers at the lowest cost.

Organizational Business Plan

Denver Water is the nation's premier, forward-thinking water resource manager. Each year, the organization leads the way in putting customers first, delivering high-quality water and planning for an uncertain future. This year will be no different.

As part of the annual business plan, Denver Water assessed the Strategic Plan to refine organizational priorities, programs and divisional initiatives. This exercise became even more important with the refreshed Strategic Plan adopted by the Board in 2022. Below, each division within Denver Water summarizes its planned contributions to the Strategic Plan in 2023.

Administrative Services

Administrative Services will begin several important divisional initiatives in 2023. With help from a consultant in 2022, the Records and Documents team identified gaps in the information governance program and developed a roadmap to improve classification of electronic records, standardize storage, improve searchability for routine operations and legal matters, and reduce risk. The division plans to implement the roadmap in 2023, with the Records and Documents and IT teams doing most of the work internally.

In 2022, Administrative Services created a facilities management team to improve maintenance and streamline day-to-day operations for the Operations Complex and Quivas facilities. This team is now part of the Sustainability group and will continue to fine-tune the new facilities, establish service levels, increase energy efficiency and reestablish landscaping that never fully developed after construction. The team also oversees maintenance activities such as mowing and snow removal.



Denver Water's Operations Complex, 2020

The technology market shift toward cloud-based services provides us with an opportunity to evolve IT's staffing model for greater efficiencies. IT is reorganizing, training and preparing for this future state of software support.

Additionally, Administrative Services will develop a long-term recreation strategy that includes optimizing of recreation opportunities, management and infrastructure at existing facilities (such as a different campground management philosophy) and review locations in which recreation is not allowed or is passively managed. This will allow us to align with U.S. Forest Service and Colorado Parks and Wildlife objectives, provide better resource planning and improve long-term budgeting.

Engineering

Engineering will continue delivering Denver Water's largest capital plan in history, budgeted at \$2.4 billion over the next 10 years. In addition to the Northwater Treatment Plant and Gross Reservoir Expansion Project, work will continue on several other projects in 2023 to help ensure Denver Water's water storage, delivery and treatment systems will continue to serve customers for decades into the future. This work will include the following:



during the Gross Reservoir Expansion Project

- Complete the \$107 million Hillcrest storage tank and pump station project, started in 2015.
- Continue to pursue a permanent Federal Energy Regulatory Commission permitting exemption with the installation of a new hydropower unit at Strontia Springs Reservoir.
- Continue regional collaboration with the installation of the WISE treated-water connection at Denver International Airport.
- Further expand the recycled water system with a conduit extension to Fairmont Cemetery.
- Continue additional development of the downstream reservoir complexes with design of the Hazeltine Pump Station located at the North Downstream Reservoir Complex.

Denver Water's ongoing maintenance programs include upgrades to corrosion control systems, rehabilitation of distribution system valves and vaults, modifications to pipelines and assessment and rehabilitation of gates at several dams. With a large portion of work complete on North System, Engineering will complete a study to holistically look at Denver Water's South System. Findings from this study will inform the Integrated Resource Plan and identify South System projects for the Enterprise Project Management Office's future project prioritization process.

Finance

In 2023, Finance will conduct the biennial customer survey, which provides a comprehensive understanding of what customer service areas most impact the customer experience. This will inform the Customer Experience Value Stream and the customer metrics. In addition to process improvements through the value stream, Finance will support a system upgrade to the customer billing system and the roll out of the call center platform to Dispatch and Water Sales.

Finance will continue to enhance financial reporting on large strategic projects. The new Enterprise Reporting Tool, launched in 2022, marks an important step in tracking and reporting on all projects. The Enterprise Project Management Office uses data and reporting from this tool to analyze project performance and update project managers and leaders.

To support the financing of the Lead Reduction Program, Finance will continue incorporating federal lead funding from the Bipartisan Infrastructure Law into Denver Water’s financial plan. This includes complying with all federal requirements and ensuring Denver Water’s policies and procedures allow maximizing use of these funds while they are available. Finance also will analyze alternative debt options for Board consideration as the division prepares to issue more debt to fund the large capital plan.

Divisional initiatives include reviewing system development charges, evaluating the effectiveness of Denver Water’s rate structure and analyzing alternative sources of revenue.

Office of People and Strategy

The Office of People and Strategy will use a three-year roadmap to work on the organizational priorities and programs identified through the gap analysis of the refreshed Strategic Plan. Using project charters and metrics, the Executive Team will track the progress of this work which will be communicated to the Board in quarterly performance reports.

The Office of People and Strategy will build on diversity, equity and inclusion work started in 2022. This division established a cross-functional DE&I advisory committee and are developing a comprehensive implementation plan for 2023. A multipronged approach addresses the systemic and individual elements that must be in place to ensure a diverse, equitable and inclusive culture at Denver Water. This includes policies and practices related to hiring and promotions, training in areas such as unconscious bias, sexual harassment and diversity, supervisor coaching related to building diverse, inclusive teams and defining behavioral expectations for all Denver Water employees.

The team will continue to focus on leadership development for building organizational strength to achieve strategic goals. The 10-month H2O Leadership Academy builds critical leadership competencies and will graduate another 75 employees in 2023. And a new leadership forum will provide H2O Leadership Academy graduates with monthly networking sessions aimed at sustaining a culture of leadership excellence, building future leaders and providing a forum for continuing leadership education.



Through Denver Water’s new partnership with CareerWise, diversity and inclusion continue to be promoted by hosting the first cohort of apprentices in the fall of 2023. First-semester high school seniors will split their time between their traditional high school classroom and the workplace. Denver Water will provide apprenticeship opportunities in Finance, O&M and Engineering, which will culminate in the student achieving industry certification and debt-free college credit.

The Public Affairs team will support the Gross Reservoir Expansion Project, Northwater Treatment Plant, the Lead Reduction Program, programming, outreach at the new Hydro Building at CSU Spur and the new landscape transformation initiative. This team will work with local, state and federal government stakeholders on areas such as protecting Colorado’s water, employment regulations, cybersecurity, One Water, conservation and more. Public Affairs will continue their proactive content strategy, leading with internal stories about Denver Water projects, issues and initiatives using the news site, TAP, and sharing on traditional and social media channels, email marketing, direct mail and more.



Colorado State University Hydro Building at the National Western Complex

Office of General Counsel

In 2023, the Office of General Counsel will continue to appear before regulatory bodies such as the Water Quality Control Commission and Mined Land Reclamation Board in support of matters affecting Denver Water’s interests. The team will continue to advance and defend Denver Water’s interests in litigation, most significantly working alongside the federal government to defend the U.S. Army Corps’ permitting decisions for the Gross Reservoir Expansion Project and pursuing the Wolford Mountain litigation. The Office of General Counsel will continue its regular docket of water rights litigation, including the Nevada Ditch and City Ditch water rights applications. They also will continue their support of various business operations with regulatory compliance issues, contracting, real estate transactions, human resource matters and other routine legal questions.

The Office of General Counsel will support the advancement of local, statewide and Western-region efforts to protect Colorado’s water by assisting government relations with analysis of, and advocacy for, relevant bills and regulations. The team will continue to collaborate with Finance to implement the federal funding strategy and ensure that there are appropriate controls and oversight in place to meet all federal requirements for the Lead Reduction Program. The Office of General Counsel will continue to support the LRP team on compliance with the EPA variance and contracting.

Operations & Maintenance

Source of Supply staff will continue to improve Denver Water’s approach to asset management by directing more internal resources toward preventive maintenance activities on water-moving assets, thereby allowing contractors to complete other routine work. In 2023, Source of Supply will focus on implementing the asset management plan for hydropower turbine assets developed in 2022. Operations and Maintenance will be heavily engaged in onboarding and training new staff



members to help commission, start up and operate the new, state-of-the-art Northwater Treatment Plant. Laboratory staff will spend the first three months obtaining certification from the Colorado Department of Public Health and Environment for the new laboratory at the CSU Spur Hydro building and return Denver Water’s internal operating capacity of the lab back to pre-move levels.

Water Distribution will continue their main replacement program. The team has a goal to increase the replacement rate to 1% over time. However, given budget constraints, the team plans to maintain the 2022 replacement level of 0.67%. Denver Water will continue the Lead Replacement Program, accelerating efforts with the availability of federal funding.

The trades group will support the new facilities management team that will coordinate and execute many of the maintenance needs on the Operations Complex and Quivas building. Many of these assets require different skill sets and higher levels of customer service than previously necessary. This will allow the other shops in Support Services to better support the asset management strategy for water-moving assets that need more proactive maintenance to obtain longer service lives and higher reliability.

Water Resource Strategy

Water Resource Strategy will continue to operate, maintain and develop water resources and options that ensure a sufficient and dependable water supply to meet the needs of Denver Water’s customers.

Water Resource Strategy will continue their work to protect and develop water rights, including making improvements to the Platte and Colorado Simulation Model (our long-range planning model) and supporting the two change cases for the Nevada Ditch and City Ditch. The team will begin a multiyear review of Denver Water’s water accounting and continue to refine forecasting efforts, including participating in enhanced snowpack measurement activities and coordinating with national forecasting centers.

Water Resource Strategy will advance permitting and regulatory compliance efforts with the Gross Reservoir Expansion Project, the Lead Replacement Program and other projects. They will continue working with Learning by Doing, the Wild and Scenic Stakeholder Group, Upper Colorado Recovery Program, and the South Platte Water Related Activities Program. Work with these groups will aid progress on stream monitoring, restoration projects and habitat improvement activities to benefit river and stream systems in Denver Water’s watersheds. The team will continue to work to mitigate catastrophic wildfire risk through the From Forests to Faucets Partnership. As part of the Bipartisan Infrastructure Law, Denver Water will participate in the National Wildland Fire Mitigation and Management Commission to provide recommendations to Congress on funding, programs, regulatory policy and projects on critical wildfire



Training and preparedness helped fight the Tenderfoot 2 fire on U.S. Forest Service land, Tenderfoot Mountain, near Denver Water’s Dillon Reservoir.

topics. In 2023, Denver Water also will complete the North System Impact Assessment and Prioritization effort that will feed into development of the Watershed Action Plan.

Water Resource Strategy will begin preparing for updates to the Integrated Resource Plan, in addition to leading the continuous planning work of IRP 2065. These efforts will include developing strategies related to the expansion of the recycled water program, continuing to investigate the permitting process for Aquifer Storage and Recovery and exploring long-term water supply options that are resilient to potential Colorado River curtailment. In addition, the Climate Adaptation Team will implement new tools to evaluate the impacts of warming weather patterns on drying watersheds, algal blooms in reservoirs and changes to precipitation.

Pursuant to the Colorado River water utility memorandum of understanding, the team will develop a program to replace 30% of nonfunctional turf in Denver Water's service area, by transforming landscapes to meet multiple efficiency objectives, such as cooling, shading, managing stormwater, supporting pollinators and increasing drought tolerance. To support overall operations, they will develop a new water efficiency plan to identify additional targets for water conservation in a growing population. The team will propose rebates for water-efficient indoor and outdoor fixtures, targeted help for inefficient water users and an effort to reduce peak use to improve overall operations and reliability.

Budget highlights

As in 2021, Denver Water experienced increases to operating costs in several key areas (i.e., chemicals, paving, trucking/hauling, fuel). These impacts are reflected in the 2023 budget. Construction and Field Services, Waste Disposal Services, Materials and Supplies, and Chemicals are seeing the largest year-over-year increases. Below are summaries of the major changes to each expenditure category for the 2023 budget.

Sources of Funds – \$661.9M (increase of \$127.8M, 23.9% from 2022)

A higher bond issuance planned for 2023 represents much of the change from 2022 (\$71M). The budget also reflects the 5.0% rate revenue increase that was approved by the Board.

Other notable changes to the revenue budget include a decrease of \$8M to Contributions for participation from Arvada for Gross Reservoir Expansion (equal to 16.7% of the 2023 construction costs, which are expected to be lower than 2022). The projected interest income is \$4.2M higher than 2022 due to higher interest rates.

Operating Expense without projects – \$234.0M (increase of \$18.1M, 8.4% from 2022)

Salaries and Benefits – \$145.1M (increase of \$7.6M, 5.5% from 2022)

In 2022, we implemented a \$45,000 minimum pay for employees and aligned similar jobs across O&M. The budget also includes funding for Board-approved merit increases in 2023.

Other notable changes include: An increase to the budgeted vacancy rate to 5.5%, which is consistent with the 2022 forecast and the addition of 20.0 FTE/LTE.

FTE – 1,160.36 FTE and 31.0 LTE (increase of 20.0 FTE/LTE from 2022)

As in prior years, we performed a thorough review of FTE/LTE for each division. 6.0 FTE were removed from the budget as a result of this effort.

14.0 FTE and 7.0 LTE were added to support organizational priorities (Lead Reduction Program and Northwater Treatment Plant). And 5.0 new FTE positions were created to support operational needs. All new FTE/LTE requests had to be approved by either the CEO or chief of staff. More details can be found in the Significant Changes section.

Professional and Purchased Services – \$56.3M (increase of \$5.9M, 11.7% from 2022)

During budget development, divisions reviewed their Professional and Purchased Services contracts and expenditures. This resulted in several changes to the budget for 2023. Many of the changes are due to inflation, scheduled contract cost increases and maintenance items that were deferred in 2021 or 2022.

Materials, Supplies, and Chemicals – \$29.9M (increase of \$6.7M, 28.8% from 2022)

The 2023 budget has been adjusted to reflect the cost increases that we are experiencing in Water Distribution materials, supplies and chemicals. The unit prices for key chemicals have increased significantly over the last two years (chlorine is up 51%, caustic soda is up 24% and acidified alum is up 15%, as an example).

Travel, Training, and Conferences – \$1.3M (increase of \$73K, 6.2% from 2022)

Travel costs are expected to increase based on current prices for airfare and hotel. The training budget also was increased to add required training for commercial driver's license and Water Quality and Treatment certifications.

Other Expense – \$1.5M (decrease of \$2.1M, -58.9% from 2022)

The majority of this variance is due to the removal of budget for a legal settlement that occurred in 2022.

Capital and Operating Projects/Programs

All projects and programs on the long-term forecast were vetted using EPMO's updated project submission, prioritization and selection process. The process includes an analysis of alternatives, evaluation of capacity needs and dependencies, completion of a risk assessment, review of the proposed timeline, and an estimation of the expected costs.

Operating Projects/Programs – \$29.6M (increase of \$13.4M, 83.2% from 2022)

The most significant change to operating projects is a reduction to the cost for planned IT projects in 2023.

Capital Projects/Programs – \$364.8M (decrease of \$68.0M, -15.7% from 2022)

Denver Water is in the midst of its largest capital plan in history. The largest projects in the 2023 capital budget include the Northwater Treatment Plant, Lead Replacement Program, and Gross Reservoir Expansion.



Panoramic view of Northwater Treatment Plant taken by Water Treatment Engineer Peter J. McCormack.

