

2020 | AMENDED BUDGET



TABLE OF CONTENTS

Denver Water Overview	3
CEO Letter	4
About Denver Water	10
History	11
Mission, Vision, Values	15
The Mile High City	16
Organizational Structure	21
Board of Water Commissioners	22
Organizational Chart and Executive Leadership	23
Strategy and Process	31
Strategic Plan	32
Annual Process	35
Financial	41
Budget Summary	42
Sources and Uses	54
Revenue	55
Division Budgets	58
Regular Employees	59
Fund Structure	60
Debt Information	61
Financial Policies	62
Projects	66
Project Prioritization	67
5 Year Project Plan	68
Top Projects	69
Project Summary	71
Capital Project Updates	72

Water Rates and Usage	77
Water Rates	78
Water Usage	80
Water Shortage Preparedness	83
Glossary and Definitions	86



DENVER WATER OVERVIEW

CEO LETTER

We are pleased to present the 2020 Annual Budget Book for Denver Water.

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 5-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.

Profile of Denver Water

The privately-owned Denver City Water Company was organized in 1870. It was merged into the Denver Union Water Company in 1894, along with several smaller companies serving various parts of a growing Denver. 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 five-member Board of Water Commissioners (the "Board") structure is still in existence, governed under the Charter of the City and County of Denver Article X.

Denver Water is a public entity funded by water rates, hydropower revenues and new tap fees, not taxes. Today, its 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 more than 1.5 million people. Three major treatment plants – Marston, Moffat, and Foothills – maintain water quality under the watchful eye of the Denver Water Quality Control Laboratory.

The mission of Denver Water is as follows:

To expertly manage and supply an essential natural resource to sustain our vibrant community — because water connects us all.

Local Economy

Denver is the center of economic activity in the state of Colorado. Major industries include aerospace, aviation, beverage production, bioscience, broadcasting and telecommunications, energy, financial services, healthcare and wellness, and IT-software. The statewide economy also includes agriculture and tourism. Water is essential to making Colorado beautiful and to ensuring the quality of life we enjoy. An overview of the Denver metropolitan area can be found in the City and County of Denver section.

Strategic Plan

The Strategic Plan is the overarching document that defines the vision, perspectives, goals, and objectives of the organization. Denver Water refreshed its 2017 Strategic Plan in January of 2020 to ensure it was relevant for the next several years and that it resonated with our customers and employees.

Annual 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
Prior to the commencement of the annual budget process, updates are made to the Annual Business Plan. A thorough review of ongoing and proposed organizational initiatives is completed to begin determining the organizational priorities for the upcoming year. With help from section leaders, division chiefs utilize a filtering tool to show how the initiatives link to the updated Strategic Plan, to identify the demands placed on the business, and to reflect the impact to the Strategic Plan. Initiatives are deferred if they do not have a strong enough business case, and the remaining initiatives are prioritized. Early in this process, multi-year projects and programs that roll from year to year are flagged because they limit the number of new initiatives that can be added. Once completed, the Organizational Scorecard and Dashboard are reviewed and updated, as necessary, to align with the Annual Business Plan and the Strategic

Plan. Finally, the Continuous Improvement activities are reviewed and modified to ensure alignment to the Annual Business Plan.

- Long-Range Financial Plan

Updates to the long-range financial plan are made annually to determine the level of revenue adjustments needed to meet annual revenue requirements and financial performance measures. The long-range project plan projects additions, improvements, and replacements to water system facilities and infrastructure, based on projected demand for water, federal and state regulations, and ongoing system requirements. The Operations and Maintenance Plan includes the ongoing costs of operating and maintaining the water system and the impact of the project plan on operations. The Financial Plan includes financial performance measures, such as debt service coverage, debt-to-asset ratio, and targeted reserve levels.

- Revenue Adjustments

Revenue adjustments identified in the 2020 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, 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 annual cost of facilities over time rather than requiring the full amount in any one year. The adopted revenue adjustment for 2020 was effective beginning January 1, 2020. This adjustment is expected to produce 3.0% of additional revenue over a 12-month period, assuming normal weather and consumption. The Financial Plan is updated annually.

- 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. Official approval by the Board occurs in December.

Long-Term Financial Planning – Major Initiatives

Lead Reduction Program

- In December 2019, state and federal agencies approved Denver Water’s new Lead Reduction Program. 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 street to customer houses at no charge to the customer, and providing free water filters that are certified to remove lead to all customers with lead service lines until their line is replaced. The program will be rolled out in 2020 with replacement of the lead service lines occurring over the next 15 years. The estimated cost of the program is approximately \$605 million.

The North System Renewal

Gross Reservoir Expansion Project:

- Approximately \$464 million is planned in total project costs for Denver Water’s Gross Reservoir Expansion Project for the evaluation, permitting, mitigation, and construction process to augment our supply to the northern service area adding system balance and protecting against system vulnerabilities. A federal Clean Water Act Section 404 Permit and other state and federal permits have been issued for the project. In December 2018, six environmental groups sued the US Army Corps of Engineers and the US Fish and Wildlife Service arguing that the federal agencies had violated the National Environmental Policy Act, the Clean Water Act, and the Endangered Species Act in permitting the project. Denver Water intervened in the case to defend the federal agencies’ actions and decisions. The Federal Energy Regulatory Commission (FERC) issued a final Supplemental Environmental Assessment in February 2019, which resulted in a finding of No Significant Impact for the project and marked the last federal NEPA process for the project. Denver Water is waiting for the final FERC order, which will authorize construction to begin. Denver Water is continuing to work through the local permitting process.

North System Renewal and Conduit 16 replacement project:

- Approximately \$600 million is planned in capital cost for Denver Water’s Northwater Treatment Plant (NTP) and Conduit 16 replacement projects. This includes funds for the planning, design, and construction of a new 75-million gallon per day (MGD) Water Treatment Plant (WTP), with room to expand. Upon completion, the NTP will replace the existing Moffat WTP with a state-of-the-art facility designed to improve reliability and operational flexibility. A portion of the existing Moffat WTP will also 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.

Relevant Financial Policies and Practices

Denver Water established a comprehensive set of financial policies and practices as a basic framework for the financial management of Denver Water and its planning and budgeting process. These policies and practices are listed in the Budget Book. Two related policies and practices are as follows:

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 or contribution to investment balances.

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.”

Annual Budget

Denver Water received the Government Finance Officers Association’s (GFOA) Distinguished Budget Presentation Award for its annual budget document for the fiscal year beginning January 1, 2019. It was the 28th consecutive year Denver Water has received this award. To qualify for the award, Denver Water’s budget document had to be judged proficient as a policy document, a financial plan, an operations guide, and a communications device.

Comprehensive Annual Financial Report (CAFR)

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to Denver Water for its CAFR for the fiscal year ending in December 31, 2019. This was the 31st consecutive year that Denver Water has achieved this prestigious award. To be awarded a Certificate of Achievement, a government entity must publish an easily readable and efficiently organized CAFR. 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.

Other Awards and Recognition

WateReuse Community Water Champion —The WateReuse Association awarded the Community Water Champion award to Denver Water for the WISE project, a regional partnership that provides new supply by combining unused capacities in Aurora Water’s Prairie

Waters Project with unused water supplies from Denver and Aurora. The award recognizes utilities that showcase exemplary water reuse projects or systems.

Climate Registry Gold Status — The Climate Registry recognized Denver Water’s Sustainability Plan with gold status. This is given to organizations addressing climate change by managing and reducing emissions at the subnational level.

CDPHE Silver Level — The Colorado Department of Public Health and Environment recognized Denver Water with silver-level status for voluntarily going beyond compliance with state and federal regulations and for being committed to continual environmental improvement.

AWWA President’s Award — The American Water Works Association awarded its President’s Award to Denver Water’s Marston Treatment Plant in 2019. AWWA’s Partnership for Safe Water recognizes utilities that demonstrate a commitment to delivering superior quality drinking water to customers.


Heartland Emmy Award — Denver Water received an Emmy Award from the National Academy of Television Arts and Sciences, Heartland Division, for Best Historical Documentary for “Written in Water,” a video celebrating Denver Water’s 100th anniversary.

American Heart Association Gold Level — Denver Water’s wellness program achieved gold-level recognition from the American Heart Association for taking significant steps to build a culture of health in the workplace.

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

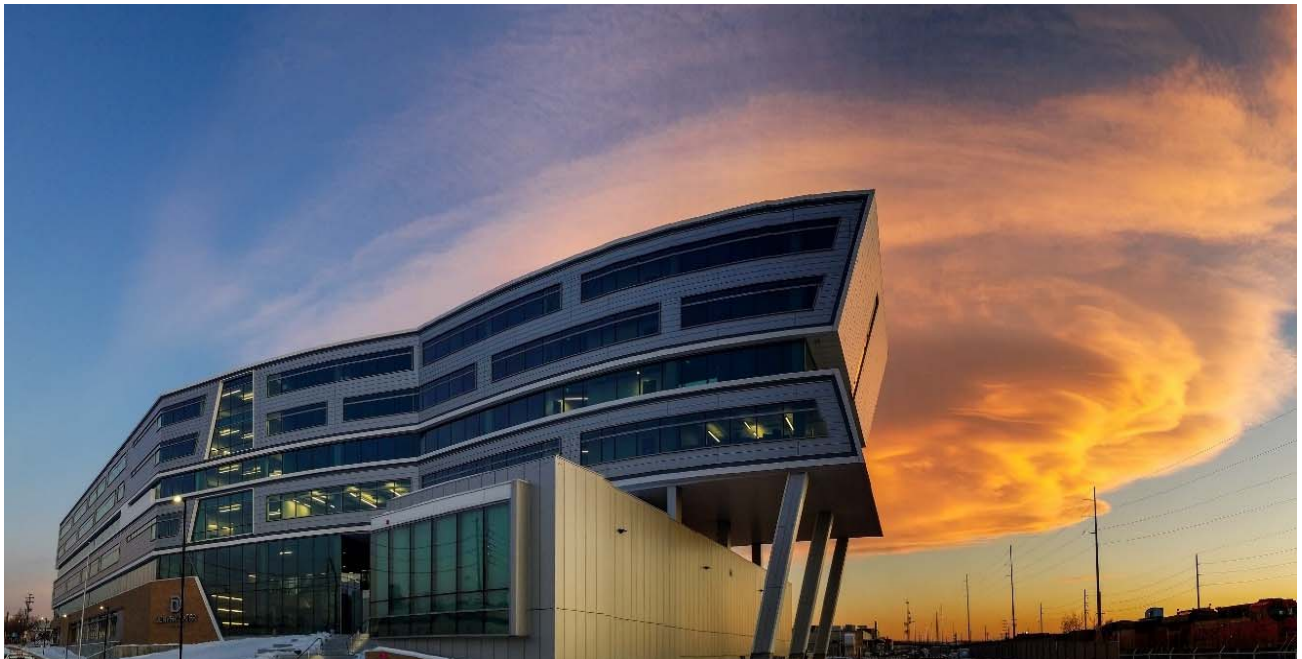


Angela C. Bricmont
Chief Finance Officer

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.

- Denver Water is Colorado’s oldest and largest water utility.
- Denver Water was established in 1918 after Denver residents voted to buy the water system from a private company.
- Denver Water is a separate entity from the city of Denver and is funded by water rates and new tap fees, not taxes.
- Denver Water derives its authority from the Charter of the City and County of Denver (Article X).
- Denver Water’s 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.



HISTORY

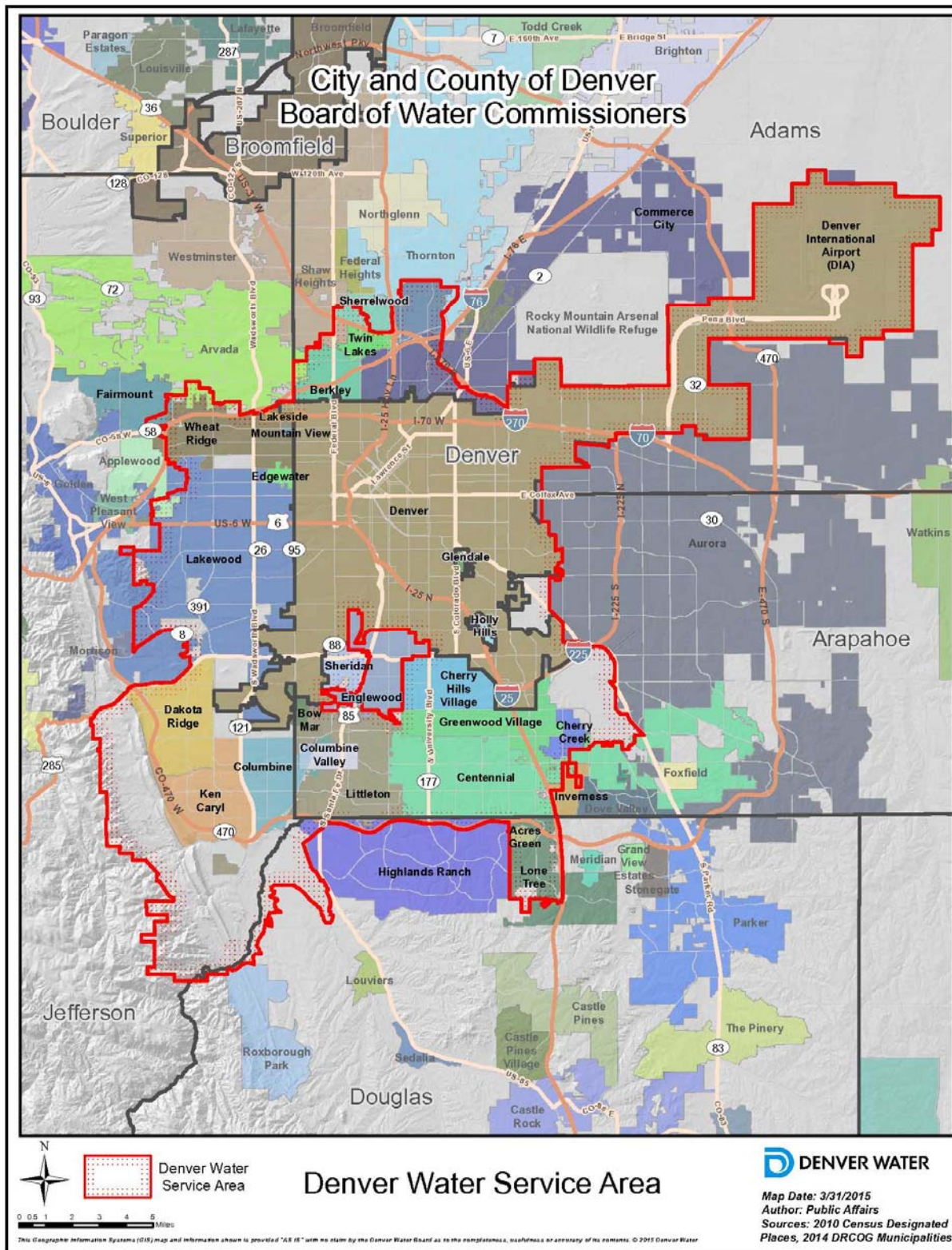


Long before the city of Denver was established, the South Platte River and Cherry Creek were oases for people who traveled the dry Great Plains. These early travelers could do without many things, but not water. That's why pioneers, and the American Indians before them, camped along the banks of Cherry 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. A system of reservoirs networked by tunnels and canals provides water to more than a million people. Three major treatment plants — Marston, Moffat and Foothills — maintain water quality under the watchful eye of the Denver Water Quality Control Laboratory.

SERVICE AREA MAP



Past, present, and future: Water connects us all.

Everyone in Colorado shares in the beauty of water and in the responsibility for taking good care of it. Because water doesn't just sustain our bodies, it nourishes the state's agriculture, industry, recreation, tourism, and environment.