SOURCES AND USES

COMPARISON OF SOURCES AND USES OF FUNDS							
	2020		2021		2022		2023
	Budget	Actuals	Budget	Actuals	Budget	Unaudited Actuals	Budget
BEGINNING CASH & INVESTMENTS	276,326	276,326	258,734	258,734	403,589	403,589	361,826
SOURCES OF FUNDS							
Water Sales	306,147	342,903	311,270	323,079	326,191	349,174	356,513
Hydropower	3,872	3,874	3,801	3,835	3,787	3,921	3,962
Special Assessments and Fees	6,940	6,959	7,057	7,066	7,137	6,443	7,139
Interest Income	4,169	2,677	1,480	1,112	1,169	2,315	5,375
Other Revenue ³	9,284	21,346	8,766	8,436	8,606	10,561	23,785
System Development Charges	29,985	22,553	22,000	37,897	34,988	47,221	34,679
Contributions	8,032	3,655	5,485	4,142	32,239	22,865	24,247
TOTAL REVENUE	\$ 368,429	\$ 403,967	\$ 359,860	\$ 385,567	\$ 414,116	\$ 442,500	\$ 455,700
Proceeds from debt	155,000	158,629	350,000	351,185	120,000	200,773	206,271
TOTAL SOURCES OF FUNDS	\$ 523,429	\$ 562,596	\$ 709,860	\$ 736,752	\$ 534,116	\$ 643,273	\$ 661,971
USES OF FUNDS							
Regular Wages and Other Pay	95,261	95,736	95,275	95,104	101,517	104,681	107,628
Applied Labor ¹	(10,710)	(8,586)	(11,094)	(8,104)	(10,746)	(9,255)	(10,724)
Benefits	44,789	44,444	44,568	44,755	46,782	45,381	48,243
Salaries and Benefits	129,340	131,595	128,748	131,756	137,553	140,806	145,147
Materials and Supplies ³	19,461	23,027	20,445	22,260	23,185	28,784	29,876
Utilities	8,237	7,888	8,339	9,451	8,911	11,354	9,228
Professional and Other Services	35,440	35,054	36,672	38,165	41,467	43,512	47,054
Other Expense	2,533	1,123	1,637	1,928	4,821	4,991	2,747
Subtotal Operating w/o Projects	\$ 195,011	\$ 198,686	\$ 195,842	\$ 203,560	\$ 215,936	\$ 229,447	\$ 234,052
Collection	888	924	898	1,108	2,112	1,983	2,587
Distribution	6,570	578	985	1,459	802	994	918
Expansion	10,701	3,192	5,095	5,692	4,335	4,061	3,526
Operations Support/Other	6,902	4,004	5,444	5,660	8,338	8,830	21,893
Treatment	1,043	833	325	386	566	543	670
Operating Projects	26,104	9,532	12,748	14,304	16,153	16,411	29,594
TOTAL OPERATING COSTS	\$ 221,115	\$ 208,218	\$ 208,590	\$ 217,864	\$ 232,090	\$ 245,858	\$ 263,646
Collection	36,371	33,111	41,840	38,152	185,992	123,542	144,449
Distribution	77,854	102,396	72,535	67,883	50,068	50,504	57,539
Expansion	16,866	11,956	29,362	20,691	4,542	2,986	5,772
Operations Support/Other	89,471	88,858	84,689	70,787	84,454	67,192	95,364
Treatment	75,842	106,306	128,287	125,404	107,757	119,144	61,692
Applied Labor	-	-	-	-	-	-	-
TOTAL CAPITAL (incl. applied labor)	\$ 296,405	\$ 342,627	\$ 356,713	\$ 322,916	\$ 432,813	\$ 363,366	\$ 364,816
Debt Service	46,169	46,372	50,351	50,519	55,786	53,166	71,843
TOTAL USES OF FUNDS	\$ 563,688	\$ 597,217	\$ 615,654	\$ 591,299	\$ 720,688	\$ 662,390	\$ 700,305
Cash balance adjustment ²		17,029		(598)		(22,646)	
ENDING CASH & INVESTMENTS	\$ 236,067	\$ 258,733	\$ 352,940	\$ 403,589	\$ 217,017	\$ 361,825	\$ 323,492

Notes:

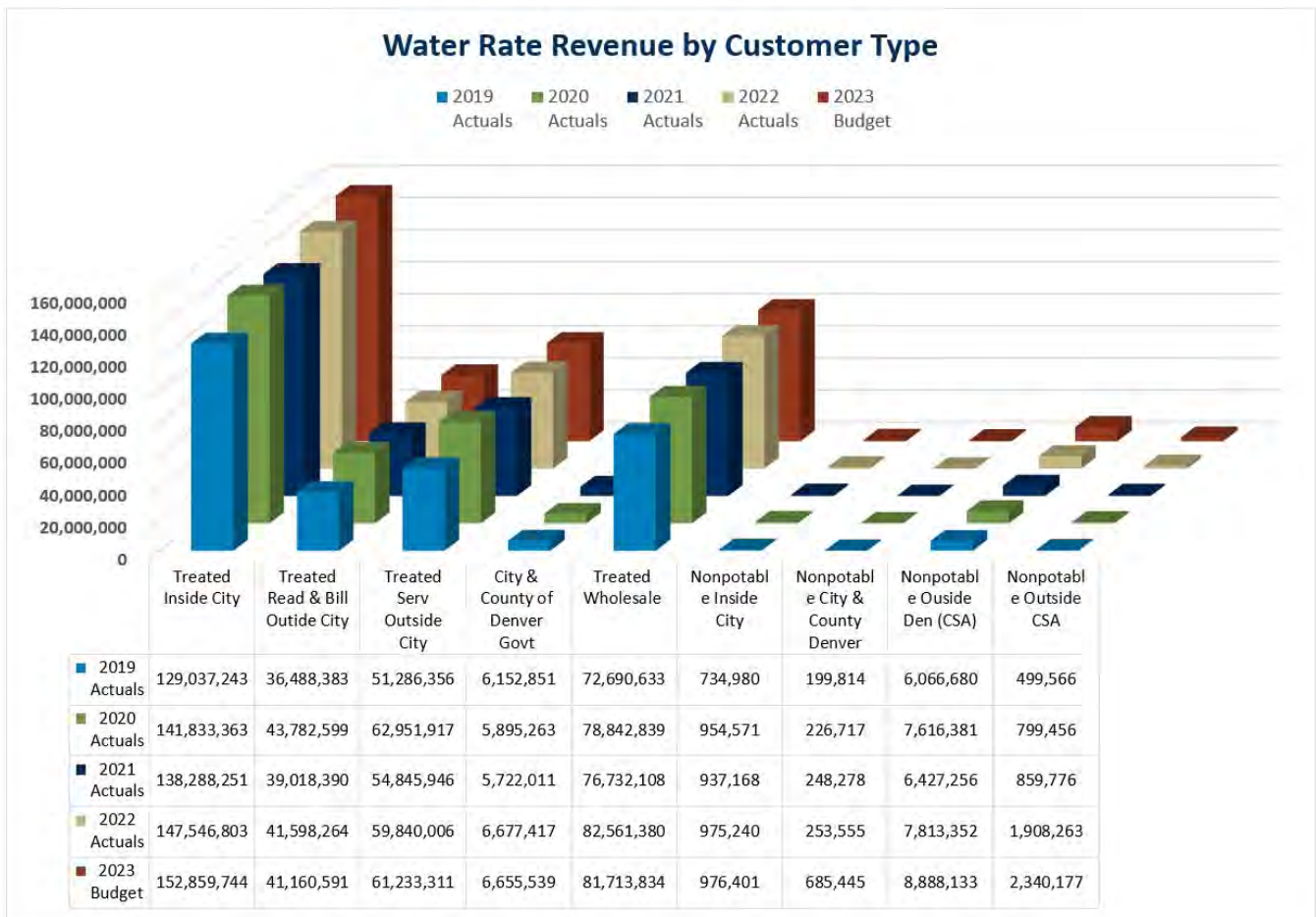
1) Actuals in the above chart are being reported on a budgetary basis

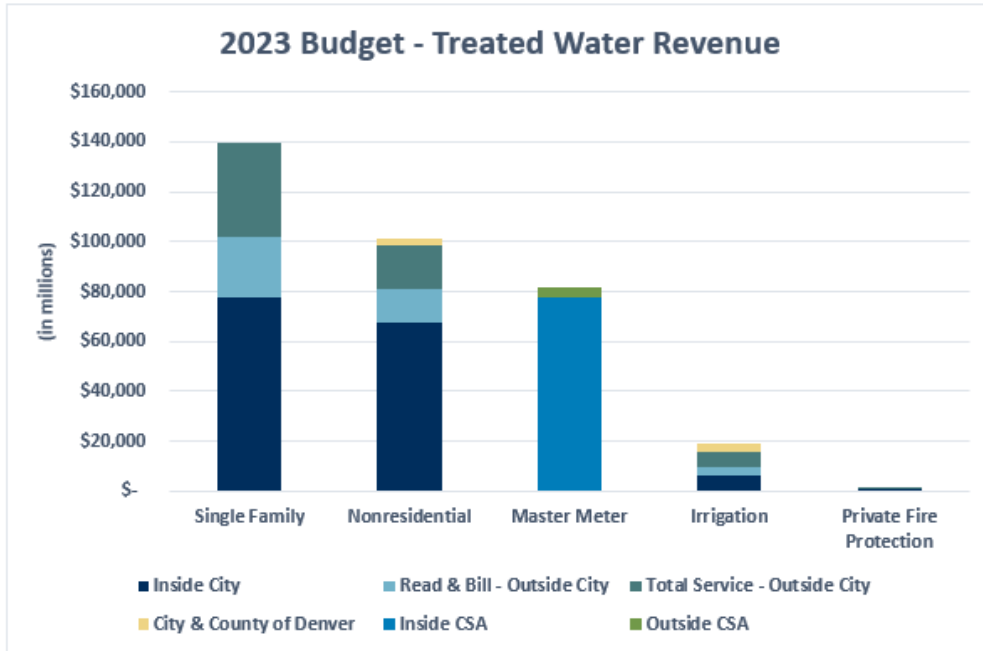
2) The cash balance adjustment represents timing differences between the receipt of revenues and payment of expenditures at year-end (these items are included in the year-end accruals, but the cash is not impacted until the following year).

3) Includes Charge Ahead Grant

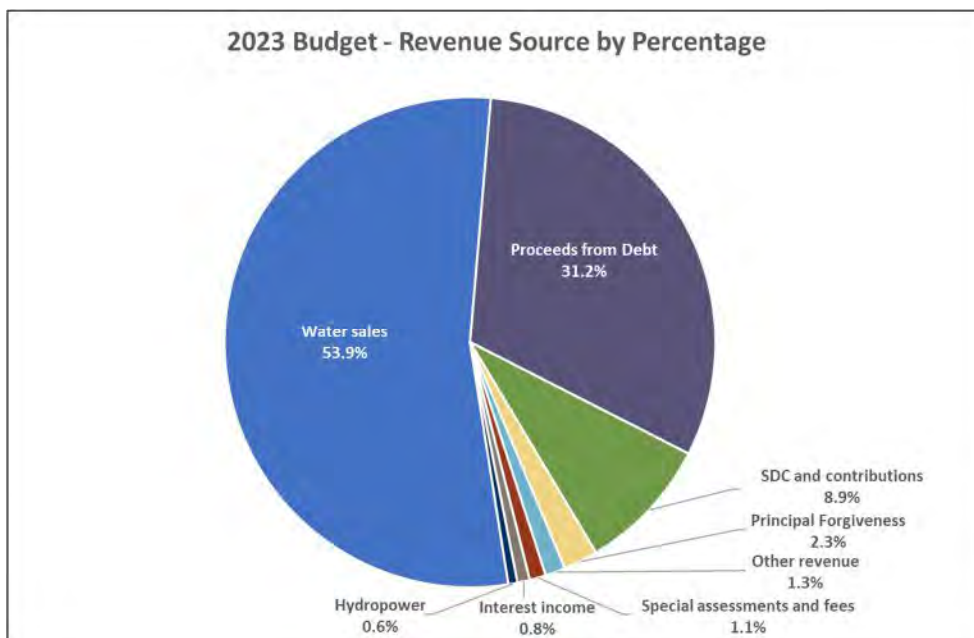
REVENUE

Revenue adjustments identified in the 2023 Financial Plan are set at levels to meet annual revenue requirements, debt service coverage and target reserves. Revenue requirements include annual operation and maintenance expenses, payments on existing and proposed debt service, the Lead Reduction Program, and rate-funded capital projects. Denver Water uses a combination of debt and cash reserves to maintain leveled annual revenue adjustments to meet these requirements. The use of debt to fund specific capital projects distributes the cost of facilities over time rather than requiring the full amount in any one year. The adopted revenue adjustment for 2023, effective Jan. 1, 2023, is expected to produce 5% of additional revenue over a 12-month period, assuming normal weather and consumption. The Financial Plan is updated annually.





Denver Water’s program team led a complicated effort to apply for \$76M in federal funding to accelerate the removal of customer-owned lead service lines. Gearing up to apply for the funds and tracking the expenditures according to federal guidelines required a huge effort from dozens of employees across the organization. The Colorado Water Resources and Power Development Authority Board unanimously approved the loan in October, and Denver Water began drawing from these funds in 2023. The funding will reduce the duration of the program and address some of the more complicated lead service line removals. The total loan amount is \$76.1M, of which \$40M of principal was forgiven at loan execution.





ONE SYSTEM, MANY PARTNERS

50% of the 1.4 million people who rely on Denver Water are served through **63** Distributor partnerships.



There are 3 kinds of Distributors.

29 Total Service districts receive full service from Denver Water including customer service, billing and maintenance of their infrastructure, just like customers in the city of Denver.



23 Master Meter districts buy water from Denver Water on a wholesale basis. The districts are responsible for customer service, billing and maintenance of their infrastructure.



11 Read and Bill districts are a hybrid approach to water service. Denver Water reads the meter and sends a bill to the district's customers, while the district is responsible for operating and maintaining the infrastructure, such as the distribution pipes.



One of the benefits of these partnerships is that Denver Water is responsible for all water quality testing for itself and the 63 distributors, as well as reporting the results of those tests to state health officials.

Outside the City and County of Denver, Denver Water provides residential water service through contractual relationships with distributors.

There are three main kinds of contracts for residential water service outside the City and County of Denver:

Total Service

Under Total Service contracts, Denver Water owns the water system and is responsible for its operation, maintenance and replacement. Denver Water reads each customer's meter and bills each customer at the established Total Service rate.

In Total Service areas, water service is provided to customers in the same manner as it's provided to customers inside Denver.

Master Meter

A Master Meter distributor owns and is responsible for construction, operation, maintenance, and replacement of its water system. Denver Water delivers water to the distributor through one or more master meters and bills the distributor at the established wholesale (Master Meter) rate. The distributor, not Denver Water, is responsible for reading the meters of its individual customers and for billing its individual customers according to rate schedules established by the distributor.

Read and Bill

Under Read and Bill contracts, the distributor owns and is responsible for construction, operation, maintenance, and replacement of its water system into which Denver Water delivers water. Denver Water reads the meter of each customer and bills each customer at the established Read and Bill rate.

DIVISION BUDGETS

DENVER WATER BY DIVISION - OPERATING EXPENSE SUMMARY							
Division Name	SALARIES AND BENEFITS		OTHER OPERATING COSTS		TOTAL OPERATING COSTS		
	2022 Budget	2023 Budget	2022 Budget	2023 Budget	2022 Budget	2023 Budget	% Budget Change
Administrative Services	23,897	25,119	20,866	23,702	44,763	48,821	9.1%
Engineering	20,129	21,324	1,197	1,387	21,326	22,711	6.5%
Finance	10,468	11,393	3,656	3,910	14,125	15,303	8.3%
Manager & Staff	16,935	17,442	7,764	5,509	24,699	22,951	-7.1%
O&M	62,630	66,532	39,327	48,270	101,958	114,803	12.6%
Non-Divisional	(2,814)	(3,175)	1,645	2,012	(1,169)	(1,163)	-0.4%
Water Resource Strategy	6,307	6,512	3,927	4,091	10,234	10,603	3.6%
TOTAL DIVISION OPERATING	\$ 137,553	\$ 145,147	\$ 78,384	\$ 88,881	\$ 215,936	\$ 234,028	8.4%



REGULAR EMPLOYEES

DENVER WATER - REGULAR EMPLOYEE COUNT										
Division	2019 Budget		2020 Budget		2021 Budget		2022 Budget		2023 Budget	
	FTE	LTE	FTE	LTE	FTE	LTE	FTE	LTE	FTE	LTE
Administrative Services	59.50	1.00	165.25	1.00	166.75	2.00	168.75	3.00	168.75	3.00
Engineering	172.75	1.00	173.75	2.00	173.75	2.00	173.75	5.00	172.75	5.00
External Affairs ³	184.65	-	187.99	5.00	-	-	-	-	-	-
Finance	37.00	-	36.00	1.00	93.26	-	103.26	-	106.26	-
Human Resources ²	27.00	-	-	-	-	-	-	-	-	-
Information Technology ¹	104.25	-	-	-	-	-	-	-	-	-
Manager & Staff	37.80	-	58.80	-	84.40	-	84.60	1.00	86.60	2.00
Operations & Maintenance	479.00	5.00	481.00	12.00	565.00	17.00	575.00	15.00	583.00	21.00
Water Resource Strategy	-	-	-	-	45.00	-	42.00	-	43.00	-
Total	1,101.95	7.00	1,102.79	21.00	1,128.16	21.00	1,147.36	24.00	1,160.36	31.00

Notes:

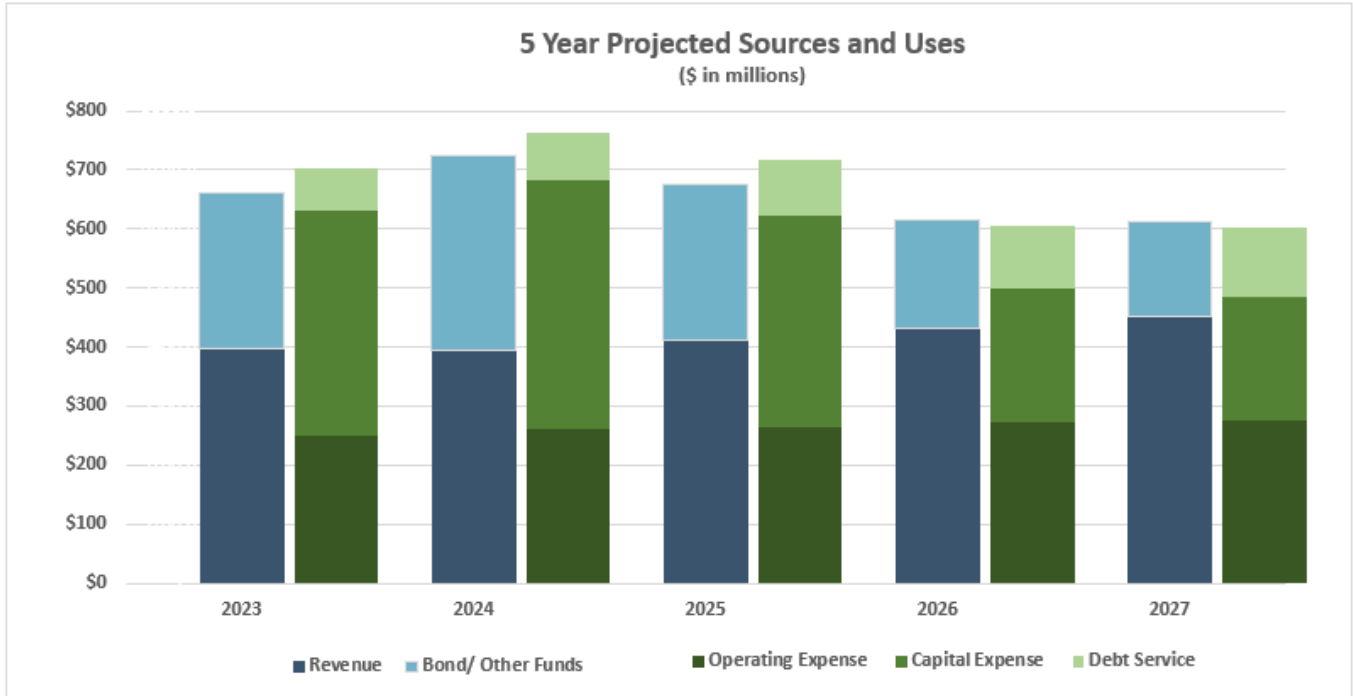
1) Information Technology merged with Administrative Services in 2020.

2) Human Resources merged with Manager & Staff in 2020.

3) External Affairs was reorganized in 2021. The sections underneath External Affairs were moved to Finance, Manager & Staff, Operations & Maintenance and Water Resource Strategy (new division).



WATER WORKS FUND



Denver Water is an enterprise of the City of Denver within the meaning of Article X, Section 20 of the Colorado Constitution. The Board maintains a **single fund** as mandated by the City Charter, which states:

“There is hereby created a Water Works Fund into which shall be placed all revenues received from the operation of the Water Works system and plant together with all monies received by the Board from other sources.”

The general city government has no access to the Water Works Fund and Denver Water has no access to the city’s general fund. Although the Board approves the rates and the annual budget, no funds are appropriated. Denver Water defines fund balance for the Water Works Fund (an Enterprise Fund) as the balance at the beginning of the period, plus the total sources of funds, less total uses of funds for the period.

Within the Water Works Fund are legally restricted funds and Board-designated funds. As outlined, the Board targets reserves to pay for operating, capital, self-insurance and debt service in an emergency, in addition to the restricted and designated funds. Any excess funds above these target amounts are considered available for future operating and capital projects.

DEBT INFORMATION

Denver Water issues and secures debt to fund capital improvements and to refund existing debt. Denver Water has the discretion to issue and secure debt for purposes other than capital improvements if deemed necessary by the Board. Operating expenses and capital improvements of a normal recurring nature are included in the calculation of the revenue requirement from rates and are financed on a pay-as-you-go basis.

The Treasury section of the Finance division monitors the marketplace and evaluates the appropriateness of various financing sources for specific capital projects. The evaluation considers the expected life of the asset, the nature of any covenant requirements, the impact on Denver Water’s financial flexibility and the organization’s capacity to support the projected level of debt.

Denver Water uses the following guidelines in its financial planning activities:

- Debt Ratio should not exceed 45% of the net capital assets.
- Water rates are established to provide Net Revenues sufficient to produce annual coverage of 1.8 times that of the current Annual Debt Service.

Denver Water’s outstanding bonds were assigned Aaa/AAA ratings by Moody’s Investors Service, Inc. and S&P Global Ratings, respectively, in September 2022. The ratings are subject to revision or withdrawal at any time by the respective rating agency, and there is no assurance that the ratings will continue or that they will not be revised or withdrawn.

Debt Principal and Interest Obligations (in millions of dollars)			
Year	Principal	Interest	Total
2023	20.9	45.7	66.6
2024	23.4	43.4	66.8
2025	24.5	42.4	66.9
2026	25.6	41.2	66.8
2027	26.8	40.0	66.8
2028	27.9	38.9	66.8
2029	29.2	37.8	67.0
2030	30.5	36.5	67.0
2031	31.9	35.1	67.0
2032	33.4	33.6	67.0
2033	34.8	32.1	66.9
2034	36.2	30.5	66.7
2035	37.7	29.0	66.7
2036	39.0	27.5	66.5
2037	40.4	26.0	66.4
2038	41.9	24.7	66.6
2039	43.4	23.4	66.8
2040	45.0	22.0	67.0
2041	46.7	20.6	67.3
2042	48.5	18.9	67.4
2043	50.4	17.2	67.6
2044	52.3	15.4	67.7
2045	54.2	13.5	67.7
2046	56.4	11.3	67.7
2047	58.8	8.9	67.7
2048	60.9	6.8	67.7
2049	62.8	4.9	67.7
2050	64.8	2.9	67.7
2051	12.8	1.2	14.0
2052	13.4	0.6	14.0
Total	\$ 1,174.5	\$ 732.0	\$ 1,906.5

FINANCIAL POLICIES

The Board has established financial policies that constitute the basic framework for the financial management of Denver Water. These policies are intended to assist members of the Board and Denver Water’s staff in evaluating current activities and proposals for future programs. They are reviewed annually and modified to accommodate changing circumstances or conditions. A summary of these policies is presented below:

Accounting standards

The Board’s financial statements are prepared in accordance with principles generally accepted in the United States of America (Generally Accepted Accounting Principles). Additionally, the Board applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

Balanced budget

The Board has not adopted an official policy on a balanced budget. It is the practice of the Board and Denver Water to balance the budget by the planned use or contribution to investment balances.

Capital assets

Purchased and constructed capital assets are recorded at cost. Donated capital assets are recorded at their estimated acquisition value on the date received. Assets are capitalized if they have a cost of \$50,000 or more and have a useful life of more than one year. Costs not meeting these criteria are expensed. Land and water rights are recorded at cost. Land is not depreciated, and water rights are granted in perpetuity and not amortized. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective asset classes.

Cash reserves

The charter of the City and County of Denver specifically allows the accumulation of reserves “sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, and betterments, including those reasonably required for anticipated growth of the Denver Metropolitan area and to provide for Denver’s general welfare.” The Board’s practice is to maintain reserves that are sufficient to provide:

- 25% of the next year’s operating costs.
- The greater of average annual depreciation cost and 2% of current total capital assets (before depreciation) for replacement capital and equipment purchases.
- 50% of expected annual debt service for next year.
- \$10 million in exposure reserve.

Consumption and service charges

In October 2022, the Board approved a 5% water rate increase, effective Jan. 1, 2023. The rate increase is designed to increase overall total system water rate revenue, assuming normal weather and consumption.

Debt Management Policy

The Board adopted a debt policy in 2021 updating the philosophy, objectives, and practices to issue debt. Debt will primarily be used to fund capital improvements and to refund existing debt as defined in the Master Bond Resolution. Only costs that may be capitalized under generally accepted accounting principles are eligible for debt financing.

- When appropriate, Denver Water will use debt to achieve an equitable allocation of capital costs/charges between current and future system users.
- The Board has discretion to issue debt for purposes other than capital improvements.

Denver Water is not subject to legal debt limits.

Expenditures

In planning expenditures, Denver Water follows the city charter’s mandate to keep rates as low as good service will permit. This means Denver Water will properly maintain its facilities and continue to seek ways to operate more efficiently.

Investments

The Board established an investment policy for funds not needed for current operations and delegated its authority to invest these funds to the chief finance officer. The Investment Policy establishes investment objectives, standards of care, broker and dealer requirements, custody and safekeeping requirements, permitted investments, and investment parameters. The primary objectives, in order of priority, are safety of principal, liquidity and yield.

Measurement focus and basis of accounting

The Board, as a business-type activity, is accounted for in an Enterprise Fund, which is used to report any activity for which a fee is charged to external users for goods or services. The Board’s basic financial statements are accounted for on the flow of economic resources measurement focus, using the accrual



Denver and Denver Union Water Company for the purpose of acquiring a water works system.

basis of accounting. Under this method, all assets and liabilities associated with operations are included on the statements of net position, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. This is different from the basis of budgeting.

Denver Water's budget is prepared using the budget basis in which revenues are recorded when they become available, and expenditures are recorded at the time liabilities are incurred. Under the terms of grant agreements, the Board funds certain programs using a combination of cost-reimbursement grants and general revenues. It is the Board's policy to first apply cost-reimbursement grant resources to such programs, followed by general revenues.

Operating revenues and expenses

Operating revenues consist primarily of charges to customers directly or indirectly related to the sale of water. Operating expenses consist of the cost of providing water and power, including administrative expenses and depreciation on capital assets. All other revenues and expenses are classified as nonoperating.

The Board accrues for estimated unbilled revenues for water provided through the end of each year from the last reading of the meters, based on the billing cycle.

Rates and fees

Under Article X, Section 10.1.9 of the Denver City Charter, the Board is empowered to set rates for all customers. These rates "...may be sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, betterments, including those reasonably required for the anticipated growth of the Denver metropolitan area, and to provide for Denver's general welfare...."

Revenues

Denver Water is completely funded through rates, fees, and charges for services provided by Denver Water. There are no transfers to or from the City's General Fund. Water rates pay for operation and maintenance expenses, repair, capital replacements and modifications to existing facilities, debt service, a portion of the costs of new facilities, and water supply.