Denver Water has some impressive stories in its past: The longest underground tunnel in the world, the tallest dam in the world, even a project built with a blast from President Calvin Coolidge. But between those remarkable engineering feats, we've built something unparalleled: A system that delivers safe, clean water to a quarter of all Coloradans.



Employees pose in front of the Denver Union Water Company building in downtown Denver – August 31, 1918



Employees pose in front of the new Denver Water building in downtown Denver – November 19, 2019

Water pioneers knew Denver had potential to be a world-class city, but it couldn't do much without a reliable water source. In Denver's early years, multiple water companies fought, collapsed and merged trying to provide water to the growing city. But nobody stayed for long. That was until 1918, when residents voted to establish Denver Water, supplying the city "with water for all uses and purposes." That progressive move paved the way for 100 years of stable water service, foresight we value now more than ever.

A century later, there are new trails to blaze. And our legacy is only beginning. We're expanding a dam, systematically reducing lead service lines, undergoing a long-range planning process to guide the water system for 50 years, modernizing the north system and using revolutionary sustainability practices in a new operations complex. We are proud of our century of service to the Denver-metro area and we will continue to build on its impressive legacy long into the future.

As we enter into the next century of service, we're facing new challenges with innovation, hard work and grit, never swaying from the original pursuit to manage and improve the complex system entrusted to us. We stand by and thank our fellow citizens who are also good stewards of water, our life-giving, finite resource. Past, present, and future: the commitment to water runs deep.









MISSION AND VALUES

The Denver Water Mission: To expertly manage and supply an essential natural resource to sustain a vibrant community — because water connects us all.








Denver Water’s Vision: To be the best water utility in the nation.

Denver Water’s Values: Vision, Integrity, Passion, Respect, and Excellence








Vision

-  Maintain a long-term perspective
-  Be curious and seek creative solutions
-  Innovate
-  Adapt to change
-  Visualize a forward path and take it
-  Anticipate future needs








Integrity

-  Do the right thing, even when no one is watching
-  Be honest
-  Be accountable for actions
-  Stand up for others
-  Own up to mistakes
-  Keep your word
-  Be open to constructive feedback









Passion

-  Do the job with heart and soul
-  Act as an ambassador for Denver Water
-  Maintain a positive attitude
-  Care about everything we do from source to tap
-  Don’t give up, even under difficult conditions
-  Display energy and enthusiasm
-  Go the extra mile

Respect

-  Listen actively and thoughtfully
-  Act honorably and courteously
-  Assume others have positive intentions
-  Treat others as they want to be treated
-  Seek common ground
-  Act in a fair and inclusive manner
-  Work together as a team

Excellence

-  Take initiative
-  Be safe
-  Be extraordinary, set and meet high standards
-  Get the job done right, not just done
-  Focus on the customer
-  Learn from mistakes
-  Have the courage to lead
-  Go out of your way to help others succeed

THE MILE HIGH CITY



Demographics

At the heart of the Rocky Mountain region, Denver is a highly active center of economic, cultural, and entertainment activity. With downtown Denver, the Interstate 70 industrial corridor, the nearby Denver Tech Center, surrounding business districts such as Cherry Creek, and a wealth of new mixed-use infill projects, Denver's diverse economy supports a growing population.



Source: www.choosecolorado.com/doing-business/demographics/

Denver's diversity and abundant opportunities attract a skilled, highly educated workforce. The city is the nation's top in-migration destination for the future workforce (those aged 25- to 34-years-old). Complementing its workforce, Denver has made infrastructure investments in transportation, finance, and recreation. Denver International Airport (DEN) opened in 1995 and is the sixth-busiest airport in the nation.

Denver has emerged as a hub of innovation and entrepreneurship. Ranked by VentureBeat as the third best American city for startups, Denver offers a strong downtown and unique, vibrant neighborhoods for firms to expand. A U.S. Patent and Trademark Office further strengthens Denver as a leading city for innovative business.

With construction well underway on the \$7.4 billion FasTracks mass transit expansion, Denver offers 41 light rail stations and major bus routes, presenting a strong variety of transit-oriented development sites for expanding firms. Signature sites include the redevelopment of Denver Union Station in Lower Downtown and the development of Airport City Denver at Denver International Airport, which offers 9,300 acres of developable land to connect businesses to the world.

Population

Denver's booming downtown serves as the nexus of the entire Rocky Mountain region. More than \$5 billion in public and private sector projects have opened or are under construction in the downtown area over the past five years, anchored by the visionary redevelopment of Denver Union Station — an innovative transportation, commercial and cultural hub connecting the entire metro region with the heart of the city.



According to the Downtown Denver Partnership (one of Denver's urban core civic business association):

- Nearly 80,000 people live in Downtown Denver and its City Center neighborhoods. Downtown's residential population has tripled since 2000. Over the past five years, Denver has been adding an average of 15,000 residents per year.
- More than 130,000 people work in Downtown Denver; employment is up by 17% since 2010.
- More than 48,000 students attend public, not-for-profit higher education institutions downtown, adding to central Denver's vibrancy and its supply of highly educated workers. Two-thirds of Downtown Denver residents have a bachelor's degree or higher.

Source: www.denvergov.org/content/denvergov/en/denver-office-of-economic-development/choose-denver/our-economic-profile.html

Industries

Denver's diversified economy is one of its greatest strengths. The major industry sectors are aerospace, broadcast and telecommunications, healthcare and wellness, financial services, bioscience, energy, and IT-software. Denver generally follows the national trend with the fastest-growing sector being healthcare, although its other sectors, namely high-tech and energy, more accurately define Denver's enviable edge. Tech firms choosing Denver invariably cite the attraction of one of the nation's largest clusters of the internet and telecommunications services industry.

The energy sector is tremendously important to Denver's economy. Colorado's energy and natural resources industry supports about 150,000 workers and accounts for nearly \$11.4 billion annually, according to the Colorado Office of Economic Development and International Trade. Denver has established itself as one of the world's premier energy cities. Energy has been central to Denver's economy for more than 80 years, and today continues to be an integral part of its economic landscape.



In 2013, the energy industry trade publication Rigzone ranked Denver as the 3rd city in the world for oil and gas. It was the only U.S. city to rank in the top 10 (rankings have not been updated). Since then, Denver's standing has only increased: crude oil production was at an all-time high in Colorado, having increased for an average of 3 million barrels a month in 2010 to an average of nearly 12 million barrels a month in 2017.

Meanwhile, Denver's clean-tech industry is undergoing a period of sustained, rapid growth. According to the 2016 Metro Denver Economic Development Council's annual Industry Cluster Study, the metro Denver and Northern Colorado region ranks fourth nationally in cleantech employment concentration.

Source: www.denvergov.org/content/denvergov/en/denver-office-of-economic-development/choose-denver/industries.html

Colorado industries include a dynamic and growing group of companies

Financial Services – Colorado is a growing global financial center with an innovative ecosystem and unmatched talent pool. As the “Wall Street of the West,” Colorado's Front Range is one of the few areas outside of the Northeast with a substantial financial services industry in 3 key market segments: banking and finance, investments, and insurance. Colorado's competitive environment, strong

technology base, and sound transportation infrastructure attract numerous Forbes Global 2000, Fortune 500, and Inc. 500 Fastest Growing companies. These growing companies and the entrepreneurial business environment are propelling forward with significant venture capital and investment activity. Denver is home to one of only six U.S. Mint locations and the Federal Reserve Bank of Kansas City's Denver Branch, which connects Colorado, Wyoming and New Mexico to the central bank. Denver also ranks among the top 10 U.S. cities for financial adviser startups (AdviceIQ/Meridian).

Health and Wellness – Colorado offers a robust culture of health and wellness. The state has the nation's lowest rate of adult obesity and is home to one of the fittest populations in the nation, due to active lifestyles and access to the outdoors.

Biosciences – Colorado is home to a thriving bioscience hub. As the life science center for the Rocky Mountain region, the state offers leading research institutions, an abundance of scientific talent, and a critical mass of bioscience companies, fostering growth and innovation for the industry. Colorado is home to one of the largest concentrations of federally funded science and research labs in the nation with 33 federal labs generating \$2.6B in net economic impact to Colorado in 2016. Colorado bioscience companies have received \$1.0B in venture capital investments and awarded \$1.2B in National Institutes of Health grants since 2012. Colorado ranked 2nd in the 2016 State Technology and Science Index (Milken Institute, 2016).

Infrastructure Engineering – The infrastructure engineering industry includes companies that provide a full spectrum of planning, design, development, operations and maintenance of critical structures, machinery, equipment and other systems. Colorado's talented workforce and innovative capacity create a world-class hub for engineering, design, commercial and civil construction firms.

Technology and Information – From startups to major technology corporations, thousands of technology & information companies call Colorado their home. Colorado has cultivated an innovative community where technology and information thrive. Many cities in the state enjoy dense ecosystems of venture capital, startups, and educated talent that come together to challenge ideas and push the boundaries of what is possible.

Energy and Natural Resources – A business-friendly climate, intellectual capital, industry collaboration, and world-class research institutions drive energy job growth and innovation. The energy sector has been integral to Colorado's economy, and the state has been a national leader in championing clean energy technologies with significant private investment. Colorado ranked in the top 10 states for both installed solar capacity and the number of solar jobs according to the Solar Energy Industries Association. Colorado is also consistently ranked in the top 10 states in CleanEdge's Clean Tech

Leadership Index. In 2017, 24 Colorado-based clean tech companies secured \$76.4 million in venture capital funding.

One of the nation's leading wind producers, Colorado has 15 wind power equipment manufacturing facilities and roughly 1,900 installed wind turbines that produced approximately 20 percent of the state's net electricity generation in 2017. Colorado's progressive policy initiatives, such as the 1st voter-led renewable energy standard in the nation and new financial incentives, support the state's balanced energy economy.

Source: www.choosecolorado.com/key-industries





ORGANIZATIONAL STRUCTURE

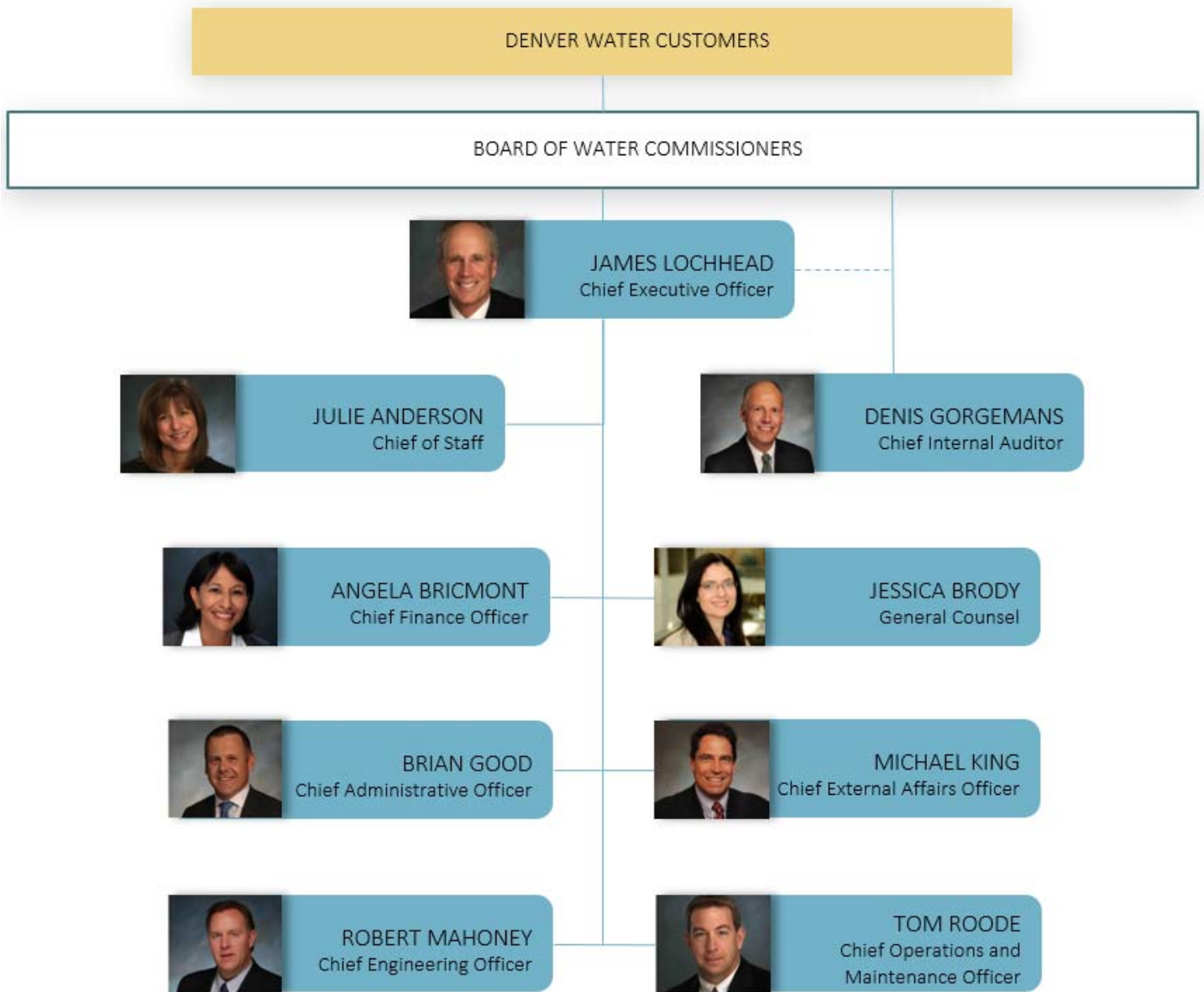
BOARD OF WATER COMMISSIONERS



Top from left: Greg Austin, Gary Reiff; **Bottom from left:** John Lucero, Paula Herzmark, Craig Jones

Greg Austin, President Former partner, Holland & Hart LLP	Commissioner since July 2009 Term expires 2020
Gary Reiff, First Vice President Chief Legal Officer, UC Health	Commissioner since September 2017 Term expires 2023
John Lucero, Vice President Former deputy director, Mayor’s Office of Economic Development	Commissioner since July 2007 Term expires 2021
Paula Herzmark, Vice President Executive director, Denver Health Foundation	Commissioner since April 2009 Term expires 2020
Craig Jones, Vice President Managing director, The Colony Group’s Rocky Mountain Region and co-president, Colony Sports Entertainment	Commissioner since October 2017 Term expires 2023

ORGANIZATIONAL CHART AND EXECUTIVE LEADERSHIP



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.

Jim Lochhead was appointed Denver Water's CEO/Manager in 2010. Lochhead also currently serves on the boards of the Association of Metropolitan Water Agencies, the Water Research Foundation, the Water Utility Climate Alliance, the Water Foundation and the Denver Botanic Gardens.



Internal Audit

- Internal Audit

Operations
Budget:
\$0.7M

Employee Count:
FTE – 3.0
LTE – 0.0

The Internal Audit Activity 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.



General Counsel

- Office of General Counsel
- Insurance and Legal Claims

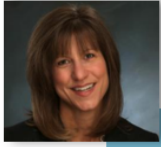
Operations
Budget:
\$4.1M

Employee Count:
FTE – 15.8
LTE – 0.0

The Office of General Counsel provides legal counsel and advice and handles all legal representation for Denver Water, acting through its Board, CEO/Manager and employees.

The Office 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, and 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

- Chief of Staff
- Continuous Improvement
- Learning and Organizational Development

Human Resources

- Talent
- Wellness
- Compensation
- Benefits Administration

Operations
Budget:
\$7.7M

Employee Count:
FTE – 32.0
LTE – 0.0

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 ensuring the attainment of organizational goals.

The office is also responsible for overseeing essential functions related to human resources, employee development and training, and continuous improvement.

Additionally, 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.