Risk management

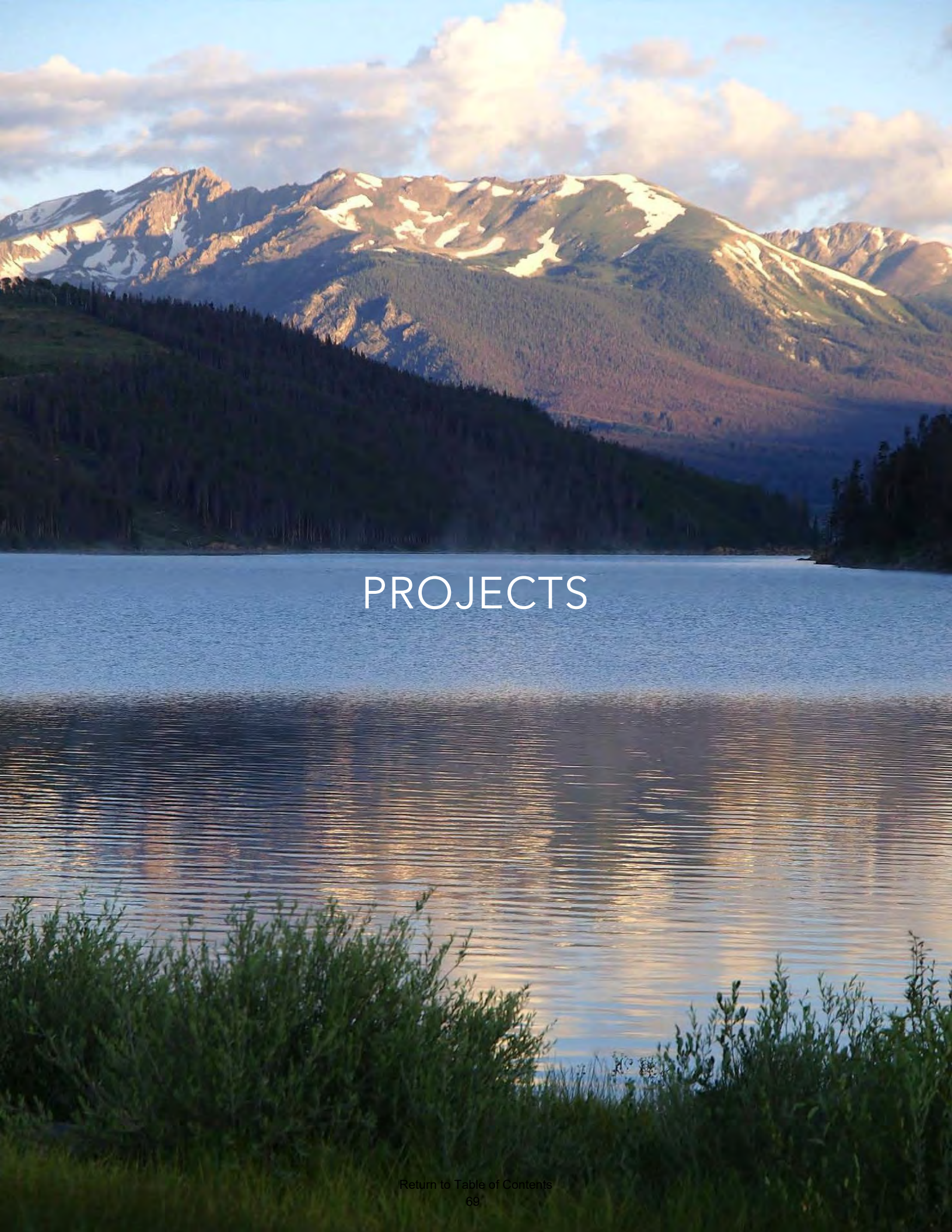
Denver Water is exposed to various risks of loss including torts, general liability, property damage (all limited under the Colorado Governmental Immunity Act (CGIA) to \$424,000 per person, per occurrence and \$1,195,000 aggregate per occurrence as of January 2022), and employee life, medical, dental, and accident benefits. The CGIA limits are adjusted every four years for inflation. Denver Water has a risk management program that includes self-insurance for general and automobile liability, employee medical (including stop-loss coverage in excess of \$500,000), dental, and vision. Denver Water carries commercial property insurance for catastrophic losses, including floods, fires, earthquakes, for scheduled major facilities including the Denver Water Operations Complex, Marston Treatment Plant and Lab, Moffat

Treatment Plant, Foothills Treatment Plant, the Recycling Plant, and water turbines. It carries limited insurance for other nonscheduled miscellaneous locations. Denver Water also carries commercial insurance for life, accident, short-term and long-term disability, employee dishonesty, cyber-attacks, terrorism, malicious attacks, excess general liability, and fiduciary exposure.

Denver Water is self-insured for workers' compensation and carries an excess liability (stop-loss) policy for individual claims exceeding \$500,000. Prior to February 1, 2016, Denver Water was insured for workers' compensation insurance by a large deductible policy whereby Denver Water was responsible for the first \$250,000 per claim with a maximum aggregate cost of \$2.7 million. Several claims remain open under this policy. In addition, Denver Water is at times party to pending or threatened lawsuits under which it may be required to pay certain amounts upon their final disposition. Settled claims have not exceeded this commercial coverage in any of the past three fiscal years.



Shown are two different motorists who drove through Denver Water barricades.



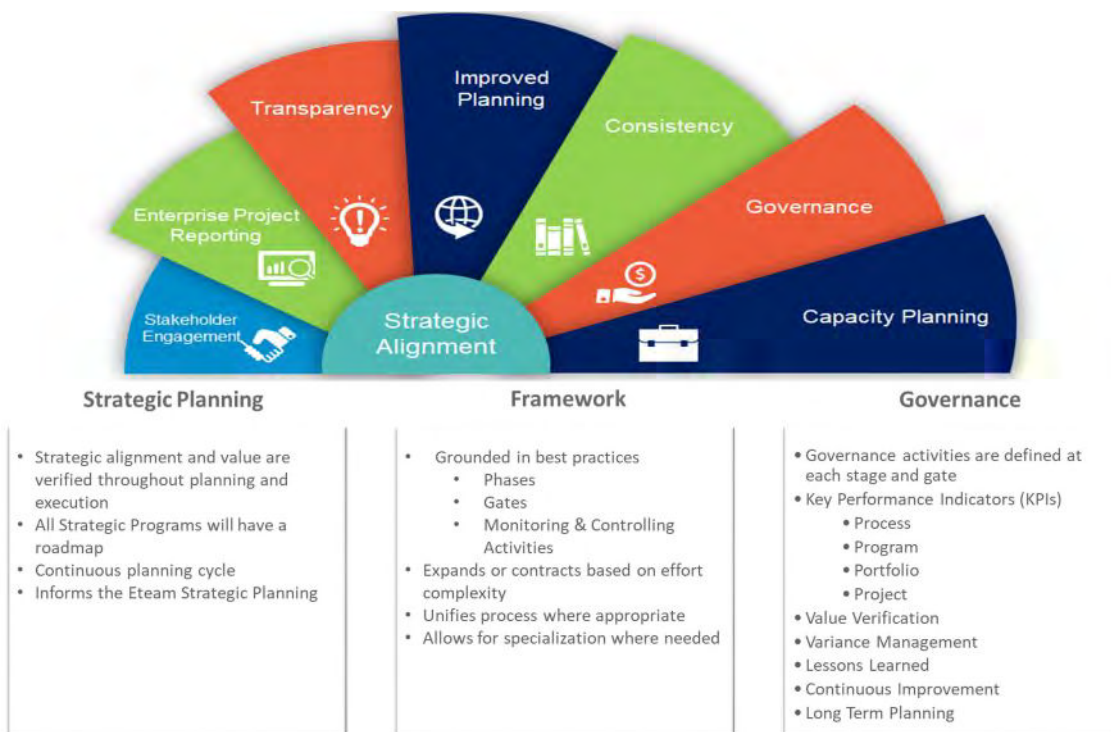
PROJECTS

ENTERPRISE PROJECT MANAGEMENT

The Enterprise Project Management Office (EPMO) supports Denver Water’s project portfolio to ensure the right projects are selected and delivered at the right time and for the right cost. The goal of the centralized EPMO is to provide company-wide guidance, governance, standardized processes, and project portfolio management best practices, tools, and techniques. The first phase of EPMO implementation, completed in 2022, established consistent governance across all projects, developed a project reporting tool, touched on value verification standards, and refreshed the prioritization process, scorecard and key project metrics. The second phase of EPMO will kick off in 2023, focusing on optimizing resources by deepening the strategic alignment of projects in Denver Water’s portfolio.

EPMO value proposition

EPMO’s goal is transparent planning, selection and governance for the Board. This includes consistent enterprise reporting and performance metrics for the Executive Team; improved stakeholder engagement for Denver Water’s partners; value realization on projects; and consistent processes for Denver Water’s project managers and people engaging in the process. When brought together, Denver Water should have clear capacity planning, and assurance that the right projects are selected at the right time and cost.



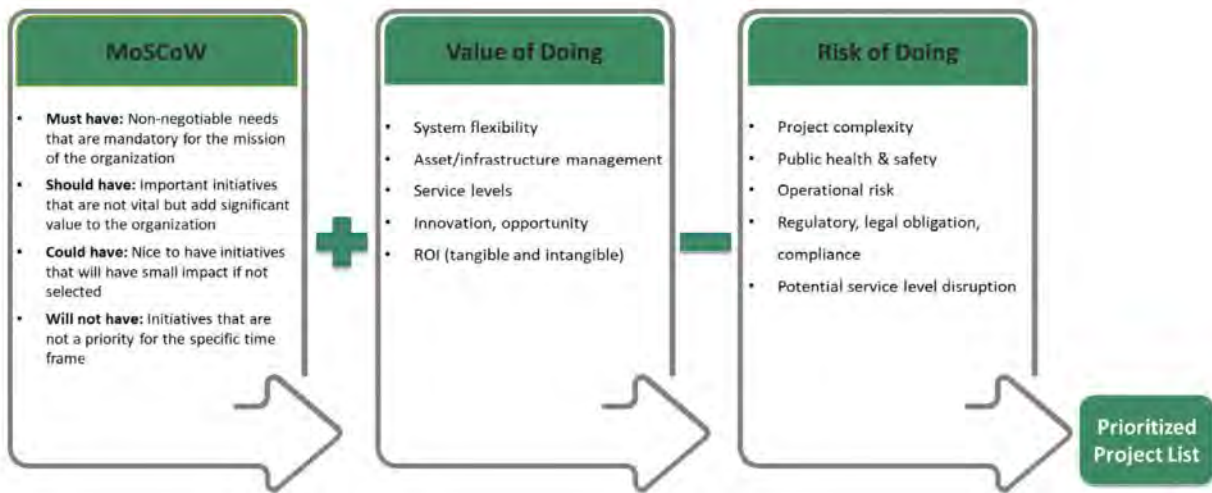
PROJECT PRIORITIZATION

Project evaluation, selection, and prioritization process

Project budgets, which consist of both capital and operating expenditures, follow the standard work of the EPMO for evaluation, selection and prioritization of projects.

To begin the process, project managers first develop a detailed business case for all potential projects. Each business case includes detailed information on the associated scope, schedule, budget, risks, dependencies and alternatives for the requested project. Once submitted, business cases are reviewed and approved by the appropriate portfolio manager.

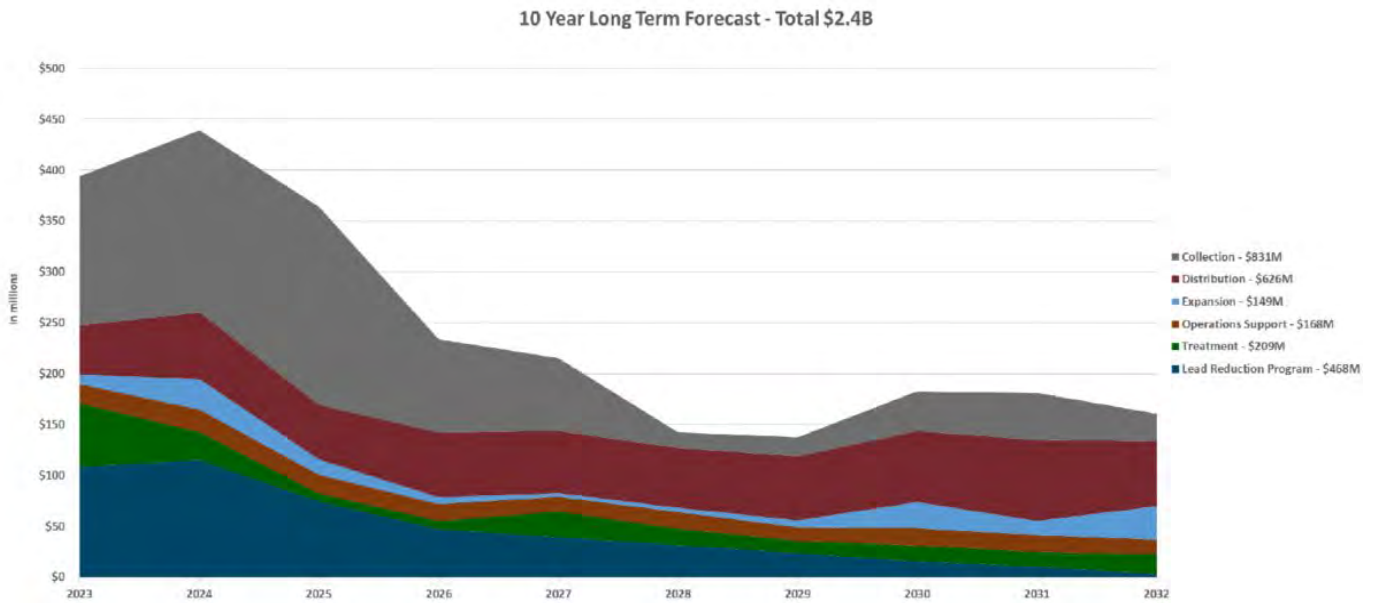
Projects approved by the portfolio managers are compiled into a preliminary long-term forecast. Portfolio managers, with guidance from the EPMO team, then conduct a series of meetings to categorize and prioritize the approved projects based on the goals of the organization for that year.



The outcome of these activities is a prioritized long-term project plan with the strategic goals of the organization, the long-term financial plan, and the recommended revenue adjustments.

10-YEAR PROJECT PLAN

The chart below illustrates the 10-year project plan for Denver Water (including both capital and operating projects). Over the next 10 years, Denver Water expects to spend \$2.4 billion improving and maintaining this system, the largest capital plan in history.



Major projects in the 10-year forecast include:

- Lead Reduction Program
- Northwater Treatment Plant
- Gross Reservoir Expansion
- Highlands Pump Station
- Main Replacements and Improvements
- Strontia Sedimentation



Lead Reduction Program, 2020



Strontia Springs Dam Spillway, 2019

PROJECT & PROGRAM DETAIL
2023 BUDGET

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
GOVERNED PROJECTS & PROGRAM							
Gross Reservoir Expansion	Collection	Capital	208,346	137,000			
Lead Reduction Program	Other	Capital	181,272	68,387	68,800	186,340	504,799
Northwater Treatment Plant	Treatment	Capital	437,650	55,364	23,200	500	516,714
Lead Program Federal Loan 2023	Other	Capital	-	15,000	20,124	1,000	36,124
Lead Program - Federal Principal Forgiveness 2023	Other	Operating	-	15,000	24,000	1,000	36,124
Lead Service Line Removal - Denver Water	Distribution	Capital	30,550	10,294	10,377	35,357	86,578
2022/23 Vault Modifications	Distribution	Capital	1,249	3,098	-	-	4,347
Main Replacement by Contractor Colfax	Distribution	Capital	-	3,081	3,500	-	6,581
Strontia- Electrical & Control Upgrade	Collection	Capital	1,162	2,839	5,732	250	9,983
N Complex Hazeltine Pump Station / Electrical, instrumentation and controls (EI&C)	Expansion	Capital	256	2,774	20,750	13,135	36,915
2023 Vault Improvements - Denver International Airport	Distribution	Capital	-	2,415	-	-	2,415
Foothills Reservoir 1&2 Waterproofing	Treatment	Capital	2,872	2,058	-	-	4,930
2023/24 Vault Modifications	Distribution	Capital	85	2,002	2,000	-	4,087
Marston Cathodic Protect Improvements	Treatment	Capital	651	1,835	-	-	2,486
Clarkson Pump Station Renovations	Distribution	Capital	2,342	1,654	-	-	3,996
Water Resources Center	Operations Support	Capital	18,961	1,500	-	-	20,461
Specialized Mains 2023	Distribution	Capital	13	1,397	235	-	1,645
2022/23 Cathodic Protection Improvements	Distribution	Capital	250	1,286	-	-	1,536
2023 Conduit Valve Replacement	Distribution	Capital	-	1,239	1,125	-	2,364
Strontia Reservoir Access Improvements	Collection	Capital	-	1,235	-	-	1,235
2024 Conduit Valve Replacement	Distribution	Capital	-	1,125	1,250	1,250	3,625
Last Chance Diversion Replacement	Collection	Capital	847	1,061	-	-	1,909
Hazeltine Reservoir Spillway	Expansion	Capital	42	958	998	-	1,998
North Complex Aeration	Expansion	Capital	-	908	3,368	832	5,109
SCADA Network Design & Configuration	Operations Support	Operating	3,240	839	281	4	4,365
Standardize Modular Micro Data Center	Operations Support	Capital	-	766	750	5,800	7,316

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**PROJECT & PROGRAM DETAIL
2023 BUDGET**

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
Marston Yard Piping & Potable Distribution	Distribution	Capital	878	656	-	-	1,534
Enterprise Telecom System Phase 2	Operations Support	Capital	-	621	800	-	1,421
Dillon Control House Hydraulic Power Unit	Collection	Capital	52	604	253	-	909
CC&B Software Upgrade to 2.9	Operations Support	Capital	535	576	-	-	1,111
Secure Configuration Network	Operations Support	Operating	45	573	18	-	636
Conduit Number 20 Expansion Joint	Collection	Capital	19	1,035	-	-	1,054
Chips Berry Facility Variable Frequency Drive Replacement	Distribution	Capital	233	534	800	-	1,567
2022 Conduit Valve Replacement	Distribution	Capital	1,199	518	-	-	1,716
Move Existing 3Par to Highland	Operations Support	Capital	-	509	-	-	509
Marston Aeration	Treatment	Capital	-	500	500	-	1,000
Conduit 20 Diversion Dam Downstream Slope Stability	Collection	Operating	-	491	-	-	491
Foothills Filter Surface Wash Chlorination Upgrades	Treatment	Capital	44	490	355	-	889
Lakeridge Facility Variable Frequency Drive Replacement	Distribution	Capital	72	490	-	-	562
Oracle Server Refresh	Operations Support	Operating	-	481	-	-	481
Business Analytics Platform	Operations Support	Operating	9	437	7	6	460
Eleven Mile Facility Electrical Upgrades	Collection	Capital	285	413	4,300	1,400	6,398
Specialized Mains 2022	Distribution	Capital	3,508	303	-	-	3,811
Recycling Treatment Plant - Upgrade CL2 Scrubber	Treatment	Capital	915	297	-	-	1,212
Sensus Master Meter Replacement	Expansion	Operating	1,882	282	-	-	2,164
WISE Connection plan direction	Expansion	Operating	-	265	-	-	265
Integrated Communications / Data Platform	Operations Support	Operating	30	261	-	-	291
Foothills Treatment Plant - DCB Flow Meter & Vent Modifications	Treatment	Capital	-	260	820	-	1,080
North Complex Mounding Drain Blend	Treatment	Capital	-	240	100	-	340
Tower Road-20" Recycled Water Main	Distribution	Capital	-	212	1,310	-	1,522
Government to Commercial Microsoft Tenant Conversion	Operations Support	Operating	9	211	-	-	220

**PROJECT & PROGRAM DETAIL
2023 BUDGET**

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
Hillcrest Hydro Cathodic Protection	Distribution	Capital	28	207	-	-	236
Corrosion Control for Treatment Plants	Treatment	Capital	-	200	200	3,600	4,000
Master Set of Process & Instrumentation Diagrams	Treatment	Operating	-	200	200	150	550
New Clinic Software	Operations Support	Operating	125	193	-	-	318
PowerBroker end of life 2023	Operations Support	Operating	-	188	-	-	188
eDiscovery Phase II	Operations Support	Operating	15	186	-	-	201
Specialized Mains 2025	Distribution	Capital	3	179	100	700	983
Secure Configuration Management	Operations Support	Operating	29	178	-	-	207
Castlewood Pump Station	Distribution	Capital	47	170	1,500	2,000	3,717
Foothills Treatment Plant Filter Media & Under Drain Replacement	Treatment	Capital	5,053	170	-	-	5,222
Nighthawk	Treatment	Operating	31	162	-	-	193
Marston Reservoir Manhole Retrofit	Collection	Operating	-	160	-	-	160
Marston/Foothills Computational Fluid Dynamic (CFD) Modeling	Treatment	Operating	1	158	-	-	158
Meter Shop Test Bench Instrument Control	Operations Support	Operating	32	156	21	-	209
Contact Center- Remote Worker	Operations Support	Operating	-	132	-	-	132
2024 Vault Improvements - Denver International Airport	Distribution	Capital	-	127	900	-	1,027
Digital Asset Management System	Operations Support	Operating	-	125	-	-	125
Ralston Dam Modifications	Collection	Capital	9,111	117	-	-	9,228
Highlands Pump Station Rehabilitation	Distribution	Capital	187	110	135	13,400	13,832
Upgrade Direct Access (DA), Virtual Private Network (VPN), and Multifactor Authentication (MFA)	Operations Support	Operating	33	102	-	-	135
Backflow Assembly Upgrade - DIA/CD/NF	Distribution	Capital	-	100	2,000	-	2,100
Specialized Mains 2024	Distribution	Capital	-	100	1,200	50	1,350
Access Control System Replacement	Operations Support	Capital	-	97	1,200	-	1,297
Operating Expense & Revenue Reporting Tool	Operations Support	Operating	-	97	200	-	297
2024/25 Vault Modifications	Distribution	Capital	-	91	2,000	2,000	4,091

PROJECT & PROGRAM DETAIL
2023 BUDGET

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
Conduit 18 Redundancy for Central Utility Plant	Operations Support	Capital	-	89	1,500	-	1,589
South System Facility Plan	Treatment	Capital	890	87	-	-	977
Promise-Pmt Arrangement WebApp	Operations Support	Operating	-	84	-	-	84
Triple Bottom Line Treatment Plant Disinfection	Treatment	Operating	-	75	-	-	75
Recycling Treatment Plant Caustic Soda System Rebuild	Treatment	Capital	-	74	-	-	74
High line Canal Dam Sluice Gate	Collection	Capital	-	69	600	-	669
Administration Building Roof Runoff - Study	Treatment	Capital	2	64	311	-	376
Intuitive Tap/Water Sales Payment	Operations Support	Operating	0	62	-	-	62
Foothills Replace Filter Panel	Treatment	Capital	293	51	-	-	344
Vasquez Creek Culvert Replacement	Collection	Capital	-	50	370	-	420
OMSConnect Software Updates	Operations Support	Operating	-	50	-	-	50
Contact Center Reporting Platform	Operations Support	Operating	1	41	-	-	42
Eleven Mile Pipe Abandonment	Collection	Operating	-	40	-	-	40
Capitol Hill Conduit 18 Hydro	Distribution	Capital	-	38	150	300	488
Welby Pump Station Re-Commissioning of Electrical/Mechanical Components	Collection	Operating	-	34	-	-	34
Aquifer Storage and Recovery Pilot	Expansion	Operating	2,490	30	-	-	2,520
Online Plan Review Portal	Operations Support	Operating	15	25	-	-	40
Conduit 26 Steel Liner Rehabilitation	Collection	Capital	218	14	-	-	232
Kassler Pump Station Pump Evaluation	Collection	Operating	-	14	-	-	14
Dillon Stilling Basin-Concrete	Collection	Operating	-	14	387	-	401
Strontia Conduit 26 Gate Chain Hoist	Collection	Capital	-	13	117	-	130
IT Hardware/Software Asset Management System	Operations Support	Operating	112	9	-	-	121
2021/22 Vault Modifications	Distribution	Capital	4,232	3	-	-	4,235
Enterprise Telecommunications System	Operations Support	Operating	13	2	-	-	15
Software Defined Access	Operations Support	Operating	34	2	-	-	36
TOTAL GOVERNED PROJECTS AND PROGRAMS				\$ 351,115			

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**PROJECT & PROGRAM DETAIL
2023 BUDGET**

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
NON-GOVERNED PROJECTS AND PROGRAMS							
Main Replacements/Improvements	Distribution	Capital	21,069	19,822	24,963		65,853
Vehicle Replacements	Operations Support	Capital	3,512	6,313	7,925		17,750
Main Relocations	Distribution	Capital	2,728	2,727	5		5,460
Forest to Faucets	Expansion	Operating	2,500	2,500	2,500		7,500
WISE Denver International Airport Connection	Distribution	Capital	133	2,121	16,135		18,389
Landscape Transformation Program	Expansion	Capital	-	1,131	-		1,131
Fire Hydrant Replacement	Distribution	Capital	1,141	1,006	1,000		3,147
Highline Canal Forever Fund	Collection	Operating	1,000	1,000	1,000		3,000
2023/24 HVAC Improvements	Operations Support	Capital	235	971	847		2,053
Replace End of Life Network Devices	Operations Support	Operating	370	577	665		1,612
Roof Maintenance Repair & Replacement	Operations Support	Operating	125	500	250		875
Conduit Inspections	Distribution	Operating	500	500	500		1,500
Cathodic Protection Improvements - Denver International Airport	Distribution	Operating	370	418	250		1,038
Unplanned Expense Work	Other	Operating	541	300	300		1,141
2021/22 HVAC Improvements	Operations Support	Capital	520	285	160		965
Strontia Sedimentation Removal	Collection	Operating	243	284	8,000		8,527
Information Governance Road-map Deliverables	Operations Support	Operating	-	276	-		276
Water Use Efficiency Plan	Expansion	Operating	-	250	500		750
No-Fault Main Break Program	Operations Support	Operating	4,694	250	250		5,194
Strontia Watershed Management Plan - US Forrest Service Lands	Collection	Operating	85	250	250		585
Strontia Watershed Management Plan - Denver Water Lands & Rights of Way	Collection	Operating	231	250	250		731
Emergency Capital Unplanned Projects	Other	Capital	87	250	250		587
Integrated Resource Plan 2075	Expansion	Operating	-	199	400		599
Replace Pressure Reduction Valves (PRV) - misc	Distribution	Capital	64	169	70		303
Misc Small Pumping & Storage Projects	Distribution	Capital	44	150	150		344
Conduit 94 Assessment and Repairs	Distribution	Capital	112	115	115		342

PROJECT & PROGRAM DETAIL
2023 BUDGET

(in thousands of dollars)

Project / Program Name	Portfolio	Type	Prior Year(s) Actuals	2023 Budget	2024 Projected	Future Year(s) Projected	Projected Total
Foothills Local Operations Capability	Treatment	Operating	-	75	-		75
Upgrade Remaining 2012 Servers	Operations Support	Operating	105	62	-		167
Programmable Logic Controller (PLC) Replacement - Foothills RMIX	Operations Support	Operating	-	60	-		60
Domain Functional Upgrade	Operations Support	Operating	28	51	-		79
Meadow Creek System Improvement	Collection	Operating	29	50	-		79
Programmable Logic Controller (PLC) Replacement - 41st & Zenobia Vault	Operations Support	Operating	-	44	-		44
Programmable Logic Controller (PLC) Replacement - Highline & Ash Vault	Operations Support	Operating	-	43	-		43
Programmable Logic Controller (PLC) Replacement - Gore Rng & Simms Vlt	Operations Support	Operating	-	43	-		43
Programmable Logic Controller (PLC) Replacement - Belleview & Lowell Vt	Operations Support	Operating	-	42	-		42
Hyper-V Upgrade Project	Operations Support	Operating	316	36	28		380
Review/Improve Employee Offboarding	Operations Support	Operating	-	33	-		33
Programmable Logic Controller (PLC) Replacement - 72nd & Tower	Operations Support	Operating	16	31	-		47
FirstNet Project	Operations Support	Operating	27	28	-		55
Programmable Logic Controller (PLC) Replacement - 48th & Tower	Operations Support	Operating	25	18	-		43
Programmable Logic Controller (PLC) Replacement - 45th & Wolff	Operations Support	Operating	12	12	-		25
Programmable Logic Controller (PLC) Replacement - Moffat Floc & Sed 1-4	Operations Support	Operating	-	10	-		10
Programmable Logic Controller (PLC) Replacement - COLO ROW	Operations Support	Operating	14	10	-		24
Programmable Logic Controller (PLC) Replacement - Marston CONV	Operations Support	Operating	-	10	-		10
Programmable Logic Controller (PLC) Replacement - Colorado & Yale Vault	Operations Support	Operating	-	8	-		8
Programmable Logic Controller (PLC) Replacement - Marston SOL1	Operations Support	Operating	-	8	-		8
Programmable Logic Controller (PLC) Replacement - Marston POLY	Operations Support	Operating	-	6	-		6
Programmable Logic Controller (PLC) Replacement - Hogback	Operations Support	Operating	19	0	-		20
TOTAL NON-GOVERNED PROJECTS AND PROGRAMS				\$ 43,295			
TOTAL PROJECTS AND PROGRAMS				\$ 394,409			

All projections are based on the current long-term forecast, are at various levels of design, and are subject to change.

Non-Governed Projects & Programs display only a rolling 3 years. While other prior year actuals or future years forecast may exist, they are not reflected in this report. Prior year actuals are based on 2022 3rd Quarter year-end forecast and represent the information available at budget adoption.

PROJECT & PROGRAM DETAIL

2023 BUDGET

(in thousands of dollars)

2023 BUDGET BY SYSTEM		
Collection	\$	147,036
Operation Support / Other		117,257
Treatment		62,362
Distribution		58,458
Expansion		9,297
Total	\$	394,409

2023 BUDGET BY TYPE		
Capital	\$	364,816
Operating		29,594
Total	\$	394,409



PROJECT HIGHLIGHTS

Denver Water’s collection system covers more than 4,000 square miles and operates facilities in 12 counties. Denver Water also operates and maintains more than 3,000 miles of distribution pipe — enough to stretch from Los Angeles to New York — as well as 20 dams, more than 20 pump stations, four treatment plants and more.

Gross Reservoir Expansion Project

Construction is underway.

Construction for the Gross Reservoir Expansion Project started April 1, 2022. The project will raise the height of the dam by 131 feet, tripling the reservoir’s capacity from approximately 42,000 acre-feet to 119,000 acre-feet.