Administrative Services

Administrative Services

- Clinic
- Contract Control
- Emergency Management, Safety, and Security
- 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:
\$41.0M

FTE – 165.3
LTE – 1.0

Administrative Services allows Denver Water to efficiently and effectively deliver services internally and to its customers. The division oversees sustainability, environmental compliance, security and recreation. It also oversees organizational functions including purchasing and contracting, records and document administration, safety, emergency management, risk management, and the print shop and mailroom.

The Information Technology section plans, develops, implements and supports all information technology-enabled business systems and operational technology-enabled water process instrumentation and industrial control systems, including enterprise infrastructure and communication systems for Denver Water. This involves providing appropriate resources to deliver secure technology solutions that produce net productivity gains and enhanced information management capabilities, while minimizing the risk of obsolescence and nonsupport.



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

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.

Operations
Budget:
\$20.1M

FTE – 173.8
LTE – 2.0



Finance

- Accounting
- Financial Planning and Performance
- Rates
- Treasury
- Debt & Investments
- Risk Management

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, among other duties.

Operations
Budget:
\$9.0M

FTE – 36.0
LTE – 1.0



External Affairs

Public Affairs

- Community Outreach
- Government Relations
- External Communications
- Organizational Communications
- Integrated Marketing and Brand
- Youth Education
- Sponsorships

Customer Relations

- Customer Care
- Distributor Relations
- Contact Center
- Business Support
- Meter Shop
- Meter Reading and Inspections
- Central Dispatch
- Tap Sales
- Plan Review
- Quality Assurance and Reporting

Water Resource Strategy

- Water Resource Efficiency
- Environmental Planning
- Watershed Planning
- Water Resource Analysis
- Water Resource Planning
- Water Rights

The External Affairs division develops and maintains strategically effective relationships with a broad range of publics, and identifies the future water and facilities needs of Denver Water and develops strategies for meeting those needs.

As it plans for the future, External Affairs must consider how new water rights, infrastructure and resource management alternatives will work with the Board's existing raw water collection and treated water distribution systems.

The division also is responsible for issues management, internal and executive communications, youth education, and public outreach functions.

Operations
Budget:
\$30.0M

FTE – 188.0
LTE – 5.0



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

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.

Operational
Budget:
\$79.2M

FTE – 481.0
LTE – 12.0



STRATEGY AND PROCESS

STRATEGIC PLAN

Our Vision: Denver Water Aspires to be the Best Water Utility in the Nation

Denver Water is the nation’s premier, forward-thinking water resource manager. We sustain a vibrant metropolitan area in a semi-arid climate at the base of the Rocky Mountains. We play an integral role in building communities and advancing economic and social health.

Our customers are our top priority. They rely on us to manage a scarce and valuable natural resource – essential to their health and wellbeing. We will 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 natural environment that sustains our water supply. Along with maintaining our infrastructure, we protect the health of the environment. We collect, treat and deliver water with minimal interruption, meeting the highest standards of quality and taste, and we partner with our customers and community to achieve maximum efficiency of water use.

Challenges face us — known and unknown — such as population growth, warming climate, periodic drought, competition for water resources, security threats, and changing regulatory and political environments. To meet these challenges, we foster and build the trust and support of local, regional and national interests by 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 vision. 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 to avoid large fluctuations and ensure they are fair and affordable across customer classes. We are fiscally responsible; we will not sacrifice long-term interests for short-term expediency.

We live in and serve our community. Our families and friends are part of the social fabric that makes up the diverse cultures and neighborhoods throughout our water system. This sense of community, family and friendship drives our passion for service. Because we care about the community we serve, we are committed to its economic and social health. We collaborate, we engage, and we partner. As a result, customers trust, value and support our commitment to delivering clean, safe, great-tasting water, without fail.

We use the following guiding principles to evaluate all our decisions and purposefully move us toward our vision to be the best water utility in the nation.

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. We provide the best possible outcome for our customers, as well as future generations.

Our Mission

To expertly manage and supply an essential natural resource to sustain our vibrant community — because water connects us all.

Excellent Operations

An organization that is effective, efficient and strategically driven

Goal	Objectives
We strategically align our projects and programs, to provide the best value to our customers	We consistently tie our decisions to our Strategic Plan to ensure we implement the right projects and programs, at the right time and at the optimum cost
	We have a visionary, adaptable long-range planning approach that considers the challenges of a warming climate and ensures diversity in supply and delivery, and efficiency in use
	We sustain healthy watersheds and an excellent collection, treatment and delivery system to provide high quality water at an affordable rate
We employ best business practices in our day-to-day operations to increase efficiency and delivery of service to our customer	We place the highest priority on safety
	We are passionate in providing outstanding customer service and making it easy for our customers to do business with us
	We are driven to continuously improve in everything we do. We use standard work, work plans, asset and risk management practices, metrics and operational reporting to effectively and efficiently manage the business
We lead the utility industry in environmental stewardship and sustainability	We execute a robust environmental sustainability plan and a healthy built environment across all our systems and operations

Strong Financials

An organization that is financially strong and stable

Goal	Objectives
We sustain a financial plan that supports our strategic objectives	We effectively manage our debt and cash reserves to ensure the successful execution of our capital and long-range financial plans
	We carefully manage rates and fees to optimize revenue stability from year to year, ensure equity and affordability across customer classes, and promote water use efficiency
We make financial decisions keeping in mind the best long-term interests of our customers	We develop and execute our operating budget to ensure alignment with our strategic priorities
	We maintain a strong control environment by effectively tracking, managing and transparently reporting our financial resources, transactions and performance

Inspired People

An organization that is passionate about our customers and our community

Goal	Objectives
We are inspired by our mission, vision and values and we know we are a part of something meaningful and larger than our own self-interest	We draw strength from our diversity and we utilize the unique gifts and contributions of our people
	We foster autonomy, creativity, initiative, innovation, calculated risk-taking and recognition of success
	We have a culture and organizational structure that removes barriers, advances strategic goals at all levels and is adaptable to changing business needs
	We value candid communication and debate as critical to our ability to make the best decisions for our customers
We have leadership that inspires, fosters meaningful work and develops our people	We have inspirational leaders at all levels who maintain a strategic focus, strengthen management practices and align initiatives and goals to the Strategic Plan
	We develop our people to realize their maximum potential, fulfill our mission and enhance Denver Water's reputation
	We communicate to our people in ways that are clear, concise, transparent and delivered within the context of our values
	We attract, grow and retain top talent

Trusted Reputation

An organization with satisfied and supportive customers and strategically effective relationships

Goal	Objectives
We play an integral role in building communities and advancing economic and social health	We have transparent and efficient business practices and inclusive and competitive procurement processes, resulting in the best value for our customers and communities
	We are a community partner through active outreach and engagement with business, governmental, education and non-governmental organizations
	We foster strong relationships with government officials at the local, regional, state and national levels, and we ensure close coordination with the City of Denver as a key partner and customer
We are the public's trusted source on water	We are a thought leader in local, regional, state and national issues that affect our mission, through research, forums and organizations and in legislative and regulatory matters
	We actively engage our community and customers through public education, media and targeted communication
We go beyond what is expected operating with the highest ethics and integrity	We resolve all issues ethically to achieve the best result for all sides
	We are trusted leaders and willing partners with our neighbors in Colorado and throughout the West
	We effectively engage our Board to enable it to lead our organization with vision

ANNUAL PROCESS

The following defines and documents the process and commitments for execution in the development of Denver Water's 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 next refresh scheduled for 2023, at the latest. The Strategic Plan is the overarching document that defines the vision, perspectives, goals and objectives of the organization. It is expected that all of Denver Water's work is connected back to this plan to ensure we are continuously taking meaningful steps toward our aspiration to be the best water utility in the nation.

In order to help us identify our progress, the Executive Team developed the Organizational Dashboard, which contains metrics that correlate to each objective in our Strategic Plan. The Executive Team reviews these metrics on a monthly basis during our organizational performance review and discusses opportunities and implements countermeasures. The dashboard is reviewed with the Board on a quarterly basis 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 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 is comprised 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 on a quarterly basis. 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 the month of April, within each division, the Executive Team sources strategic ideas and builds business cases for organizational priorities for the upcoming year. These ideas are shared amongst the team during a series of meetings in May to vet the business cases and choose and prioritize those highly strategic priorities that surface to the top as

strong levers to move us closer to our vision. The organizational priorities are finalized by the end of May.

- **Divisional Programs and Continuous Improvement:** During the month of June, divisions develop strategies, continuous improvement activities and corresponding budgets around ongoing programs for budget consideration. This activity is completed by the end of June.
- **Audit Plan:** As the organizational priorities and initiatives begin to firm up, around the beginning of June Denver Water's Internal Audit team partners with the Board and Executive Team to develop the body of work for the upcoming year's audit plan. Internal Audit takes into consideration Board and Executive Team feedback, the strategic approach, the contents of the audit bin, and the organizational heat map to determine focus areas. This work is concluded by the end of July and a draft plan, is presented to the Board at its October audit committee meeting.
- **Capital and Operating Projects:** Projects are selected on an annual basis based on Denver Water's Integrated Resource Plan, long-term capital plan, capital budgeting philosophy, and a business-driven process directed by the systems and programs managers. 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 expense activities 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.

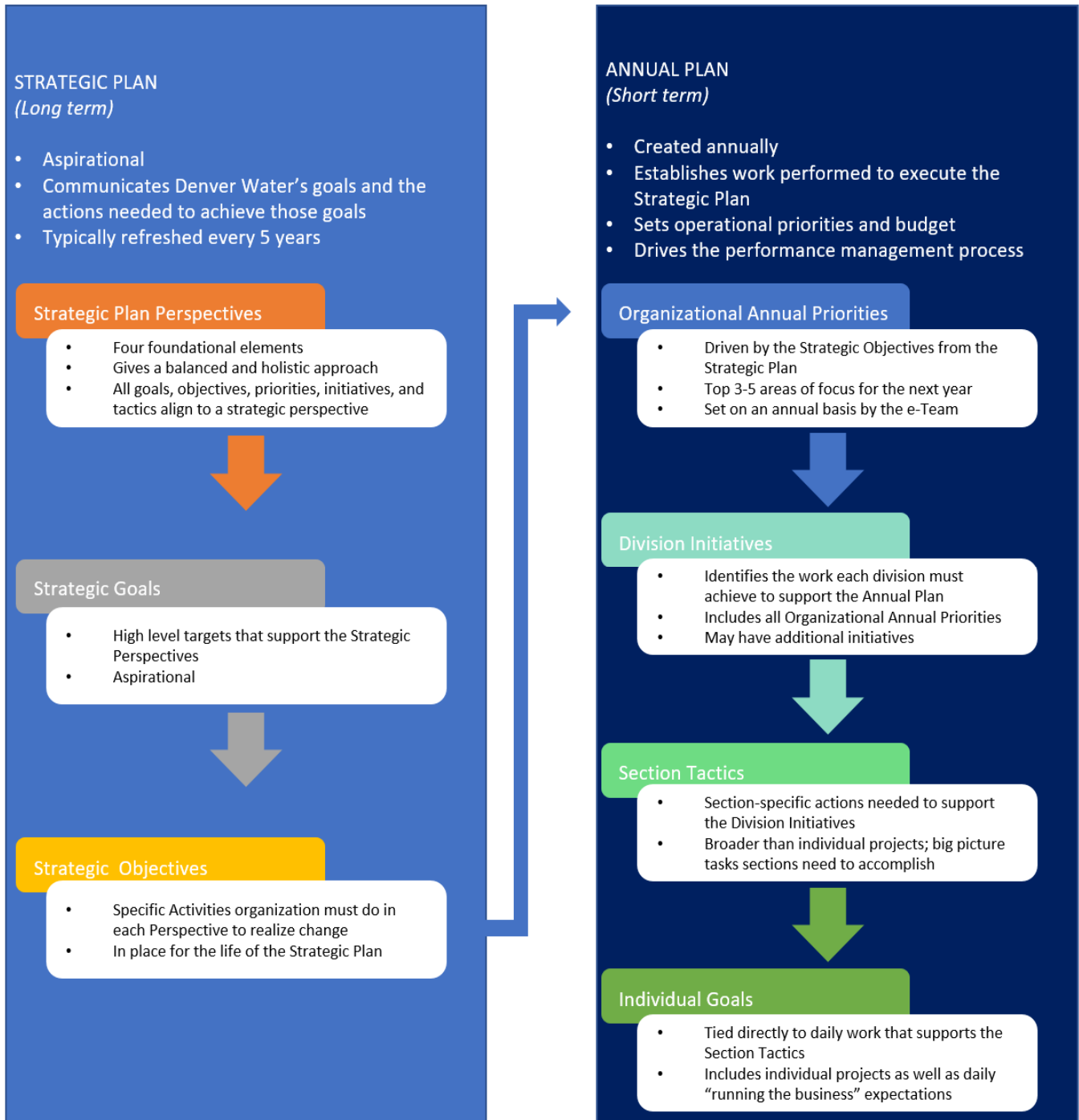
The Approved Budget is the main internal control document used to monitor and manage revenues and expenditures for Denver Water. The organization takes an active role in regular management of the budget to ensure proper fiscal governance and controls. This is done through the Monthly Budget Management process, Comprehensive Quarterly Performance Reviews and the Comprehensive Annual Financial Report (CAFR), described below.

- o **Monthly Budget Management:** Monthly, each division reviews its budget for accuracy and potential variances, and forecasts future expenditures. 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.

- o **Comprehensive Quarterly Performance Reviews:** Quarterly, the Financial Planning and Performance section, with assistance from the Executive Team, creates a comprehensive report of the organization's performance. The report includes a detailed review of our financial performance, as well as a detailed review of our organizational dashboard and progress towards our annual business plan. The report also includes information on procurement and contracting, including performance toward supplier diversity goals and targets. The Quarterly Performance Report is the primary document used to communicate progress toward our metrics (both financial and organizational) to the Board.

- o **Comprehensive Annual Financial Report:** Annually the accounting section with assistance from various areas of the business, compiles the CAFR. The CAFR is a set of government financial statements comprising the financial report of Denver Water which complies with the accounting requirements of the Governmental Accounting Standards Board (GASB). The CAFR is composed of three sections: Introductory, Financial and Statistical. The Introductory Section includes information about Denver Water. The Financial Section is comprised of the audited financial statements and required supplementary information of Denver Water. The Statistical Section includes revenue, customer, demographic, and other operational information. 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 CAFR to the Board at the second Board meeting in May, for acceptance.