The existing facility was designed as a phased project. The first phase, completed in the 1950s, is the current dam and reservoir, which supplies water to the north end of Denver Water’s system. The original plans called for two additional raises, with the timing determined based on needs in the system.

In 2002, after a historic drought and the Hayman Fire, Denver Water identified the need to explore additional storage in its North System, which makes up only 10% of the utility’s total storage capacity, putting the entire system at risk.

After an extensive review process that initially included over 300 different options, the U.S. Army Corps of Engineers determined that expanding Gross Reservoir was the “Least Environmentally Damaging Practicable Alternative” to address Denver Water’s objectives of reliability, flexibility and supply.

The Gross Reservoir Expansion Project, one part of Denver Water’s “all of the above approach,” will provide greater water security to the Front Range; reduce vulnerability in the face of climate change-driven disasters, such as droughts, floods and fire; and ensure flexibility by addressing the imbalance across Denver Water’s North and South systems, allowing the utility to provide water from multiple sources when needed.



Of the additional 77,000 acre-feet added through the expansion, 72,000 acre-feet will be for Denver Water customer use and 5,000 acre-feet will go to an environmental pool, which will provide enhanced stream flow to a 17-mile stretch of South Boulder Creek, as well as additional storage for Boulder and Lafayette.

This project will capture and store water in average and wet years. The additional water supply for Gross Reservoir will come from winter and spring runoff during the high runoff months of May, June and July. Water will not be diverted for this project during low-flow months and when water is scarce.



Building the Gross Reservoir Dam in the 1950s.

Most runoff available to Denver Water during the wet winter of 2014 and spring 2015 flowed out of state because existing Denver Water reservoirs were full and there was no place to capture and store the excess water on the Front Range. If the reservoir expansion had been complete, the reservoir would have captured and stored 72,000 acre-feet of water by summer 2015.

This project goes beyond securing customer's water future. It also helps secure the future of the natural environment for all Coloradans.

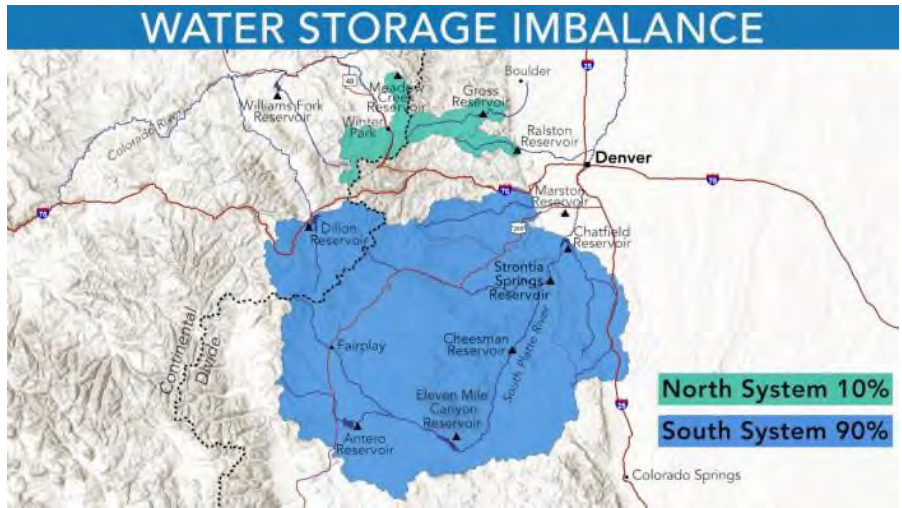
In addition to environmental commitments Denver Water has made to communities surrounding the project, agreements are in place that tie this project directly to protecting South Boulder Creek, as well as the Fraser, Williams Fork, Blue and Colorado rivers.

Through these various agreements and settlements, Denver Water has committed to more than 60 different mitigation and enhancement projects on both the West and East slopes with a total cost of more than \$30 million. Denver Water will be collaborating with numerous stakeholders to preserve the aquatic environment on a cooperative basis. Some of these projects include:

- Establishing a 5,000-acre-foot environmental pool, in partnership with the cities of Boulder and Lafayette, which will enhance stream flow in South Boulder Creek during low flow periods.
- Working collaboratively with Grand County through Learning By Doing to “maintain, and, where reasonably possible, restore and enhance the conditions of the aquatic environment in Grand County.”
- Participating in significant water improvement and stream restoration efforts, such as the Williams Fork River restoration project.

- Committing \$50,000 to stream channelization improvements on the Fraser River.
- Monitoring stream temperatures, water quality, aquatic insects and channel stability in numerous streams on both West and East slopes.
- Partnering with the Colorado Department of Transportation, Grand County, the Town of Winter Park and the U.S. Forest Service to modify Denver Water’s diversion structure on the Fraser River to remove road sand to improve stream quality and trout habitat on the Fraser River.

In short, because of this project, these waterways are better protected now than they were yesterday.



Denver Water has a water storage imbalance between its two collection systems with 90% of its reservoir storage located in the utility's South System compared to 10% in its North System. This storage imbalance creates vulnerability if there is a drought, mechanical issue or emergency that affects the South System. The storage imbalance is one of the reasons Denver Water is expanding Gross Reservoir.

Over the course of the Gross Reservoir Expansion Project, Denver Water has developed a variety of channels to share information and receive community feedback. This information will continue to be updated information on this [website](#), including regular updates about construction activities on site, project documentation and contact information.



North System Renewal

Improving the safety and reliability of an aging system.

Denver Water's North System brings snowmelt from the mountains through reservoirs, pipelines and a treatment plant to produce clean, great-tasting drinking water. Denver Water is upgrading and modernizing the northern portion of the water system. Denver Water is building a new

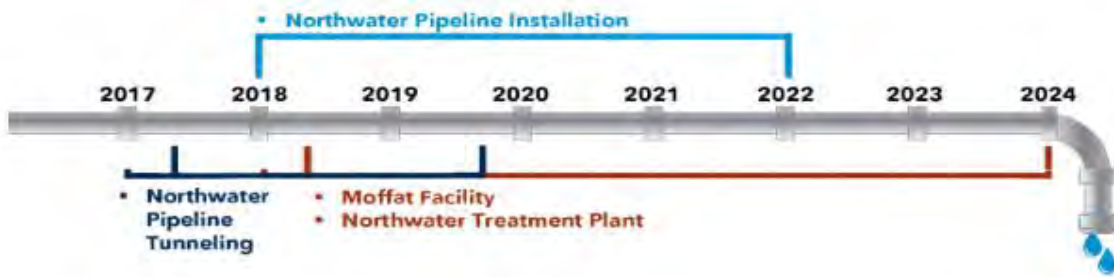


water treatment plant, installing a new pipeline and redeveloping Moffat Treatment Plant. When finished, the system will be more resilient and adaptable to changing demands for water now and into the future.

Denver Water's North System was constructed in the 1930s, when the surrounding area was mostly farmland. Now, 80 years later, the North System is reaching the end of its lifespan. The North System's pipelines and valves need to be replaced. The new treatment plant will feature updated technology, and the existing Moffat Treatment Plant will be repurposed into a distribution site.

Project components:

- **Northwater Treatment Plant (NTP)** — A new, state-of-the-art water treatment plant is being built next to Ralston Reservoir, north of Golden in Jefferson County. NTP will be capable of treating up to 75 million gallons of water a day and will be equipped with disinfection technology that will provide more flexibility to react to changes in water quality.
- **Northwater Pipeline** — A 66-inch diameter pipeline is being installed, replacing one of the two existing pipelines, running 8.5 miles between Ralston Reservoir and the Moffat Treatment Plant. The new pipeline will transport treated water from NTP to the Moffat Facility for distribution.
- **Moffat Treatment Plant** — The Moffat Treatment Plant will continue to treat water although at a reduced capacity. Water treated at NTP will be sent to the Moffat facility, via the Northwater Pipeline, where it will be stored and distributed to customers.



**Construction began October 2017. As with any project, the schedule depends on several factors and will be updated as construction progresses.*

Aquifer Storage and Recovery

Aquifer Storage and Recovery, or ASR, is the storage of clean, potable water in an aquifer for later recovery and use. Many liken the concept to a savings account — water “deposits” can be made during wet years and stored indefinitely. During periods of dry weather, “withdrawals” can ease the burden on other water supplies. Denver Water is exploring how ASR may contribute to delivering high-quality drinking water to customers far into the future. Studying the feasibility of using ASR is part of the “all of the above” strategy, which includes conservation, expanding sources of supply, recycling water and more to ensure Denver Water can meet the future needs of customers in our service area.

Clarkson Street Pump Station Renovation

Out of sight but not out of mind.

Denver Water’s contractor, Moltz Construction, began upgrading pumps within an underground vault in Greenwood Village in October 2022. Denver Water continually monitors its aging infrastructure and identifies specific equipment in the street that needs replacement to ensure customers receive a continuous supply of high-quality water.

Hillcrest Storage Tank Replacement

Durable design, less susceptibility to leaks.

To maintain safety at the Hillcrest water storage facility and improve its reliability, Denver Water is making major upgrades through work estimated to run through spring 2023.

Denver Water developed the Hillcrest water storage facility in the early 1960s to replace several small, temporary pumping stations and improve the ability to reliably serve the burgeoning population of southeast Denver. Since then, the area’s population has continued to grow, placing increasing demand on the storage and pumping facilities on top of the wear and tear expected to come with age.

The major upgrades this project brings to the Hillcrest facility are an important part of Denver Water’s plan for continued reliable water service to the southeast Denver area.



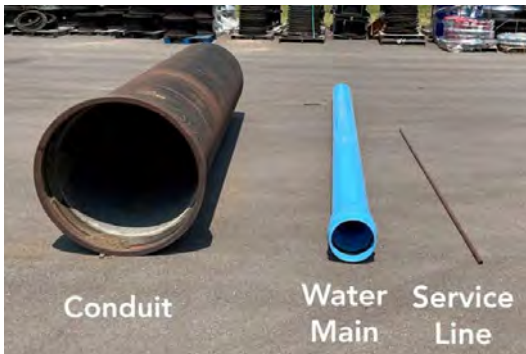
Pipe replacement and Lead Reduction Program work areas

Proactive pipe work keeps the water flowing.

Denver Water replaces water mains for various reasons, including repairing or avoiding main breaks, replacing corroded pipe, alleviating water quality problems, increasing available hydrant flow and improving area delivery. Denver Water cares about public health and will replace any customer-owned lead service line with a copper water line, at no direct charge to the customer, when discovered during a project. Customers who have lead service lines that are not encountered during pipe replacement work are enrolled in the Lead Reduction Program.

The water distribution system contains more than 3,000 miles of water mains, and Denver Water crews install or replace an average of 80,000 feet of pipe a year with a goal of replacing 140,000 feet of pipe a year by 2026.

Replacements are done for various reasons, including repairing or avoiding main breaks, replacing corroded pipe, alleviating water quality problems, increasing available hydrant flow and improving area delivery. All of these are important to maintaining the system that delivers your water.



There are typically three pipe sizes used to deliver water to customers. Conduits carry large amounts of water over long distances. Water mains branch off the conduits and run into neighborhoods. Service lines are owned by customers and connect homes and businesses to the water mains.



Construction crews install a 50-foot section of steel pipe next to Willis Case Golf Course in northwest Denver. Large pipes are 66 inches in diameter and weigh 11,500 pounds.



WATER RATES AND USAGE

WATER RATES



In October 2022, the Denver Board of Water Commissioners adopted rate changes to help pay for critical upgrades and projects to keep the water system operating efficiently.

The rate changes took effect Jan. 1, 2023, and have increased monthly bills for most single-family customers by an average, over the course of the year, of \$1 to \$4, depending on where they live and if they use water at similar volumes to 2022.

Customers' rates will help pay for an estimated \$2.4 billion in needed investment forecast over the next 10 years. This work will maintain the system today and increase its future resiliency, reliability and sustainability as it continues to deliver clean, safe water to 1.5 million people. From more frequent droughts and wildfires to additional regulations— Denver Water will be prepared. All of Denver Water's costs are paid for by rates, fees and other sources, such as bond and hydropower sales, not taxes.

To keep water affordable and to encourage efficiency, Denver Water's rate structure includes three tiers based on how much water is used. Indoor water use — for bathing, cooking and flushing toilets — is essential for human life and is charged at the lowest rate. Efficient outdoor water use is charged in the second tier (middle rate), followed by additional outdoor water use in the third tier (highest rate). In addition to variable charges based on water use, the rate structure also includes a monthly fixed charge based on the water meter size.

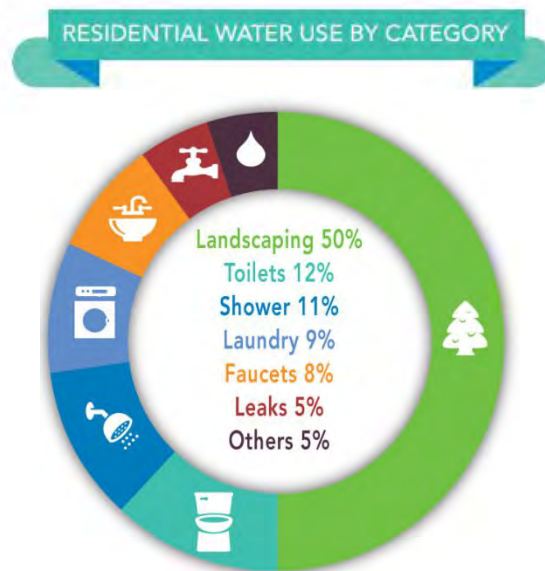
Denver Water employees continue their around-the-clock work running a large, intricate system that spans 12 counties across Colorado. With major investments forecast over the next 10 years, we're staying on top of needed upgrades and new projects to keep this system operating efficiently. Denver Water is continuing proactive and strategic work maintaining and replacing water mains in the streets, building a new, state-of-the-art treatment plant and water quality laboratory, expanding Gross Reservoir, and replacing old, customer-owned lead service lines to protect customers from the risk of lead in drinking water — preparing us for an uncertain future that includes more extreme weather patterns.

Denver Water always encourages customers to be efficient with their water use. Using less water here means more water can be kept in the mountain reservoirs, rivers and streams that fish live in and Coloradans enjoy.

WATER USAGE

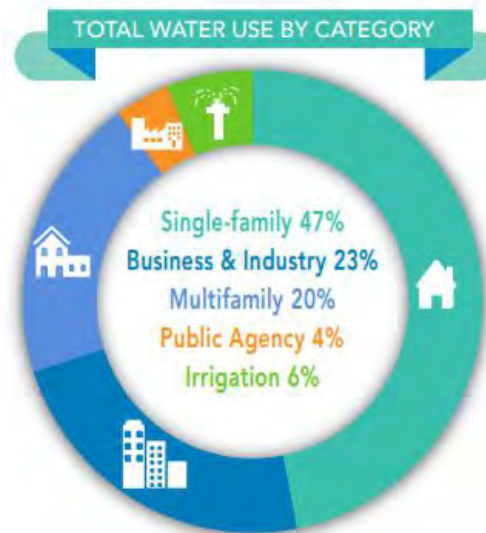
Residential usage

Denver Water analyzes how customers use water now and how that use may change in the future. By researching customer water-use patterns, Denver Water can better plan for an adequate supply of clean, reliable water well into the future.