Workflow for Strategic Plan and Annual Plan



Organizational Business Plan

DENVER WATER 2020 BUSINESS PLAN							
TYPE	STRATEGIC PERSPECTIVE	DURATION	ANNUAL PRIORITY	CONTINUOUS IMPROVEMENT	ORGANIZATIONAL METRIC	TOTAL BUDGET	EST. TOTAL COST
TOP PRIORITY	Trusted Reputation	1918 – Present	Providing High-Quality Water and Outstanding Service to Our Customers	Customer Experience VS Safety VS Water Distribution VS Trades VS Human Resources VS Emergency Management VS BTT VS	Balanced Scorecard Performance	\$195.0M (2020)	\$195.0M (2020)
ORGANIZATIONAL PRIORITIES	Inspired People	2017-2034	Lead Program		Lead Program Performance	\$695.8M	\$695.8M
	Excellent Operations	2017-2026	North System Renewal <ul style="list-style-type: none"> Gross Reservoir Expansion Northwater Treatment Plant Conduit 16 	Construction Phase VS	Operating Cost per Account	\$1.1B (pending approval of Gross)	\$1.1B
	Trusted Reputation	2017-2020	National Western <ul style="list-style-type: none"> Water Quality Lab Site Development & Recycled Water System Pillars 	Water Quality VS National Western VS	Water Quality Index	\$26.8M	\$24.4M
	Excellent Operations	2018-2020	Enterprise Resource Planning Ph 1: Human Capital Management	Human Resources VS	Operating Cost per Account	\$2.5M	\$2.4M
	Excellent Operations	2020-2022	Enterprise Project Management Office	EPMO VVS	Operating Cost Per Account	\$1.4M	\$1.4M

Balanced Scorecard

Denver Water Balanced Scorecard — 2020

MEASUREMENT



EXCELLENT OPERATIONS

An organization that is effective, efficient and strategically driven

Customer Outage Hours

Operating Costs per Account in Dollars
(does not include operating projects)



STRONG FINANCIALS

An organization that is financially strong and stable

Operating Budget Performance
(does not include operating projects)

Capital & Operating Project Budget Performance



INSPIRED PEOPLE

An organization that is passionate about our customers and our community

Bi-annual Net Promoter Score

Safety Maturity Index



TRUSTED REPUTATION

An organization with satisfied and supportive customers and strategically effective relationships

Quarterly Customer Satisfaction Survey Index

Content Impressions
(views of TAP stories per month)



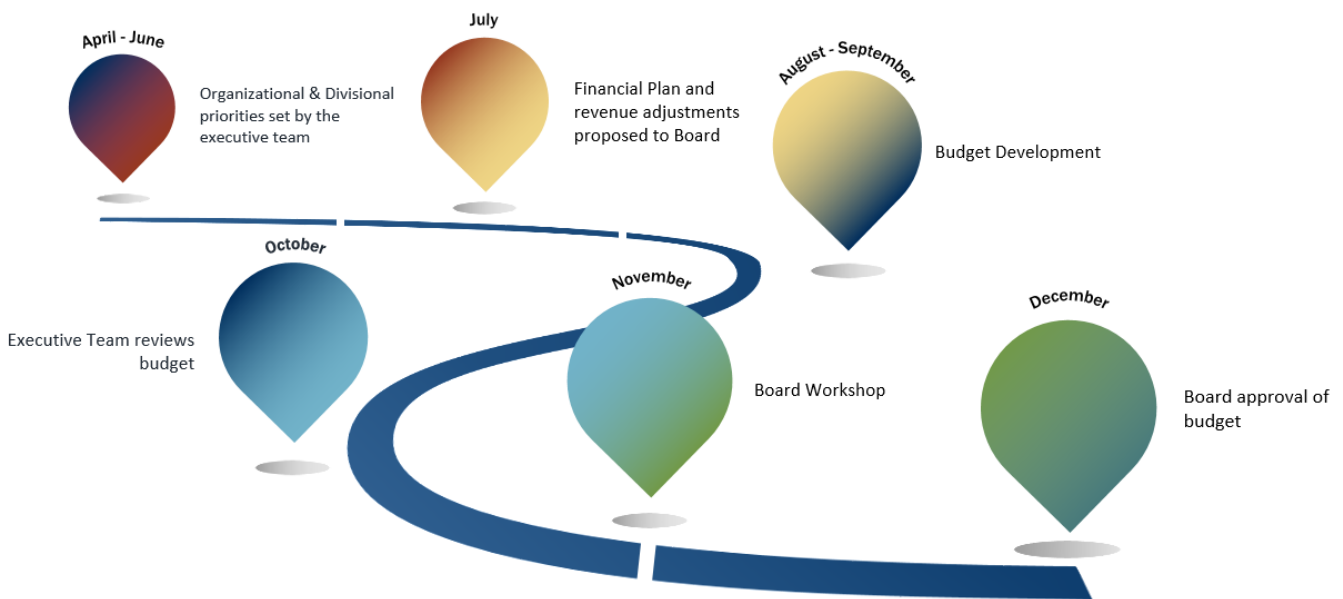
FINANCIAL

BUDGET SUMMARY

Budget Development

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 general timeline for budget development is as follows:



Each year, Denver Water creates a multi-year financial plan to determine the level of revenue adjustments needed to meet annual revenue requirements. The annual revenue requirements include operating expenses, debt service on existing and proposed bonds, and capital expenditures. These expenditures are offset through miscellaneous revenues, such as hydropower, customer-related fees, system development charges (SDC), bond proceeds, participation and interest income. The net requirement is the amount recovered through the user rates.

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 what 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 the organizational goals.

Project budgets, which are generally capital expenditures but can also be operating, 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.

ORGANIZATIONAL BUSINESS PLAN

Top Priority

In advance of the Annual Budget Development Process, the Executive Team met to review the status of the current strategic priorities and overall progress toward our Strategic Plan. After careful review of the large number of 2019 priorities carrying over into 2020, including our large capital project budget and the initiation of the Lead Reduction Program, the Executive Team identified the Enterprise Project Management Office as the only new initiative for 2020. Each person at Denver Water plays an important role in providing high-quality water and outstanding service to our customers, which should continue to be our top priority.

Each division has described below how it will contribute to the top organizational priority of “Providing High-Quality Water and Outstanding Service to Our Customers” in 2020:

Administrative Services

Significant effort was made toward baselining Denver Water’s current safety culture and developing a new Safety Maturity Index in 2019. This will shift the safety focus away from lagging metrics (e.g. counting accidents) to proactive, leading indicators. The Safety Maturity Index will be implemented in the first quarter of 2020 and refined over the next few years.

The Security Value Stream will continue its work, implementing recommendations from the 2019 re-evaluation of Denver Water’s security posture. The cyber security team was merged into Administrative Services in 2019 and leadership is addressing staffing shortfalls to ensure adequate resources to support and protect Denver Water. Three critical cyber security projects are planned for 2020 (along with many smaller ones).

After the retirement of the Chief Information Officer, IT merged into Administrative Services. The new Director of Enterprise IT is responsible for leading the work groups within IT under the guidance of the Chief Administrative Officer. This year, IT will focus on settling into the new leadership structure and organizational change as well as charting a new path forward that best supports core business functions and delivery of water to our customers.

The IT Project Management Office will focus on maturing its project management skills and best practices. Several large projects will focus on strengthening Denver Water’s cybersecurity approach. Two major upgrades are planned for 2020. The financial system will receive an upgrade to mitigate

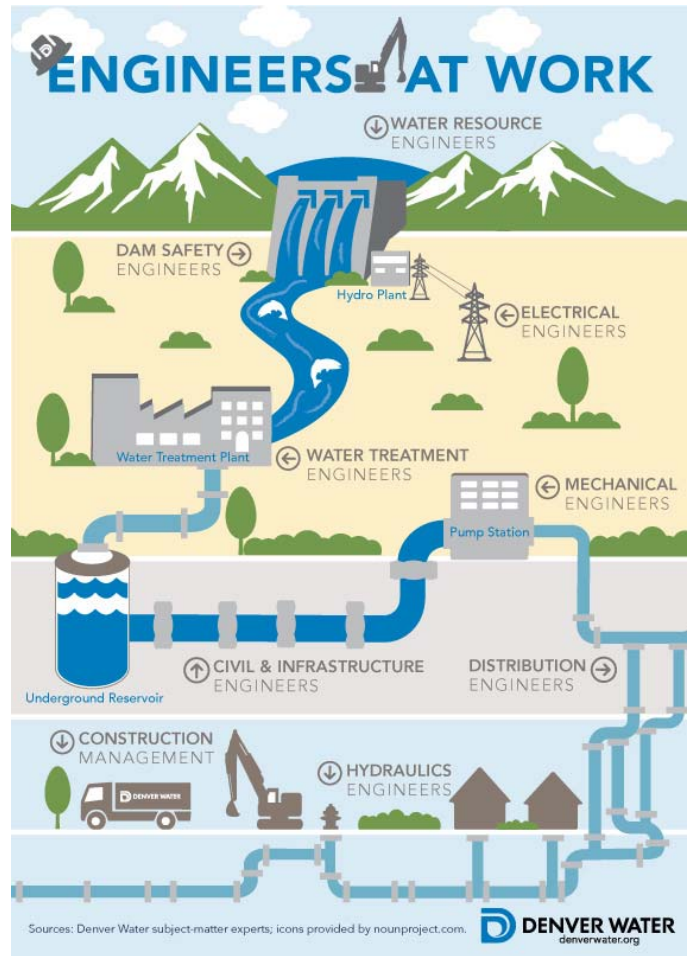
support and security risks while options are evaluated for an improved financial and contract system. Later in the year, an upgrade to the customer care and billing system will begin. Work on this upgrade will continue into 2021.

The Sustainability Team finalized developed and implemented a new energy management system in 2019, which will be used in 2020 to start diving deeper into energy efficiency and cost-reduction opportunities. The team is scheduled to refresh Denver Water’s Sustainability Guide in 2020, checking progress against previous goals and establishing new ones for the next three years.

Engineering

The Engineering Division will continue to focus on delivering Denver Water’s largest capital plan in history. With the Operations Complex Redevelopment project completing in early 2020, efforts related to execution of the Northwater Treatment Plant and Gross Reservoir Expansion projects will continue. Ongoing maintenance programs include upgrades to corrosion control systems, rehabilitation of distribution system vaults, and modifications to existing pipelines. Unique projects are also planned, including reconstruction of both the Ralston Dam spillway and North System siphons and canals.

In addition to capital plan delivery, Engineering will work on important business drivers in 2020 including numerous continuous improvement efforts, updating the on-line Capital Projects Procedures Manual which details standard work for cradle-to-grave capital project delivery. Updates to the Capital Project Construction Standards and Infrastructure Master Plan documents will be completed by the end of 2020. Engineering will address recommendations from the third-party review of capital projects procurement and delivery, including additional documentation of established processes.



External Affairs

The Lead Reduction Program will be a key focus for Public Affairs, including localized community outreach and engagement, and broad and targeted communications to ensure customers understand the importance of using filters and are aware of increased construction in certain neighborhoods. The other major overarching program is the launch of Denver Water's brand campaign, which will set the tone for all communications efforts. The department will continue to leverage our communication tools, including traditional and social media, email marketing, content journalism, video, direct mail, community outreach, partnerships and internal communications to support all of Denver Water's key projects and initiatives. Behind-the-scenes work to deliver high-quality water and outstanding service will be showcased in 2020.

Customer Relations will focus on education and support of the Lead Reduction Program. The evaluation and planning of the call center platform began in 2019 and will continue into 2020. Additionally, the team will be participating in an RFP for a new bill print and mail vendor, upgrading to the Next Gen release for Speedpay.

Water Resource Strategy (WRS) will explore and develop water supply options that are resilient to potential Colorado River curtailment, ensuring sufficient and dependable water supply for our customers. WRS is actively engaged with state-led discussions on potential Colorado River Demand Management, sitting on several demand management workgroups organized by the Colorado Water Conservation Board and continued collaboration with the Front Range Water Council.

The Environmental Planning team will continue permitting and compliance efforts associated with the Gross Reservoir Expansion project, including stream restoration work on the Williams Fork River. The highly successful Learning by Doing initiative will continue, working collaboratively with Grand County, environmental and recreation groups, water providers and state agencies to seek opportunities to benefit the river and stream systems through Grand County. The watershed team will continue implementation of a watershed assessment and monitoring plan that guides investments and partnerships to protect our customers water supply.



Williams Fork restoration work

The climate adaptation team will continue to mainstream climate change throughout Denver Water, including informing the capital budget and risk management. The team also will develop a climate change background that will be part of Denver Water's new employee on-boarding process.

The Water Resource Efficiency team will continue to advance water conservation, reuse and other alternative water management strategies ("One Water"). The Water Efficiency Plan will enter its third year with continued work on existing programs and will develop foundational elements, such as water-use benchmarking for commercial, industrial, and institutional customers. An expansion plan for the recycled water system will be finalized to identify specific projects to extend recycled water service to more customers. One Water approaches will be expanded, including participation in the City of Denver's One Water Plan, integrating water efficiency concepts into water shortage response planning, and supporting the water recycling and rainwater harvesting systems in the new administration building.

Finance

The Finance team will remain focused on providing accurate financial reporting, internally and externally. This foundational work will be even more important over the next 5 years, given the large capital plan underway. The quarterly forecasts and long-range financial plan will continue to be evaluated and updated to align spending with organizational priorities and programs.

In 2020, the Finance team will ensure compliance with all new accounting regulations, such as GASB 87, which impacts the reporting on leases. The team will continue to provide tracking and reporting for the larger strategic projects and programs (e.g. Lead Reduction Program, North System Renewal and National Western). A common library for division procedures will be created to improve monitoring and compliance. Revenue bonds will be issued in 2020. The team also will investigate alternative funding sources for the Lead Reduction Program and analyzing how costs will be reflected in the 2021 rates.

The assessment work for ERP Phase II will begin in 2020. This will involve a Choosing by Advantages analysis to determine the best way to implement a single integrated cloud-based system. Concurrent with this work, Finance will work with IT to upgrade the current financial system to maintain technical support and improve security.

Manager and Staff

The Office of People and Strategy was created in the summer of 2019 to integrate the strategic functions of Human Resources, Learning and Organizational Development, Continuous Improvement, and Enterprise Project Management (formerly the BTMO). People are the number one asset at Denver Water and the creation of the Office of People and Strategy allows the integration and alignment of all components to Denver Water's organizational strategy.

In support of the Inspired People perspective of the Strategic Plan, the team will continue to build upon the Leadership Connection Strategy in the coming year with developing leadership at all levels and keeping a pulse on employee engagement through the bi-annual employee net promoter surveys. An organizational assessment of the leadership competencies will be used to gauge strengths and opportunities across the organization and understand the areas that are most important to Denver Water leaders.

The Office of People and Strategy will partner with the Executive Team to develop a roadmap for engagement in the upcoming year. This will include strategies for our quarterly Leadership Connection meetings and monthly divisional leadership meetings. Content is being created for each competency that allows individuals to think about their strengths and development needs and identify activities they can undertake for growth. Enhancements will be made to new employee onboarding to ensure a positive and productive experience that helps employees see how their work makes a difference in our community and creates excitement for being a part of something larger than themselves.



Consistent with the leadership competency work, continuous improvement practices and methodologies will be used to increase problem solving at Denver Water. Continuous Improvement Leadership Workshops and the associated Coaching Kata sessions will continue to be utilized to develop this problem-solving competency across the organization. Value-stream level improvement activities will be used in the areas of customer experience, safety, water distribution, trades, emergency management and human resources. Additionally, there will be new value streams focusing on the asset management process for water treatment and water quality, and for the implementation of an Enterprise Project Management Office.

To achieve Denver Water's goal of attracting and retaining top talent, a new strategy will be implemented for conducting the annual review of the Total Rewards program. The review will consist of a comprehensive market analysis for all measurable components of the program with a holistic approach to analysis and decisions. This new approach will combine information about employee preferences, data from the market, and the application of best practices to ensure the program is market driven, competitive and cost effective.

The Office of General Counsel (OGC) anticipates a continued focus on litigation related to the Gross Reservoir Expansion Project in both federal and state courts, as well as eminent domain litigation for key

Denver Water capital projects. In addition, OGC attorneys will continue to support the Lead Reduction Program and other organizational priorities. Finally, OGC will maintain a steady base workload of contracting, real estate, human resources, water resources, regulatory compliance, and related matters.

Operations and Maintenance

Water Distribution will begin the second year of implementing an increase in the main replacement rate from 0.6% to 1.0% of the system over the next five years. New staffing resources were added and trained in 2019. The additional staffing will continue to shift the workload from reactive to proactive leading to improved water delivery to customers by avoiding future main breaks, reducing customer outage hours, and improving customer satisfaction.



Source of Supply (SOS) will continue to redirect efforts toward critical water delivery assets such as valves, tunnels, dam monitoring components, pipelines and canals. These assets have been inventoried in the Denver Water’s asset management system and condition assessments are being conducted allow more pro-active maintenance or replacement of these assets. Process improvements and outsourcing of less mission-critical activities, such as snow removal, weed mitigation, and fence repair, have been utilized to create additional capacity to allow for this redirection of work.

Water Quality and Treatment will begin improving corrosion control in the system either through orthophosphate or through pH adjustment if the Lead Reduction Program variance is approved. Water Quality will manage increased customer inquiry testing, investigative testing and testing in support of corrosion control. Water Distribution will modify some processes to reflect City and County of Denver permitting requirements that were identified through the lead service line replacement program. If the variance is approved the warehouse will be involved in supporting filter distribution as a backup to the primary supplier and distributor.

Organizational Priorities

Below are the Organizational Priorities for 2020. Priority dashboards have been created to track performance of each priority and will be updated and provided to the Board on a quarterly basis for oversight.

Lead Program

On December 16, 2019, the U.S. Environmental Protection Agency approved Denver Water’s application to implement a comprehensive Lead Reduction Program (LRP) in place of orthophosphate treatment, concluding that Denver Water’s plan “provides a holistic and permanent lead reduction approach that is as effective at protecting public health, more efficient in reducing exposure to lead in drinking water,

less harmful to the environment, more equitable in its public health benefits and more cost effective as compared to orthophosphate treatment.” Subsequently, the Board approved contracts related to the LRP which allowed Denver Water to begin the associated activities as defined by the program timeline.

North System Renewal

- **Gross Dam Raise**

In 2020, Denver Water will continue to pursue the design work and permitting necessary to raise Gross Dam by 131 feet to create 77,000 acre-feet of new storage volume, of which 5,000 acre-feet is dedicated as an environmental pool to enhance flows in South Boulder Creek. The enlarged reservoir will provide an additional 18,000-acre feet per year of water into Denver Water’s Moffat (North) Collection System.

- **Northwater Treatment Plant**

In 2020, construction will continue on the Northwater Treatment Plant. Project goals are to deliver the project with a zero-incident safety culture while making socially and environmentally responsible decisions that enhance best practices moving forward on Denver Water’s large capital plan. Project goals also include delivering the project through work package bidding and contracting that provides best value to Denver Water while maintaining the project’s schedule. The flocculation/sedimentation building, and the filters building will have major concrete work completed, site piping will be installed coincident with building construction, and procurement of long lead time items such as internal chemical and process piping will be done.

- **Conduit 16**

In 2020, we will continue construction of the Conduit No. 16 replacement. The Conduit No. 16 Replacement will replace existing Conduit Nos. 16 and 22 with 8.5 miles of 84 and 66-inch diameter steel pipeline through a series of 4 construction packages including Tunnels & Open Cut Segment, West Segment, Central Segment, and the East Segment. Construction of the West Segment and Tunnels and Open Cut Segment contracts are complete. Construction of the Central Segment and the East Segment will continue in 2020.

National Western Water Resources Center

Denver's current water quality lab is reaching the end of its useful life. The objective of this priority is to construct a new water quality lab in partnership with Colorado State University at the National Western Center. The project will capitalize on opportunities to create a unique research, innovation, education and policy center focused on water, agriculture and energy issues. Design of the building will continue into 2020, and construction should begin in 2020 to allow occupancy of the building by the end of 2021. The project also includes extension of the recycle system to and within the National Western site.



Enterprise Resource Planning Phase I: Human Capital Management

After the December 2019 go-live with outsourced payroll and timekeeping to ADP, this project will continue into 2020 with planned rollouts of additional ADP modules, beginning with performance management in Q1. The roll out of additional modules for ERP Phase I will occur in the first half of 2020 (ADP performance management, employee relations and open enrollment). Change management and training will continue all year through the completion of open enrollment in Q4. Evaluation will begin mid-year on several alternatives for unifying Finance, Procurement, and Inventory Management systems (ERP Phase II).

Enterprise Project Management Office (EPMO)

The Business Technology Management Office will expand into an Enterprise Project Management Office (EPMO). As the organization is approaching the highest capital project build-out in history, and in anticipation of the Lead Reduction Program, the Executive Team is cognizant that this level of work leaves the organization stretched, both from a financial and workload perspective. These two driving factors, prompted the team to examine how Denver Water could build upon the foundation of the Financial, Capital Projects Delivery and Asset Management Philosophies (as currently implemented by the Systems and Programs Process and the Business Technology Management Office) to bring this thinking across the entire organization. The intent is to ensure solid coordination and governance on delivering the right project, at the right cost, at the right time. The Executive Team believes the implementation of an EPMO will help Denver Water achieve this objective. Also, there are cross-organizational benefits to implementing an EPMO, such as:

- Support for consistent and thorough business case development and selection
- Enterprise project prioritization
- Transparency into project resources and organizational capacity
- Standardized processes, procedures, policies, templates and terminology
- Value verification of completed projects
- Standardized and user-friendly reporting
- Coaching, mentoring and training to create effectiveness, efficiency and consistency
- Change-management support

This office will work closely with Continuous Improvement and Learning and Organizational Development, as well as Finance, and the divisional PMOs (Engineering, IT, and Water Resource Strategy). The current activities of the Business Technology Management Office will roll out under the EPMO, and an existing vacancy will be used to fill the Director of Enterprise Project Management position. Once the director is in place and appropriately onboarded, a vertical value stream will occur to create a roadmap for phasing in the elements of an EPMO.

BALANCED SCORECARD AND ORGANIZATIONAL DASHBOARD

Denver Water uses an organizational dashboard to assess performance against our Strategic Plan. This dashboard operationalizes metrics chosen by the business that align to each objective, goal and perspective under the plan. The Executive Team reviews this dashboard monthly to understand opportunities for improvement and to take corrective action. The team also has chosen two 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.

It is important to note that although the Organizational Dashboard is intended to remain static over the life of the Strategic Plan that it represents, at times the metrics are adjusted to reflect a better measurement or assessment.

2020 BUDGET

With the completion of the Proposed Budget, the financial plan was updated for revenues, spending, and the projected ending cash for 2019. Since the line of credit was not utilized in 2019, the anticipated borrowing for 2020 has increased. Because the line of credit was not utilized in 2019, Denver Water will go to bond market in May 2020 for \$155M and bundle 2019 and 2020 capital projects to optimize borrowing costs.

The projected ending cash balance of \$236M (budgetary basis) includes a minimum policy target balance of \$168.9M and the remaining discretionary reserve of \$105M, which is expected to be drawn down over the next four years to fund capital projects and stabilize rate increases.

The financial plan revenues assume 5-year average consumption, which has proven to be close over the long-term, but will vary depending on the weather in a given year. Finance will check in with the Board periodically to review and receive feedback on the financing strategy as preparations to fund \$1.5B in capital projects begin over the next five years.

Budget Highlights

Below are summaries of the major changes to each expenditure category for the 2020 budget. More details can be found in the Summary of Significant Changes section of the 2020 Proposed Budget book.

Sources of Funds - \$523.4M (increase of \$90.2M / 20.8% from 2019)

The planned \$155M bond issuance represents much of the increase from 2019. The budget also reflects the 3% rate revenue increase that was approved by the Board, as well as changes to demand projections to reflect the current 5-year average.

Other notable changes to the revenue budget include a decrease of \$2.3M to interest income to reflect lower cash balances and projected interest rates. The System Development Charge (SDC) budget also

has been reduced by \$10.1M. This includes a reduction of \$5.0M in anticipation of slowed growth on the Front Range. The Arvada Gross Enlargement Raw Water SDC is not expected to be received until Q4 2020 (dependent on permit timing), so the budget for this has been reduced by \$5.8M.

Operating Expense

Salaries and Benefits - \$129.3M (increase of \$5.8M / 4.7% from 2019)

The change in salary budget includes an additional \$2.7M for the 3.3% merit increase, plus the 0.5% pay adjustments. There will be a 27th pay period in 2020, which will result in a single-year increase to the salary budget of \$3.3M.

Other changes include: The vacancy rate percentage changed from 3.7% to 5.0% which equates to an increase to the vacancy rate credit of \$1.5M, an increase to the pension budget of \$1.3M for the Actuarially Determined Contribution, and a decrease to the Stop Loss Insurance Premium of -\$445K.

FTE – 1,102.8 FTE and 21.0 LTE (increase of 1.8 FTE and increase of 13.0 LTE from 2019)

As in prior years, we performed a thorough review of FTE/LTE for each division. All new FTE/LTE requests had to be approved by either the CEO or Chief of Staff. The largest change to the 2020 budget is the addition of 7.0 LTE in O&M for 1.0 Water Treatment Tech and 6.0 Journeyman/Master Plumbers, who will be used to train existing staff. 2.0 FTE and 5.0 LTE were also added to support the Lead Reduction Program.

Professional and Purchased Services - \$43.7M (increase of \$1.1M / 2.6% from 2019)

There were several changes to this budget for 2020, which are detailed in the Significant Variances section. Some of the larger changes are detailed below.

Administrative Services/Security entered into a new contract for security guard services in 2019. This new contract added increased patrols at some sites and reflected a market price increase. The Facility Services budget has been increased by \$900K to account for these changes.

The final year of payment on the WISE agreement was in 2019. \$1.0M was removed from the Construction and Field Services budget for External Affairs/Water Resource Strategy.

As discussed during quarterly reviews in 2018, the costs in O&M/Water Distribution for Construction and Field Services (i.e. barricades, signage, street cleaning, paving, potholing, etc.) have been higher than the 2019 budget. The 2020 budget has been increased by \$195K to reflect the current spending rates and to accommodate increased pricing.

A credit of -\$500K has been added to the Water Quality Lab for the Lead Service Line transfer. The budget for the transfer credit for Water Distribution has also been adjusted by -\$250K.

Materials, Supplies, and Chemicals - \$19.5M (increase of \$1.7M / 9.6% from 2019)

The budget in Administrative Services/IT has been reduced by \$374K due to a reduced need for Windows and Unix servers and Industrial Control Systems equipment and materials.

The 2019 budget included additional ergonomic and office equipment costs related to OCR. These have been removed in 2020, resulting in a \$184K reduction to the Manager & Staff/Human Resources budget.

Similar to Construction and Field Services, O&M/Distribution has increased its budget for Materials and Supplies by \$562K to support the current rate of spend. O&M/Water Quality & Treatment has increased its chemicals budget by \$1.5M. This is primarily related to higher chemical pricing and corrosion control.

Travel, Training, and Conferences - \$1.4M (decrease of \$197K / -12.4% from 2019)

Manager & Staff/Learning & Organizational Development has reduced the internal and external training budgets by \$175K to reflect the current rate of spend.

Other Expense - \$1.1M (decrease of \$144K / -11.2% from 2019)

There are no significant changes to the Other Expense budget for 2019.

Capital and Operating Projects

All projects are evaluated using a Business Case process, where proposed projects are evaluated to ensure alignment with organizational strategy (including the IRP and Asset Management). The process includes analysis of alternatives, evaluation of capacity needs and dependencies, completion of a risk assessment, review of the proposed timeline, and estimation of expected costs.

Operating Projects - \$26.1M (increase of \$5.1M / 24.7% from 2019)

The most significant change to Operating Projects is the addition of \$5.0M for the Chatfield Reallocation of Orphan Shares.

More detail on specific Operating Projects can be found in the Systems and Programs Projects and IT Projects sections of the 2020 Budget book and its appendix.

Capital Projects - \$296.4M (increase of \$42.8M / 16.9% from 2019)

Between 2020 and 2024, we are planning to fund \$1.5B in capital projects. The final year of major construction on the Operations Complex Redevelopment (OCR) was in 2019. The 2020 budget for OCR is \$6.0M. The most significant change to this budget is the addition of \$74.5M to support the Lead Reduction Program.

More detail on Capital Projects can be found in the Systems and Programs Projects and IT Projects sections of the 2020 Proposed Budget book and its appendix.

SOURCES AND USES

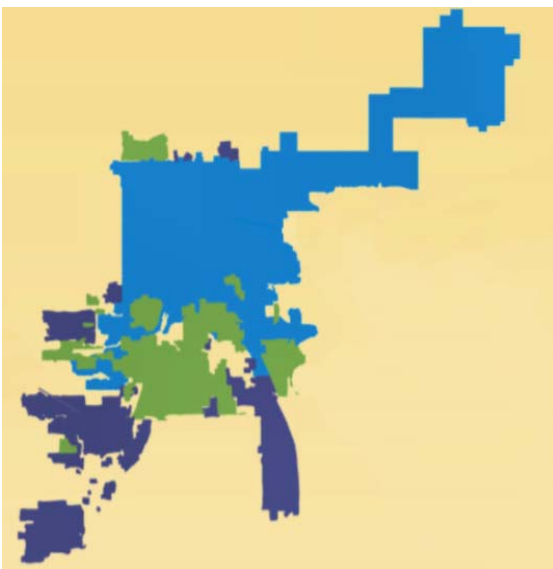
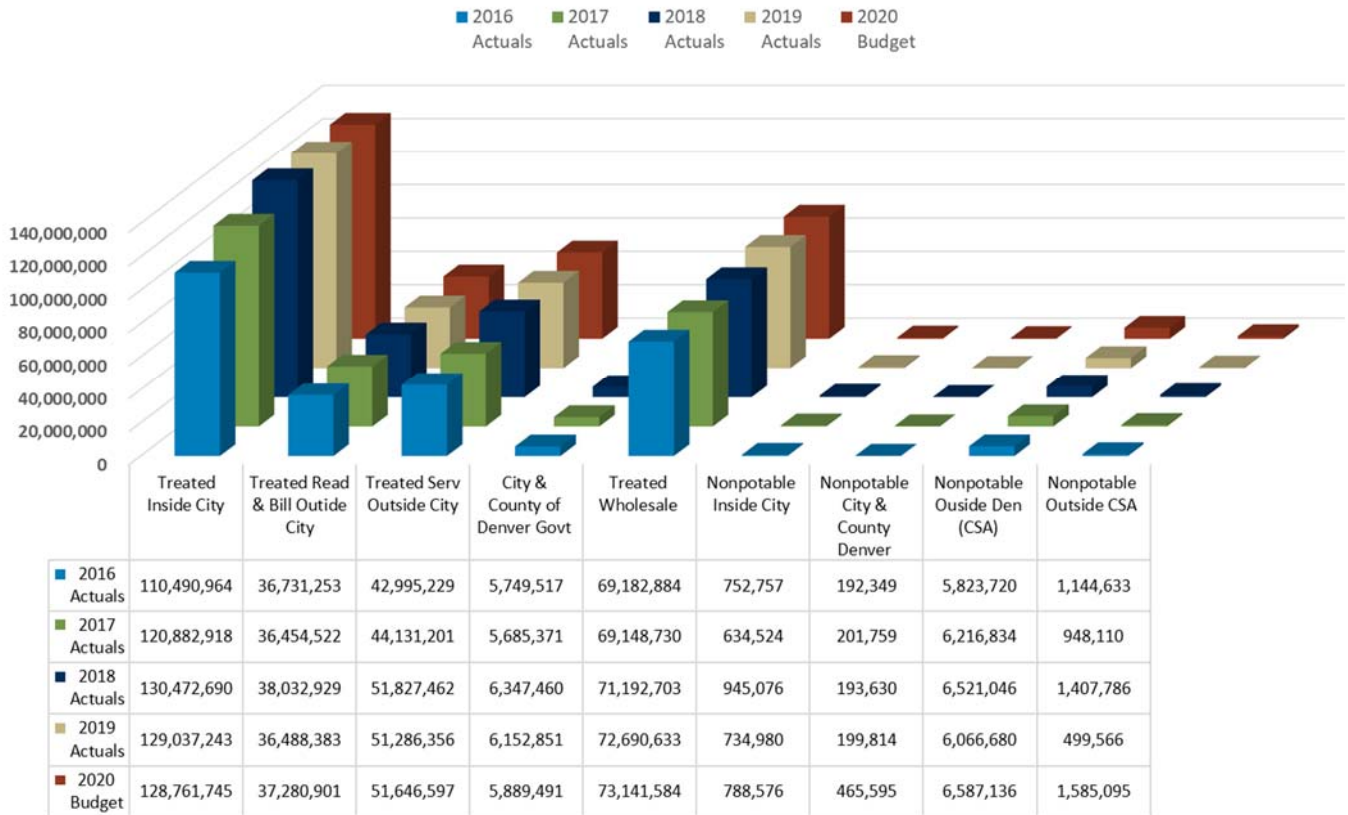
COMPARISON OF SOURCES AND USES OF FUNDS							
	2017		2018		2019		2020
	Budget	Actuals	Budget	Actuals	Budget	Actuals	Budget
SOURCES OF FUNDS							
Water sales	269,481	284,304	282,658	306,941	296,208	303,157	306,147
Hydropower	4,607	4,499	4,607	3,944	4,196	3,892	3,872
Special assessments and fees	7,230	12,713	8,130	8,851	7,639	9,174	7,640
Interest income	848	3,974	2,912	6,585	6,447	5,875	4,169
Other revenue	7,620	8,670	7,875	8,349	8,033	10,255	8,584
System Development Charges	34,035	42,486	34,000	41,045	40,058	38,668	29,985
Contributions	-	9,240	4,800	5,756	10,616	7,137	8,032
TOTAL REVENUE	\$ 323,821	\$ 365,886	\$ 344,982	\$ 381,470	\$ 373,197	\$ 378,157	\$ 368,429
Proceeds from debt	205,000	205,864	60,000	-	60,000	-	155,000
TOTAL SOURCES OF FUNDS	\$ 528,821	\$ 571,750	\$ 404,982	\$ 381,470	\$ 433,197	\$ 378,157	\$ 523,429
USES OF FUNDS							
Regular Wages and Other Pay	87,950	84,515	86,218	85,093	89,642	88,489	95,261
Applied Labor ¹	(12,391)	(7,533)	(10,833)	(8,364)	(9,129)	(8,987)	(10,710)
Benefits	45,415	42,153	44,006	43,380	42,994	41,579	44,789
Salaries and Benefits	120,973	119,135	119,392	120,110	123,507	121,081	129,340
Materials and supplies	17,746	16,490	16,367	20,439	17,754	21,108	19,461
Utilities	9,258	9,282	7,812	8,946	7,928	9,381	8,237
Professional and Other Services	35,980	29,946	33,956	31,801	34,623	33,427	35,440
Other Expense	4,737	4,670	3,716	8,830	2,875	2,715	2,533
Subtotal Operating w/o Projects	\$ 188,695	\$ 179,522	\$ 181,242	\$ 190,125	\$ 186,687	\$ 187,712	\$ 195,011
Collection	1,987	3,048	559	332	1,125	837	888
Distribution	1,976	6,387	4,337	5,631	4,903	7,381	6,570
Expansion	4,510	6,464	7,432	8,006	5,255	5,750	10,701
Information Technology	1,878	462	2,479	1,538	4,553	4,443	4,527
Operations Support/Other	630	1,119	666	1,705	3,496	6,220	2,375
Treatment	1,594	830	799	431	1,598	494	1,043
Operating Projects	12,575	18,311	16,273	17,642	20,930	25,125	26,104
TOTAL OPERATING COSTS	\$ 201,270	\$ 197,833	\$ 197,515	\$ 207,768	\$ 207,617	\$ 212,837	\$ 221,115
Collection	16,068	10,911	17,566	22,378	30,054	21,299	36,371
Distribution	76,759	70,406	79,408	86,060	89,537	72,218	77,854
Expansion	15,293	13,170	7,769	9,717	7,385	6,232	16,866
Information Technology	6,446	4,899	1,286	1,037	815	697	156
Operations Support/Other	52,884	47,669	57,038	59,544	61,724	50,635	89,315
Treatment	17,375	21,332	33,459	33,621	64,054	66,986	75,842
Applied Labor	-	-	-	-	-	-	-
TOTAL CAPITAL (incl. applied labor)	\$ 184,826	\$ 168,386	\$ 196,526	\$ 212,359	\$ 253,567	\$ 218,068	\$ 296,405
Debt Service	45,456	43,686	49,149	48,765	47,649	47,286	46,169
TOTAL USES OF FUNDS	\$ 431,551	\$ 409,905	\$ 443,190	\$ 468,892	\$ 508,833	\$ 478,190	\$ 563,688