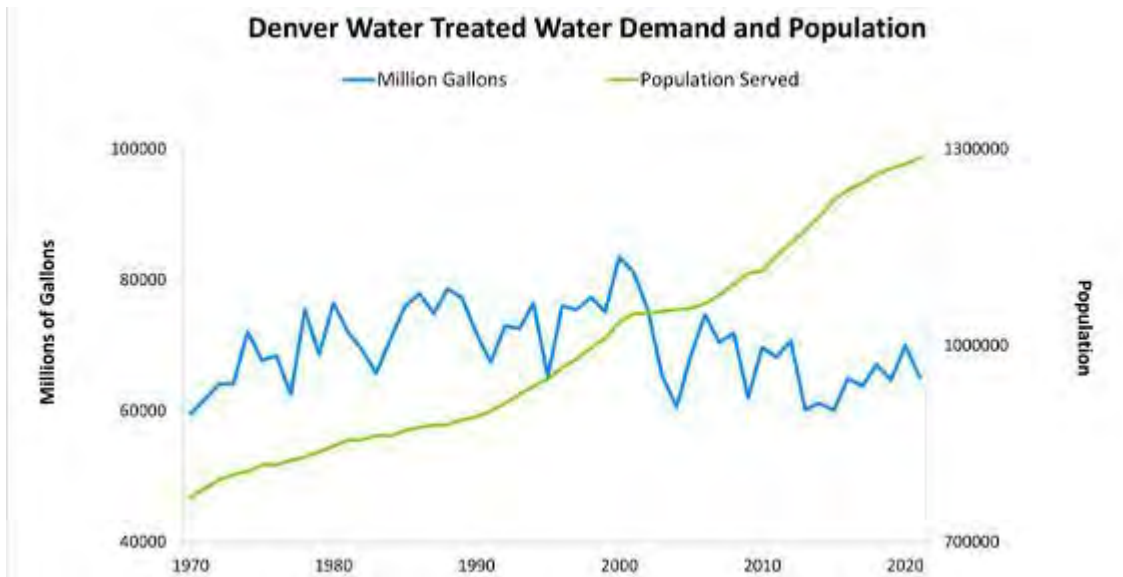
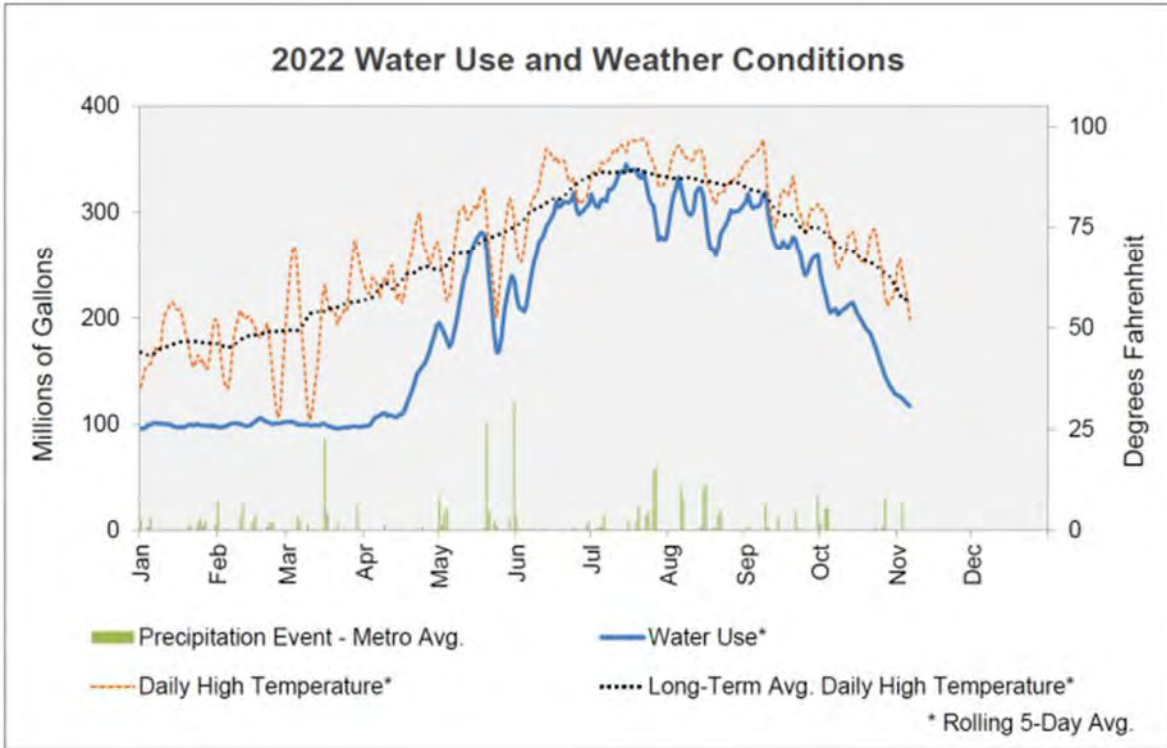


Usage by category

Predicting the future needs for Denver Water’s service area depends on growth in population and employment, improvements in water fixture technology, and changes to land use, among other variables.



Water use from year to year is heavily influenced by the weather. About half of single-family residential water use is outdoors, and a hot, dry year can mean customers use more water than usual. Denver Water serves about a quarter of the state's population but uses less than 2% of all water, treated and untreated, in Colorado.



WATER SHORTAGE PREPAREDNESS



Cheesman Reservoir during the 2002 drought

Denver Water’s proactive efforts take a holistic approach that includes planning for all water shortage events. Water shortages can occur many ways, including drought, curtailment of water supplies or an emergency in the water distribution system. Regardless of the cause, Denver Water has processes in place to respond appropriately to a water shortage event.

All decisions pertaining to water shortage response are made by the Board of Water Commissioners. Board members use Chapter 15 of Denver Water’s Operating Rules to guide their decision. The goal of the Board’s response is to maintain the health, safety and economic vitality of the community to the extent possible in the face of water shortages.

Drought is the most frequent water shortage event for the 1.5 million people Denver Water serves. The weather in Denver Water’s collection system and service area constantly fluctuates, but it’s typically very dry.

Denver receives an average of 15 inches of precipitation each year, which is about a fourth of the precipitation a tropical city such as Miami receives.

Denver Water also has experienced several severe droughts in the past that have challenged the water system and depleted supply. Because of that, Denver Water has a detailed drought-response plan in place.

Stages of drought response

Denver Water’s Water Shortage Response Implementation Plan details water shortage indicators, response tools and response actions. Denver Water’s primary response to water shortage is to restrict customers’ water use so supplies will last as long as possible and be available for the most essential uses.

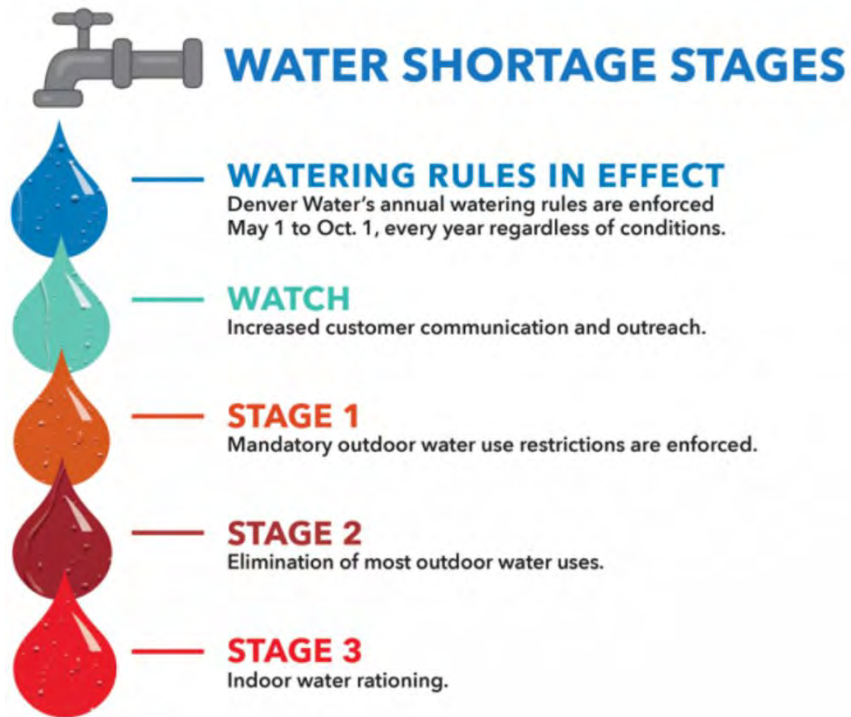


Sun seen through wildfire smoke, 2020

Denver Water’s annual watering rules are enforced May 1 to Oct. 1 every year, regardless of conditions.

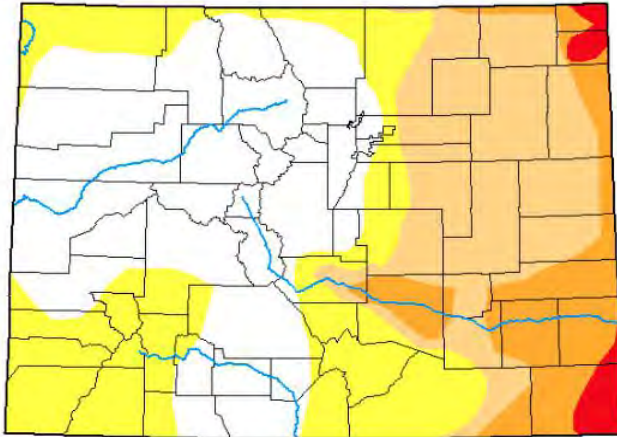
Additionally, four stages of response have been identified based on various water shortage indicators such as:

- Current and projected supply reservoir contents.
- Watershed characteristics in the Colorado and South Platte River basins such as temperature, precipitation, snowpack, streamflow, wind and soil moisture.
- Water use, including projected water use.
- Weather forecasts.
- Actions taken by local, regional and/or state governments or water suppliers regarding water use.
- Drought response actions taken by state water officials.
- Water availability conditions and/or drought conditions in the Colorado and South Platte River basins.
- A failure or emergency in the Denver Water System.



The following images show the Colorado drought monitor from January 2023 compared to 2022:

U.S. Drought Monitor Colorado



January 3, 2023
(Released Thursday, Jan. 5, 2023)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.97	60.03	33.83	12.28	1.91	0.01
Last Week 12-27-2022	13.75	86.25	42.37	30.79	3.23	0.53
3 Months Ago 10-04-2022	24.95	75.05	43.62	13.41	3.16	0.57
Start of Calendar Year 01-03-2023	39.97	60.03	33.83	12.28	1.91	0.01
Start of Water Year 09-27-2022	15.46	84.54	45.65	15.47	3.73	0.57
One Year Ago 01-04-2022	0.00	100.00	95.49	67.08	22.25	0.00

Intensity:
 None (White) D2 Severe Drought (Orange)
 D0 Abnormally Dry (Yellow) D3 Extreme Drought (Red)
 D1 Moderate Drought (Light Orange) D4 Exceptional Drought (Dark Red)

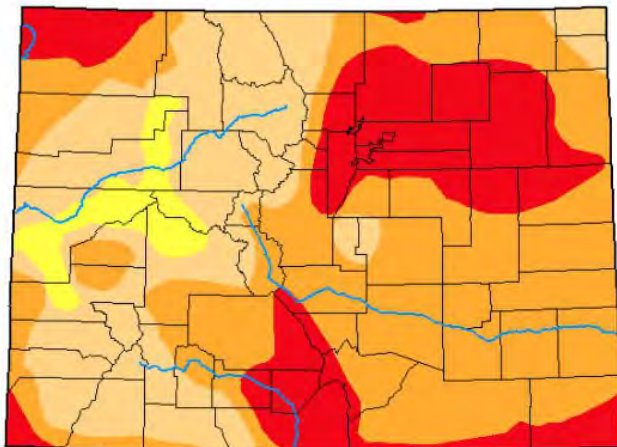
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
Brad Pugh
CPC/NOAA



droughtmonitor.unl.edu

U.S. Drought Monitor Colorado



January 4, 2022
(Released Thursday, Jan. 6, 2022)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	95.49	67.08	22.25	0.00
Last Week 12-26-2021	0.00	100.00	100.00	67.27	22.21	0.00
3 Months Ago 10-05-2021	10.34	89.66	54.10	26.59	12.97	1.95
Start of Calendar Year 01-04-2022	0.00	100.00	95.49	67.08	22.25	0.00
Start of Water Year 09-28-2021	12.72	87.28	46.42	26.30	15.05	3.91
One Year Ago 01-05-2021	0.00	100.00	100.00	93.73	76.17	27.60

Intensity:
 None (White) D2 Severe Drought (Orange)
 D0 Abnormally Dry (Yellow) D3 Extreme Drought (Red)
 D1 Moderate Drought (Light Orange) D4 Exceptional Drought (Dark Red)