Notes:

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

REVENUE

Water Rate Revenue by Customer Type



	DENVER WATER SERVICE LEVELS		
	Denver: Full Service	Suburbs: Total Service	Suburbs: Read & Bill
Treated water	✓	✓	✓
Meter reading	✓	✓	✓
Account billing and collection	✓	✓	✓
System maintenance	✓	✓	
System repairs	✓	✓	



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:

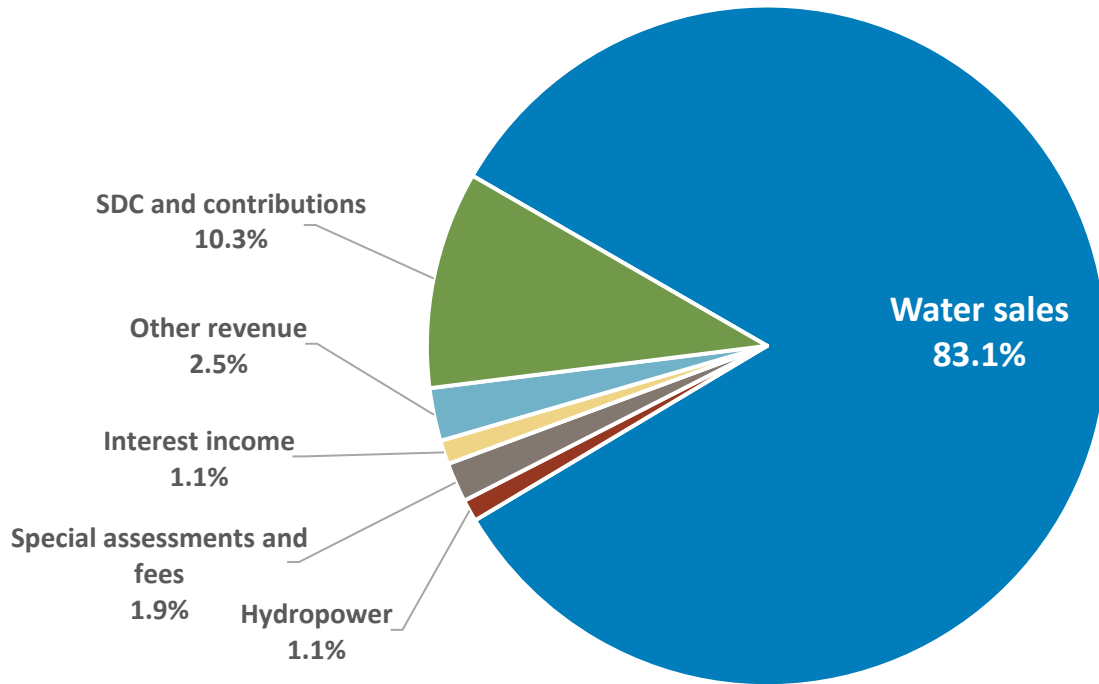
Total Service — Under Total Service contracts, Denver Water owns the water system and is responsible for its operation, maintenance and replacement. Denver Water reads each individual customer's meter and bills each individual customer at the established "Total Service" rate.

In Total Service Areas, water service is provided to the customers in the same manner as that provided to customers inside Denver.

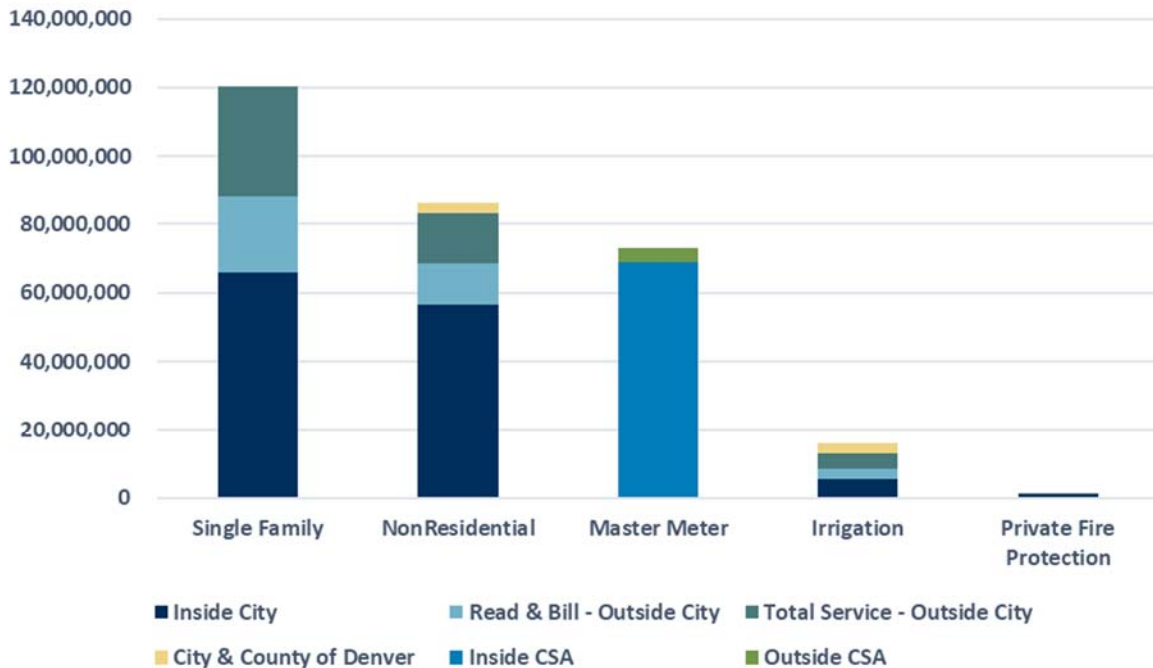
Master Meter — A Master Meter distributor owns and is responsible for construction, operation, maintenance, and replacement of its water system. Denver Water delivers water to the distributor through one or more master meters and bills the distributor at the established "Wholesale (Master Meter)" rate. 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 individual customer and bills each individual customer at the established "Read and Bill" rate.

2020 Budget - Revenue Source by Percentage



2020 Budget - Treated Water Revenue



DIVISION BUDGETS

DENVER WATER BY DIVISION - OPERATING EXPENSE SUMMARY							
Division Name	SALARIES AND BENEFITS		OTHER OPERATING COSTS		TOTAL OPERATING COSTS		
	2019 Budget	2020 Budget	2019 Budget	2020 Budget	2019 Budget	2020 Budget	% Budget Change
Administrative Services	21,396	22,620	16,403	18,282	37,799	40,903	8.2%
Engineering	17,852	18,729	1,414	1,394	19,266	20,124	4.5%
External Affairs	18,297	20,101	11,271	9,879	29,568	29,980	1.4%
Finance	4,507	4,956	1,580	2,115	6,087	7,071	16.2%
Manager & Staff	12,340	12,428	5,023	3,416	17,363	15,844	-8.8%
O&M	46,329	49,998	26,814	29,202	73,142	79,200	8.3%
Non-Divisional	2,786	506	675	1,384	3,462	1,890	-45.4%
TOTAL DIVISION OPERATING	\$ 123,507	\$ 129,340	\$ 63,180	\$ 65,672	\$ 186,687	\$ 195,011	4.5%



REGULAR EMPLOYEES

DENVER WATER - REGULAR EMPLOYEE COUNT							
Division	2016 Budget	2017 Budget	2018 Budget	2019 Budget		2020 Budget	
	FTE	FTE	FTE	FTE	LTE	FTE	LTE
Administrative Services	-	61.0	60.0	59.5	1.0	165.3	1.0
Engineering	167.8	171.8	171.8	172.8	1.0	173.8	2.0
External Affairs	-	185.8	184.6	184.7	-	188.0	5.0
Finance	60.1	35.0	37.0	37.0	-	36.0	1.0
Human Resources	33.8	30.0	29.0	27.0	-	-	-
Information Technology	115.4	112.8	103.8	104.3	-	-	-
Manager & Staff	29.2	36.1	36.4	37.8	-	58.8	-
Operations & Maintenance	516.0	487.0	466.0	479.0	5.0	481.0	12.0
Planning	52.5	-	-	-	-	-	-
Public Affairs	148.8	-	-	-	-	-	-
Total	1,123.6	1,119.4	1,088.4	1,102.0	7.0	1,102.9	21.0

Notes:

- 1) *Administrative Services was new division in 2017*
- 2) *Planning and Public Affairs merged in 2017 to become External Affairs.*
- 3) *Added LTE (Limited Term Employees) in 2019.*
- 4) *Information Technology merged in 2020 into Administrative Services.*
- 5) *Human Resources merged in 2020 into Manager & Staff.*



FUND STRUCTURE

PROJECTED SOURCES & USES - 5 YEARS 2020 AMENDED BUDGET

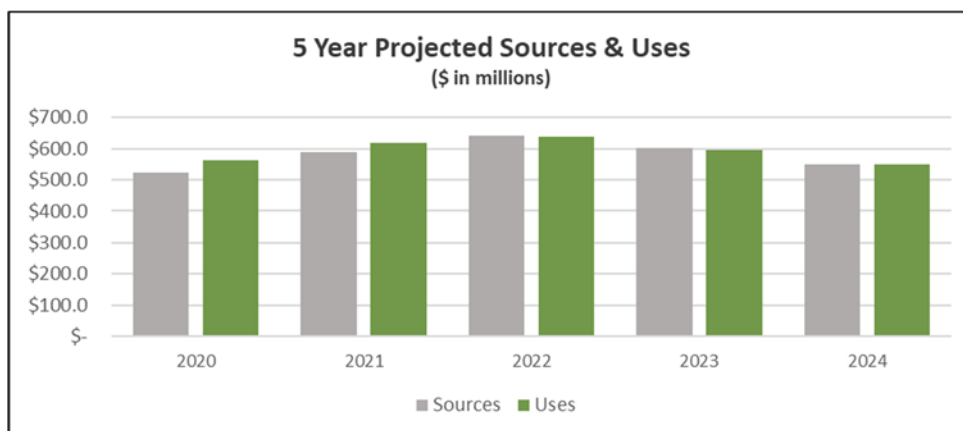
<i>\$ in millions</i>	2020	2021	2022	2023	2024
Revenue	368.4	382.2	402.0	430.4	450.8
Bond/Line of Credit Proceeds	155.0	206.6	240.5	170.7	99.8
Total Sources of Funds	\$ 523.4	\$ 588.8	\$ 642.4	\$ 601.1	\$ 550.6
Operating Expense	221.1	216.2	221.4	220.4	229.1
Capital Expense	296.4	351.0	350.4	298.5	239.3
Debt Service	46.2	51.5	65.1	76.7	80.8
Total Uses of Funds	\$ 563.7	\$ 618.7	\$ 636.9	\$ 595.6	\$ 549.3

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.”

Although the Board approves the rates and the annual budget, no funds are appropriated. Denver Water defines fund balance for the Water Works 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 there 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 debt to fund capital improvements and to refund existing debt. Denver Water has the discretion to issue 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:

- The Debt Ratio (Total Debt divided by the sum of net fixed assets plus net working capital) should not exceed 45%.
- Water rates are established to provide Net Revenues sufficient to produce annual coverage of 1.8 times that of the current Annual Debt Service.

Debt Principal and Interest Obligations (in millions of dollars)			
Year	Principal	Interest	Total
2020	22.8	20.9	43.7
2021	18.0	27.2	45.2
2022	17.8	26.4	44.2
2023	18.7	25.6	44.3
2024	14.1	24.7	38.8
2025	14.5	24.1	38.6

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 on an annual basis and modified to accommodate changing circumstances or conditions. A summary of these policies is presented below:

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 or contribution to investment balances.

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.

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.

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.

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 to \$387K per person and \$1.093M per occurrence), and employee life, medical, dental and accident benefits. Beginning in 2019, these limits are adjusted every three years for inflation.

Denver Water has a risk management program that includes self-insurance for liability, employee medical (including stop-loss coverage), dental and vision. Denver Water carries commercial property insurance for catastrophic losses, including floods, fires, earthquakes and terrorism, for scheduled major facilities including the Westside 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, and fiduciary exposure.



During two different Denver Water service line repairs, vehicles went around Denver Water barricades.

Denver Water is self-insured for workers' compensation and carries an excess liability (stop-loss) policy for individual claims exceeding \$500K. Prior to February 1, 2016, Denver Water was insured for workers' compensation by a large deductible policy whereby Denver Water was responsible for the first \$250K per claim with a maximum aggregate cost of \$2.6M. 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.

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.

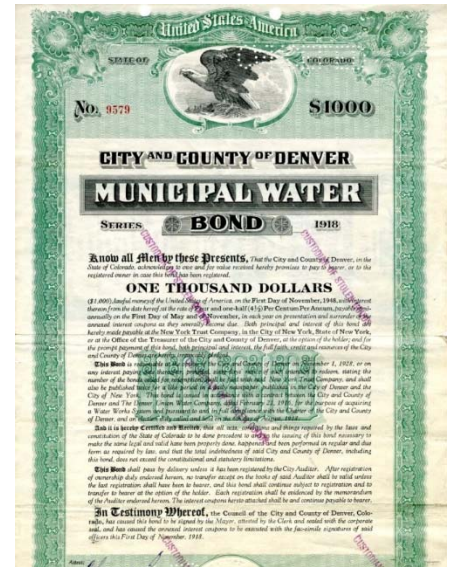
Debt Policy

The Board adopted a debt policy in 2013 establishing the philosophy, objectives and practices to issue debt. In accordance with the Debt Policy, debt may be issued to fund capital improvements that expand the system or are otherwise unusual in nature or amount and to refund existing debt. Denver Water is not subject to legal debt limits.

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 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.



Bond issued in November 1918 between City and County of Denver and Denver Union Water Company for the purpose of acquiring a Water Works System

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).

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 of its 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...."

Consumption and Service Charges

On October 23, 2019, the Board approved a water rate increase, effective January 1, 2020. This adjustment is expected to produce 3.0% of additional revenue over a 12-month period, assuming normal weather and consumption.



PROJECTS

PROJECT PRIORITIZATION

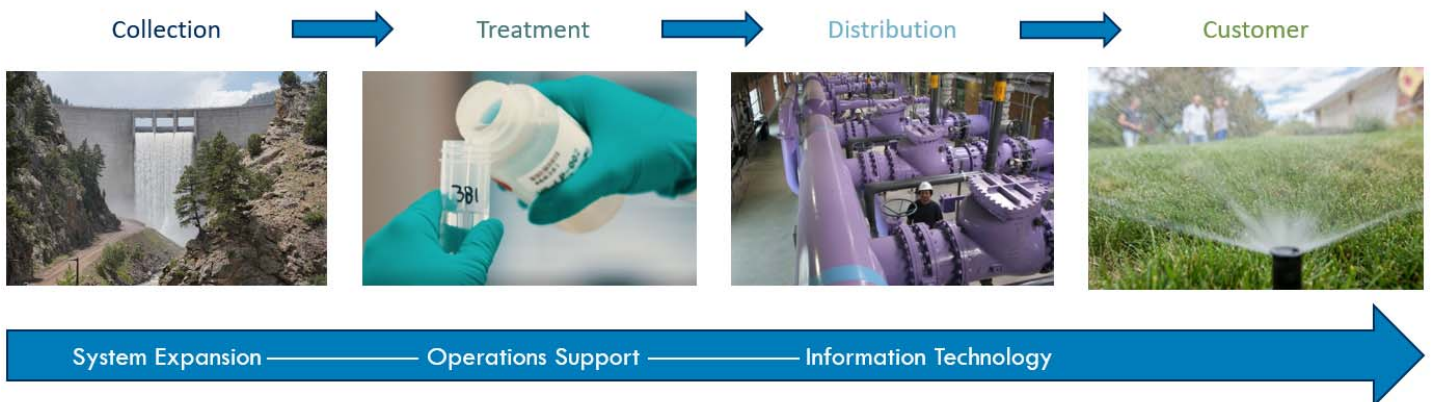
Project budgets, which consist of both capital and operating expenditures, follow the standard work of the Systems and Programs process. Collection, Distribution, Expansion, Operations Support and Treatment are prioritized together. Information Technology is prioritized separately through the Enterprise Project Management Office.

Each year, system managers prioritize needs and develop a 2-year detailed budget for projects, along with a less detailed forecast for years 3 through 10. The outcome of this work is the Long-Term Project Forecast. Like Operating Expenses, the proposed budget targets for projects must align with the annual financial plan and recommended revenue adjustments.

To be considered for prioritization, project managers first develop background information on potential projects, including associated scope, schedule, and budget. That information is submitted on a business case form and is approved by the appropriate system manager.

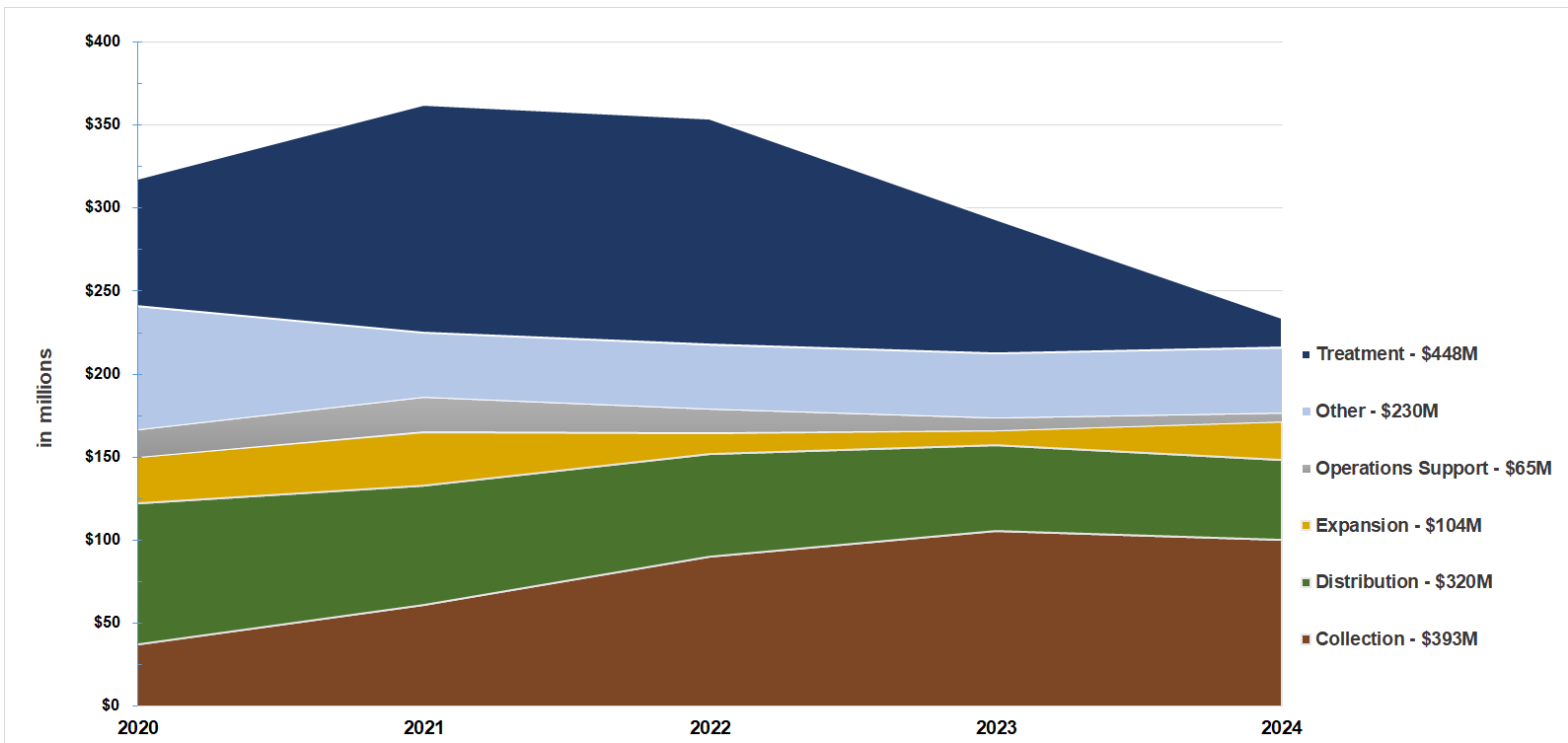
All approved projects are compiled into the preliminary Long-Term Forecast. System managers conduct a series of meetings to categorize and prioritize the approved projects until they are able to meet the defined budget targets for the next two years. Once this process is complete, project managers develop detailed budgets for each project.

CUSTOMER CENTRIC APPROACH REQUIRES TEAMWORK



5-YEAR PROJECT PLAN

The chart below illustrates the 5-year project plan for Denver Water (includes both operating and capital projects). Over the next five years, we expect to spend \$1.6 billion improving and maintaining our system. The projected costs for the Lead Reduction Program are included in the Other category on the chart below.



*Does not include Information Technology projects

TOP PROJECTS

SYSTEMS & PROGRAMS TOP PROJECTS 2020 BUDGET (in thousands of dollars)	
Project Name	2020 Budget
Lead Program	80,252
<i>ALSLR</i>	<i>74,532</i>
<i>Lead Line Svcs Program</i>	<i>5,720</i>
Northwater TP	70,628
Main Replacements / Improvements (Includes Contracted Work)	22,980
<i>Main Replacements / Improvements</i>	<i>13,300</i>
<i>Main Replacement Contracted Work</i>	<i>9,680</i>
Hillcrest Reservoir Basin Replacements & Pump Station Modifications	20,134
<i>Hillcrest PS Modifications</i>	<i>15,919</i>
<i>Replace Hillcrest Tanks</i>	<i>4,215</i>
Gross Reservoir Expansion	15,350
Conduit 16&22 Replacement	12,055
Marston PS Elec.& Mech. Upgrds	6,805
Operations Complex Redevelopment (OCR) - Closeout in 2020	6,000
Water Resources Center	3,600
Lupton Lakes Inlet/Outlet Fac	823
TOP SYSTEMS & PROGRAMS PROJECTS	\$ 261,607
ALL OTHER SYSTEMS & PROGRAMS PROJECTS	\$ 56,218
TOTAL SYSTEMS & PROGRAMS PROJECTS	\$ 317,825

INFORMATION TECHNOLOGY TOP PROJECTS
2020 BUDGET
(in thousands of dollars)

<i>Includes applied labor</i>	2020 Budget
ERP - Phase I	306
ERP - Phase II	258
Asset Sync Upgrade	83
CC&B Upgrade to 2.7	156
JDE Upgrade & Security Enhancement	443
Network Access Control (Lares-13)	592
OCR - NICS Installation	15
Office 365 Back-up	159
SCADA Network Design & Config	1,200
Segment the Internal Network (Lares-07)	578
TOP INFORMATION TECHNOLOGY PROJECTS	\$ 3,788
ALL OTHER INFORMATION TECHNOLOGY PROJECTS	\$ 895
TOTAL INFORMATION TECHNOLOGY PROJECTS	\$ 4,683



PROJECT SUMMARY

SYSTEMS & PROGRAMS - BY SYSTEM 2020 BUDGET (in thousands of dollars)	
System Name	2020 Budget
Collection	\$ 37,260
Distribution	84,424
Expansion	27,567
Operations Support	16,158
Emergency / Other	75,532
Treatment	76,885
Total Systems & Programs Projects	\$ 317,825

INFORMATION TECHNOLOGY - BY SYSTEM 2020 BUDGET (in thousands of dollars)	
System Name	2020 Budget
Business Technology	\$ 1,685
Infrastructure	518
Operational Technology	1,219
Security	1,260
Total Information Technology Projects	\$ 4,683

CAPITAL PROJECT UPDATES

Gross Reservoir Expansion Project

Securing our future ability to provide safe, reliable water

The Gross Reservoir Expansion Project is a major component of Denver Water’s long-term, multi-pronged approach to deliver safe, reliable water to the more than 1.5 million residents in our service area today and many of the projected millions who will call Colorado home in the decades to come.



The project will raise the height of the existing dam by 131 feet, which will allow the capacity of the reservoir to increase. Once permits are secured, we expect construction to take place in phases. The project website details expansion plans, permit information, construction and schedule.

North System Renewal

Improving the safety and reliability of our 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 our water system. We are building a new water treatment plant, installing a new pipeline and redeveloping our Moffat Treatment Plant. When finished, the system will be more resilient and adaptable to changing demands for water now and into the future.



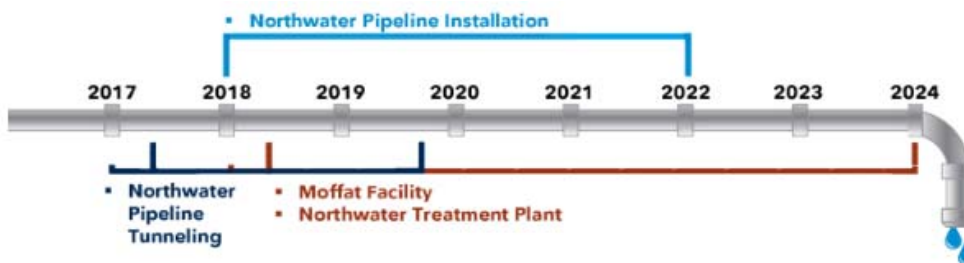
Why it's important: Denver Water’s North System was constructed in the 1930s, when the surrounding area was mostly farmland. Now, 80 years later, the North System is reaching the end of its lifespan.

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 – We are building a new, state-of-the-art water treatment plant next to Ralston Reservoir, north of Golden in Jefferson County. The Northwater Treatment Plant 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 – We are installing a 66-inch diameter pipeline, replacing one of the two existing pipeline, running 8.5 miles between Ralston Reservoir and the Moffat Treatment Plant. The new pipeline will transport treated water from the new Northwater Treatment Plant 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 the Northwater Treatment Plant will be sent to the Moffat facility, via the Northwater Pipeline, where it will be stored and distributed to customers.

Anticipated timeline*



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

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 2021.



Why it's important: 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.



Lead Reduction Program

Denver Water launches ongoing program to continue education and reduce lead in drinking water

Denver Water is committed to delivering safe water to our customers. The water that we provide to homes and businesses is lead-free, but lead can get into the water as it moves through lead-containing household fixtures, plumbing and water service lines — the pipe that brings water into the home from the main in the street — that are owned by the customer.

The program was approved in December 2019 by the Environmental Protection Agency and Colorado Department of Public Health and Environment.

The program has five main components:

- pH adjustment: Increasing the pH level of the water to reduce the risk of lead and other metals getting into drinking water from lead service lines or household plumbing.
- Inventory: Developing and maintaining 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.
- Lead Service Line Replacement: Replacing all of these lead service lines with copper lines at no direct charge to the customer.
- Filter Program: Providing 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.
- Ongoing: Communication, outreach and education programs.

Having a lead service line doesn’t necessarily mean you have elevated levels of lead in your water, but a lead service line can contribute to elevated levels of lead in drinking water. The primary source of lead in drinking water is customer-owned lead service lines, the pipe that brings water from the water main in the street to the plumbing in the home. Denver Water estimates there are 64,000-84,000 properties that may have lead service lines in its service area. It will take 15 years to replace all of them. The Lead Reduction Program will replace customer-owned lead service lines with copper service lines at no direct charge to the customer.



The water Denver Water provides is lead-free, but some homes are at risk of lead entering the water through their household plumbing or service line, like the one pictured here. The house in background was built pre-1951.

Because property owners, not Denver Water, own water service lines, information on what pipes are made of is inconsistent and scattered among a variety of sources. So, Denver Water has been developing

a comprehensive inventory of known and suspected lead services lines using a combination of property records (homes built before 1951 are more likely to have lead service lines in Denver Water’s experience), water quality tests and visual inspections of service lines.