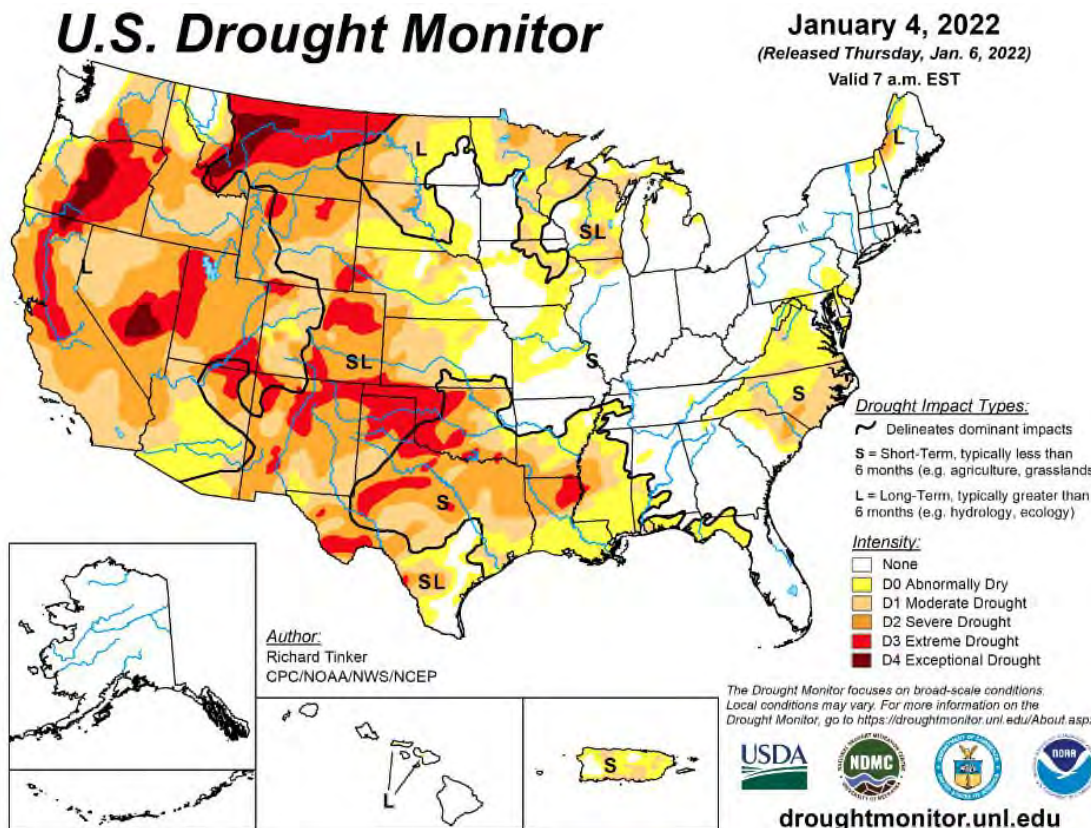
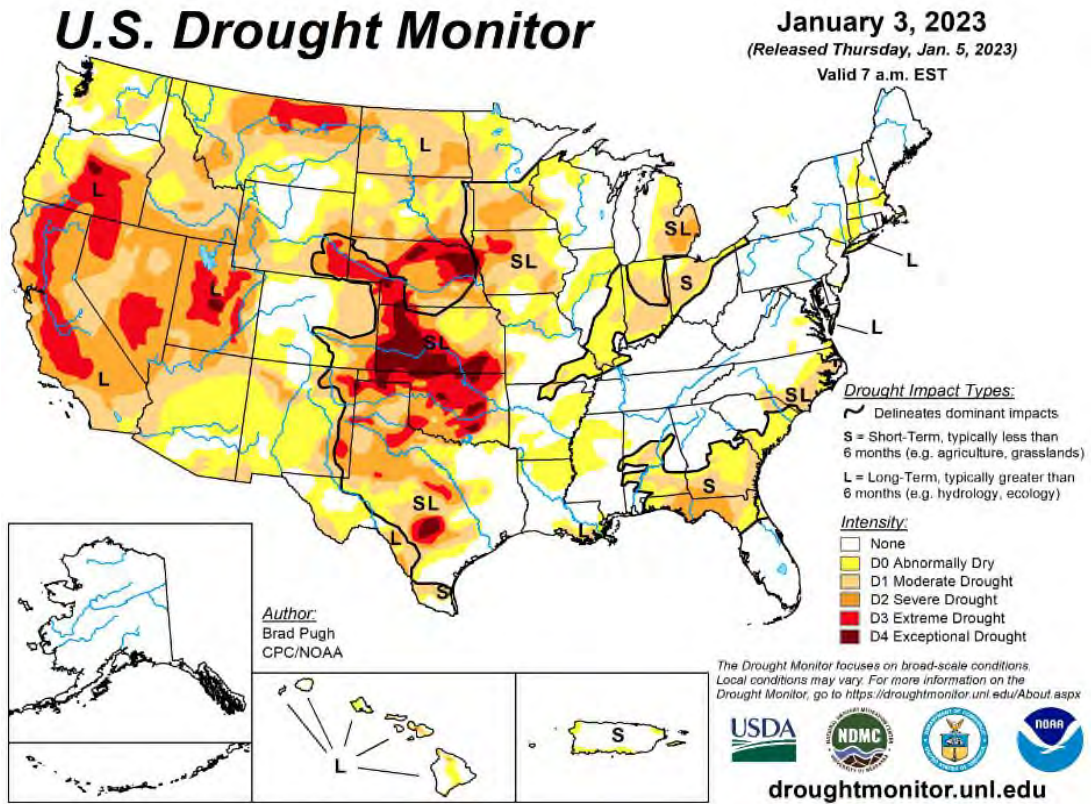
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Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

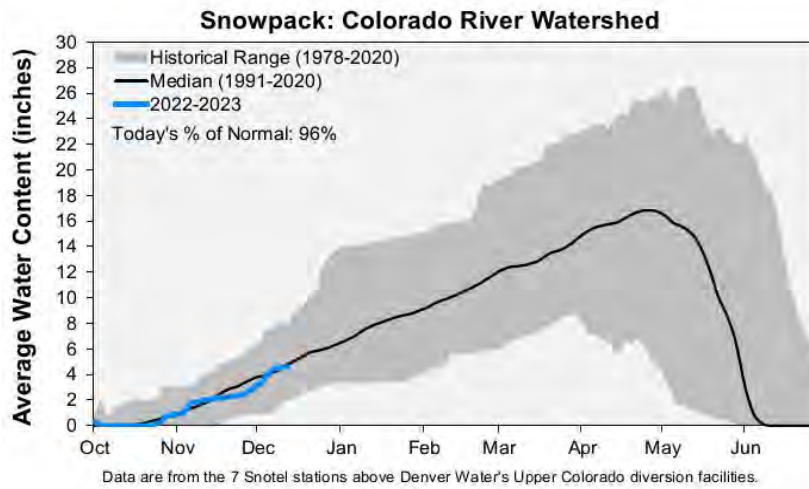
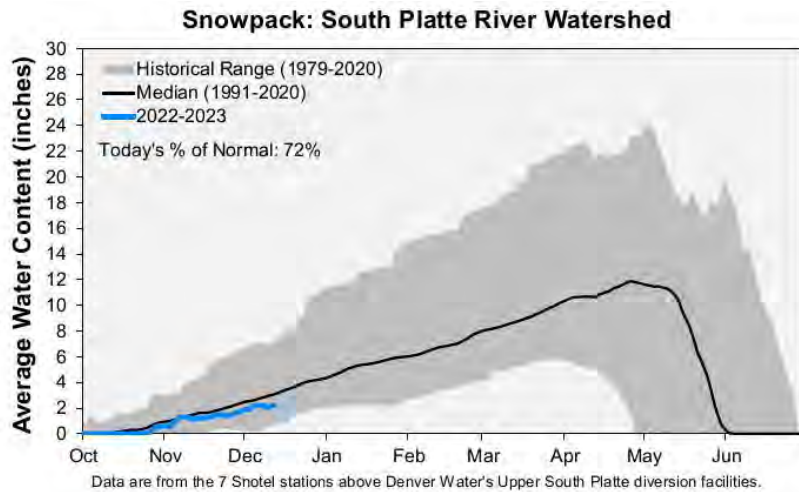
The following images show the national drought monitor from January 2023 compared to 2022:



Current conditions (as of Feb. 1, 2023)

Denver Water collects and analyzes data from throughout our system to help better understand where the water supply and demand stand. All data is preliminary and subject to change.

Denver Water’s supply reservoir storage is near average for this time of year at 82% full, with 81% full being typical for this time of year. Colorado River snowpack above Denver Water’s collection system sits at 111% of normal. South Platte River snowpack above the collection system is currently 81% of normal. The three snowiest months are ahead, and supply conditions are favorable at this point.





GLOSSARY AND DEFINITIONS

GLOSSARY AND DEFINITIONS

accounting standards

The Board's financial statements are prepared in accordance with principles generally accepted in the United States of America (GAAP). Additionally, the Board applies all applicable pronouncements of the Governmental Accounting Standards Board.

balanced budget

The Denver Board of Water Commissioners has not adopted an official policy on a balanced budget. Our practice is to balance the budget by the planned use of contribution to investment balances.

basis of accounting

The Board's financial statements are accounted for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with operations are included on the statement of net assets, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. This is different from the basis of budgeting. Denver Water's budget is prepared using the budget basis in which revenues are recorded when they become available, and expenditures are recorded at the time liabilities are incurred.

bonds

Debt instruments. According to Denver Water's charter, the Board may issue revenue bonds that are secured solely by net revenue.

budget

A financial plan for a specified period of time (fiscal year) that assigns resources to each activity in sufficient amounts so as to reasonably expect accomplishment of the objectives in the most cost-effective manner.

capital expenditure

Expenditure having a depreciable life of over one year and a cost over \$50,000.

capital policy

Initial acquisition costs of assets are capitalized if they have a service life of more than one year and a cost of \$50,000 or more. Costs of not meeting these criteria are expensed. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective asset classes.

cash reserves

The charter of the City and County of Denver specifically allows the accumulation of reserves "sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions and betterments, including those reasonably required for anticipated growth of the Denver Metropolitan area and to provide for Denver's general welfare." The Board's practice is to maintain reserves that are sufficient to

provide: 25% of the next year's operating costs; the greater of average annual amortization cost or 2% of current total capital assets (before depreciation) for replacement capital and equipment purchases; 50% of expected annual debt service for next year; \$10 million in exposure reserve.

change case

A term used to describe a water court application in which the applicant is seeking to modify a water right's location or type of use.

conduit

A 24-inch diameter (or larger) pipe carrying raw or potable water from or to treatment facilities, reservoirs and delivery points feeding a distribution system.

customer service area

The region in which customers are provided and delivered professional, helpful, high quality services and assistance before, during and after the customer's requirements are met.

debt guidelines

Denver Water has no legal debt limits. However, the Board has adopted debt guidelines to guide the timing and use of debt in the future. The guidelines set forth a policy that prevents debt proceeds from being used to pay operating and maintenance expenditures. The guidelines instruct that debt proceeds will be used only for current refunding, advanced refunding and payment for nonrecurring capital projects that expand the system or are otherwise unusual in nature or amount.

debt service

Principal and interest on debt and payments under capital leases.

depreciation

a reduction in the value of an asset with the passage of time.

division

Largest organizational unit reporting to the CEO/Manager.

enterprise fund

A type of propriety fund or a governmental unit that carries on activities in a manner similar to a private business.

fund

An accounting entity with a set of self-balancing accounts that is used to account for financial transactions for specific activities or government functions. By charter, Denver Water is reflected in the city's financial statement in a single fund known as the Water Works Fund.

fund balance

The balance in the Water Works Fund. Fund balance is calculated each year by adding total sources of funds to the balance at the beginning of the year and then subtracting total expenditures.

Governmental Accounting Standards Board (GASB)

A board that establishes the generally accepted accounting principles for state and local governmental units.

hydropower

Hydroelectric power of/or relating to production of electricity by water power.

integrated resource

A method for looking ahead using environmental, engineering, social, financial and economic considerations. Includes using the same criteria to evaluate both supply and demand options while involving customers and other stakeholders in the process.

investment balance

The total sum held in cash and investments net of uncleared warrants.

investments

The Board has protection of principal as its primary investment policy objective. The Board designates its authority to invest money deposited in the Water Works Fund to the CEO/Manager and the chief of finance. According to the current investment policy, U.S. government obligations, government-sponsored federal agency securities, commercial paper, corporate fixed income securities, money market funds and repurchase agreements are permissible investments. The official policy outlines allowable credit risk and maximum maturities for each investment type.

long-term debt

Debt with a maturity of more than one year from date reported.

operating reserves and restricted funds

The amount of cash and invested funds available at any point in time. The balance is the Water Works Fund as defined in this glossary.

operating revenue

Revenue obtained from the sale of water.

principal and interest requirements

As used in the debt guidelines, interest requirements plus the current portion of long-term debt.

program

An organized group of activities and the resources to carry them out, aimed at achieving related goals.

program budget

A method of budgeting in which the focus is on the project and activities that are required to accomplish Denver Water's mission, goals and objectives. It provides consideration of alternative means to

accomplish these criteria. It also provides a control device for higher level management and cuts across organizational lines. Resources are allocated along program lines and across organizational lines.

program element

Series of smaller categories of activities contained in the program such as raw water, water treatment, etc.

raw water

Untreated water.

recycled water

Application of appropriately treated effluent to a constructive purpose. In Colorado, the source of recycled water must be another basin. Also, to intercept, either directly or by exchange, water that would otherwise return to the stream system for subsequent beneficial use.

refunds

Includes system development charge refunds and customer refunds.

reservoir

An impoundment to collect and store water. Raw water reservoirs impound water in a watershed; terminal reservoirs collect water where it leaves a watershed to enter the treatment process; and treated-water reservoirs are tanks or cisterns used to store potable water.

revenues

Denver Water's system is completely funded through rates, fees and charges for services provided by Denver Water. There are no transfers to or from the city's general fund. Water rates pay for operation and maintenance expenses, repair, capital replacements and modifications to existing facilities, debt service and a portion of the costs of new facilities and water supply.

risk management

The Board is exposed to various risks of losses, including general liability (limited under the Colorado Governmental Immunity Act to \$150,000 per person and \$600,000 per occurrence); property damage; and employee life, medical, dental and accident benefits. The Board has a risk-management program that includes self-insurance for liability, employee medical, dental and vision. The Board carries commercial property insurance for catastrophic losses including floods, fires, earthquakes and terrorism for scheduled major facilities.

strategic plan

Process that is a practical method used by organizations to identify goals and resources that are important to the long-term wellbeing of its future.

Supplier Diversity Program

Denver Water's Supplier Diversity Program seeks to provide small businesses and businesses owned by minorities and women an opportunity to work for Denver Water as contractors, subcontractors and

suppliers. In selecting suppliers, contractors and subcontractors, Denver Water actively works to cultivate an environment that provides opportunities as well as transparency and advocacy for small, minority and women-owned businesses.

system development charges

A one-time connection charge that provides a means for financing a portion of the source of supply, raw water transmission facilities, treatment plants and backbone treated water transmission facilities required to provide service to a new customer. Sometimes called a tap fee.

tap

A physical connection made to a public water distribution system that provides service to an individual customer.

type of expenditure

A classification of resources or commodities that will be budgeted and charged to projects and activities by cost control centers.

value realization

The ability to measure the direct influence of projects and people to executive-level business objectives.

vertical value stream

A visual tool that displays all critical steps in a specific process and easily quantifies the time and volume in each stage.

ACRONYM GLOSSARY

ACFR

Annual Comprehensive Financial Report

CDPHE

Colorado Department of Public Health and Environment

CREA

Community, Research, Education and Awareness.

CSA

Customer Service Area

EPMO

Enterprise Project Management Office

FERC

Federal Energy Regulatory Commission

FTE

Full Term Employment

GAAP

Generally Accepted Accounting Principles

GASB

Governmental Accounting Standards Board

GFOA

Government Finance Officers Association

IRP

Integrated Resource Plan

LRP

Lead Reduction Program

LTE

Limited Term Employment

MGD

Million Gallons per Day

M

Million

K

Thousand

MSA

Metropolitan Statistical Area

NTP

Northwater Treatment Plant

PLC

Programmable Logic Controller

SDC

System Development Charges

SDWA

Safe Drinking Water Act

VS

Value Stream

WS

Workshop

WTP

Water Treatment Plant