While Denver Water currently replaces approximately 1,000 lead service lines a year, the Lead Reduction Program will accelerate this effort to replace all lead service lines within the next 15 years.

We’ll be working on a neighborhood-by-neighborhood basis, factoring in those who are most vulnerable and at-risk from lead exposure, underserved areas and planned construction activities.

In addition to prioritizing geographic areas, we are also prioritizing individual properties throughout the city that serve large numbers of at-risk individuals, such as schools and daycare facilities.



WATER RATES AND USAGE

WATER RATES

Water Rates

In October 2019, the Denver Board of Water Commissioners adopted rate changes to fund essential repairs and upgrades to Denver Water’s system, beginning Jan. 1, 2020. There are more than 100 major projects identified in our five-year capital plan, including replacing pipes and underground storage tanks and upgrading water treatment facilities. With rapidly changing technology, aging infrastructure, new regulations and a warming climate, the cost of running a complex water system continues to rise.



Figure shows an aerial view of a Denver Water pipe being placed

To keep water affordable and to encourage efficiency, Denver Water’s rate structure includes three tiers based on how much water the customer uses. 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 size of the water meter.

Water Rates at Work



After this water main break in Denver on Jan. 28, 2017, Denver Water engineers started design and coordination to replace the 24-inch-diameter pipe. The five-year capital plan invests more than \$100M to repair and replace water mains.

In 2020, Denver Water will continue work on projects that are part of the five-year, \$1.5B capital plan. We are staying on top of the upgrades and new projects needed to keep the water system running. Some specific projects include:

North System Renewal

Denver Water's North System was constructed in the 1930s, when the surrounding area was mostly farmland. Now, 90 years later, the North System is reaching the end of its lifespan. The renewal project includes upgrading pipes and valves inside Ralston Dam, building an 8.5-mile water pipeline, repurposing Moffat Treatment Plant and building the new Northwater Treatment Plant.

Gross Reservoir Expansion project

This major component of Denver Water's long-term, multi-pronged approach (including promoting water efficiency, recycled water and responsible sourcing of new supply) will deliver safe, reliable water to the more than 1.5 million residents in our service area today and many of the projected 8.1 million who will call Colorado home by 2050. Additional water storage from the project will help prevent future shortfalls during droughts and helps offset an imbalance in our north-south collection system.

Pipe Replacement

We replace about 106,000 feet of pipe a year and have a goal of replacing about 140,000 feet of pipe every year by 2024. Denver Water has more than 3,000 miles of pipe in the ground.

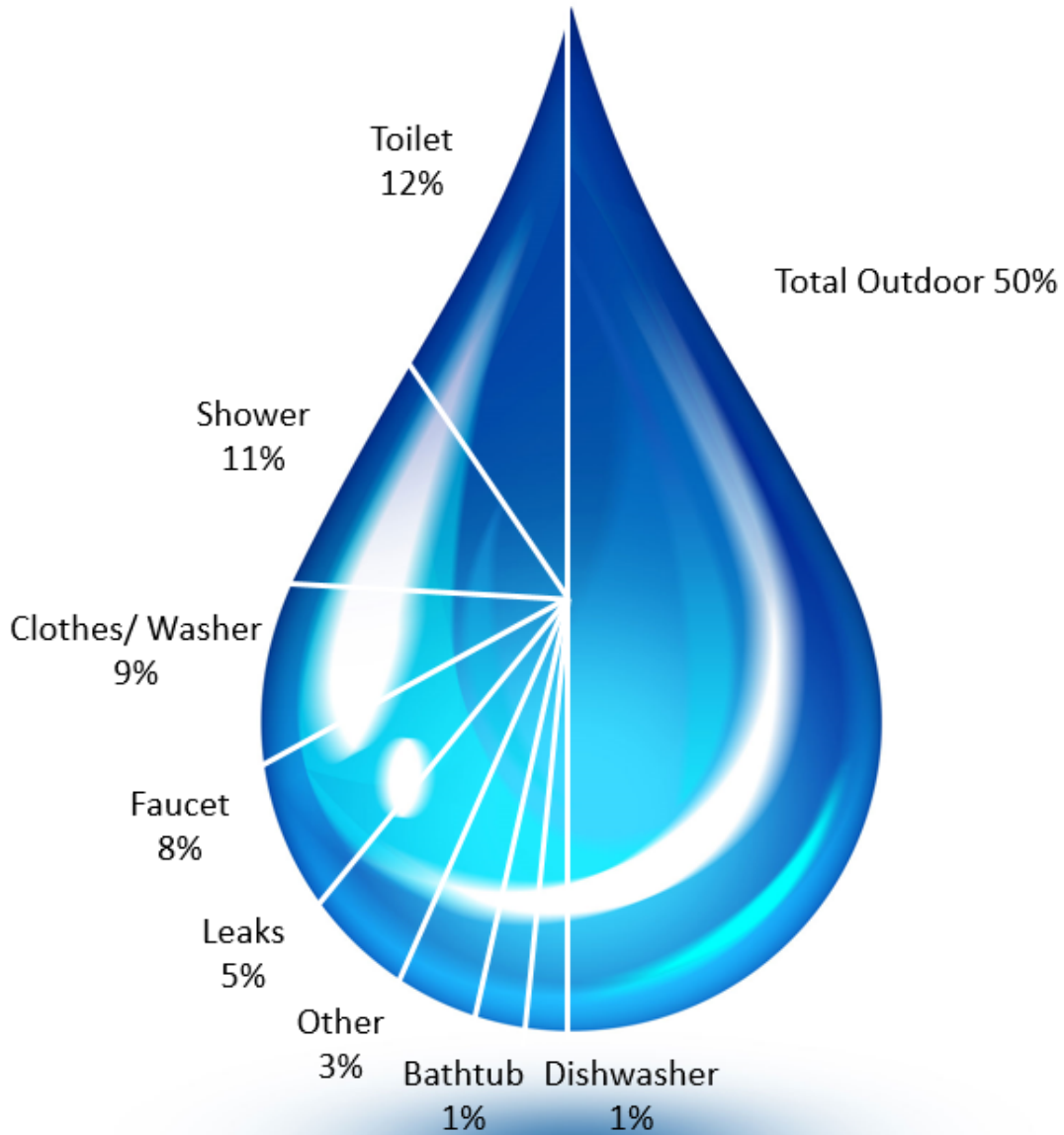


This pipe is being installed as part of the North System Renewal Project. The pipe will bring water from Ralston Reservoir to the new Northwater Treatment Plant under construction north of Golden and west of State Highway 93

WATER USAGE

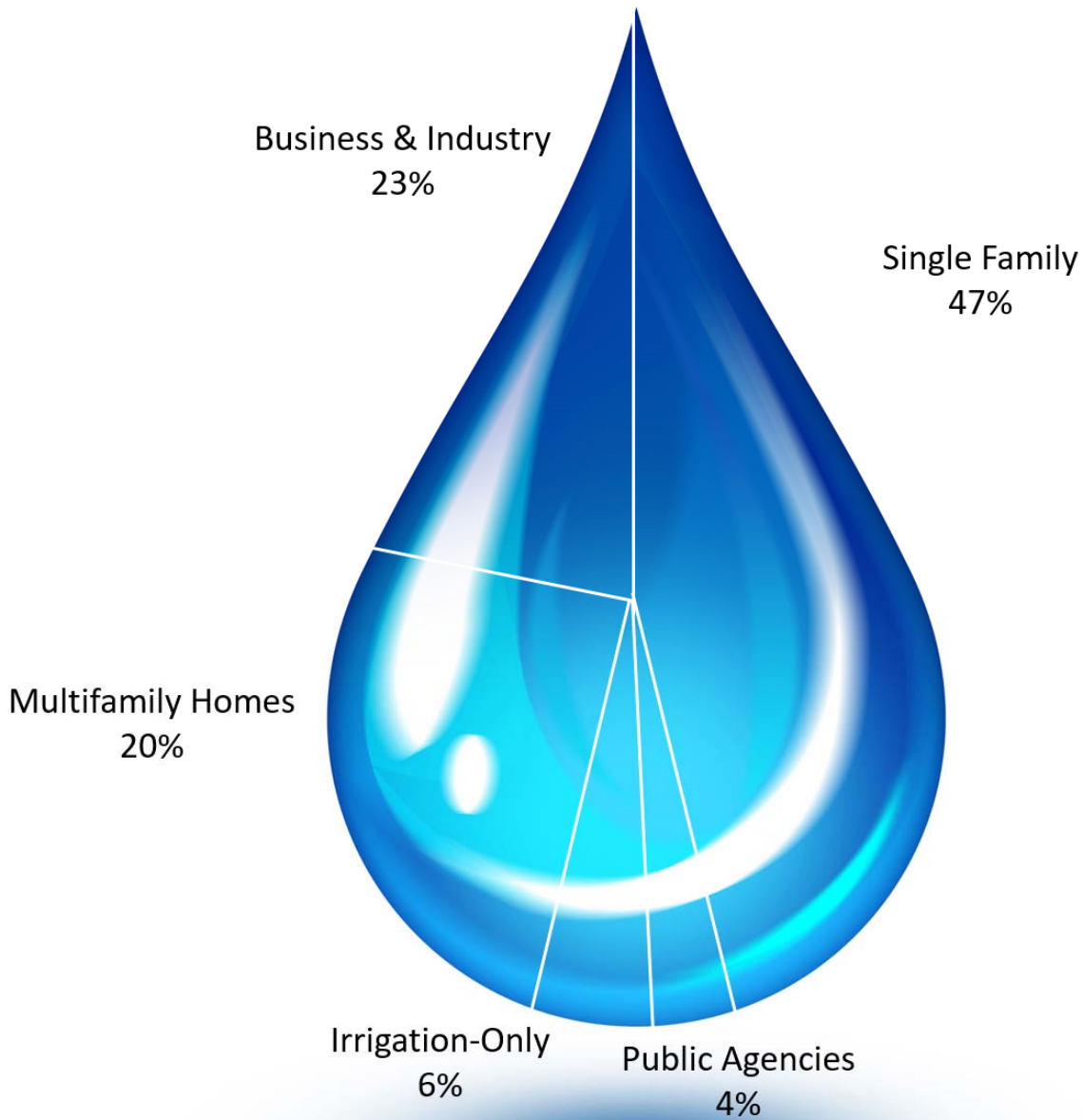
Residential Usage

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 is able to better plan for an adequate supply of clean, reliable water well into the future.

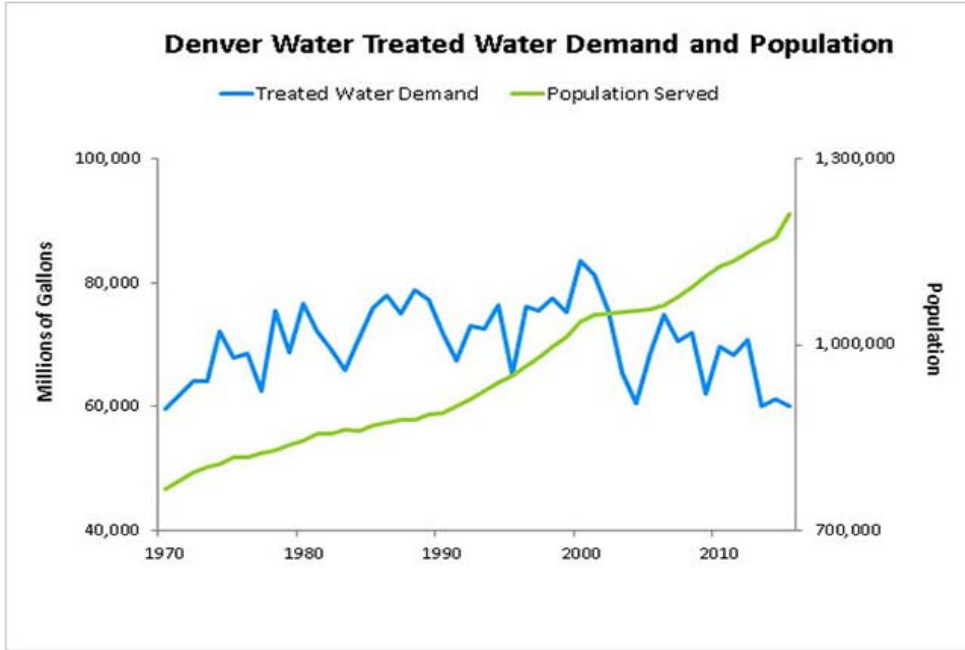


Usage by Category

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.

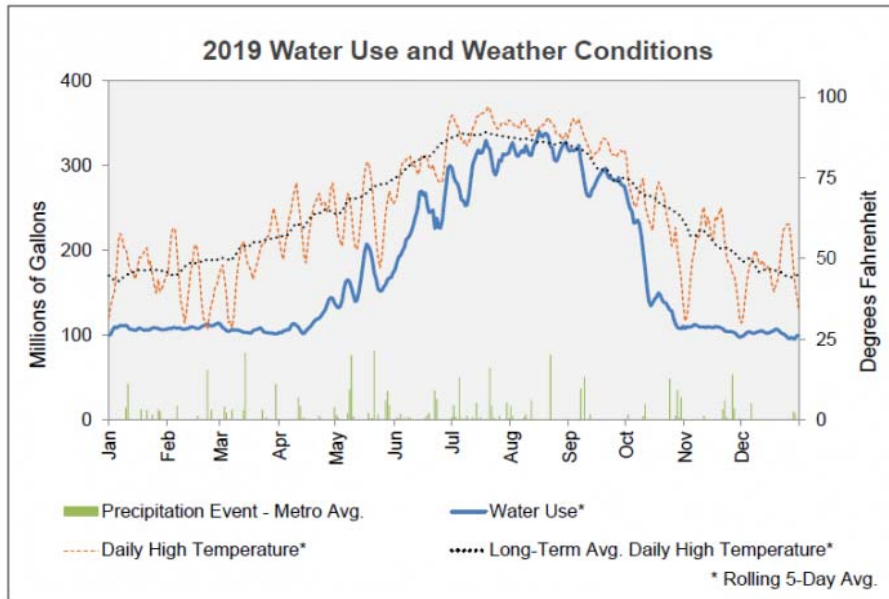


Demand and Population



Weather Impact

Water use from year to year is heavily influenced by 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 - 2002 drought

The weather in this 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.

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

Stages of Drought Response

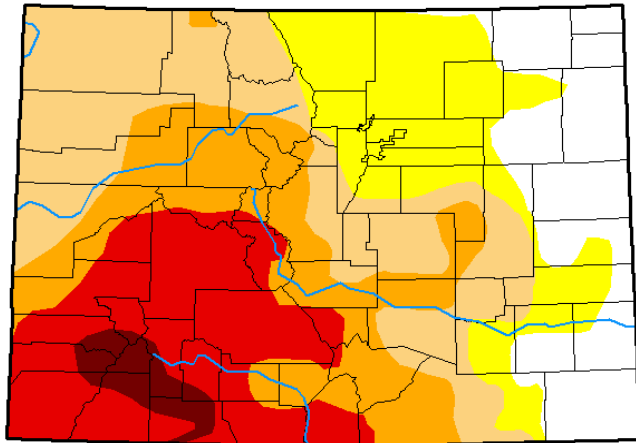
Denver Water's Drought Response Plan details drought severity indicators, response actions and program elements. Denver Water's primary response to drought is to restrict customers' water use so supplies will last as long as possible and be available for the most essential uses. Four different stages of drought response are outlined:

- **Drought Watch:** A Drought Watch will increase communication to customers that water supplies are below average, conditions are dry and continued dry weather could lead to mandatory watering restrictions.
- **Stage 1 Drought:** A Stage 1 drought response imposes mandatory watering restrictions and requires effort on the part of customers.
- **Stage 2 Drought:** A Stage 2 drought response imposes a ban on lawn watering for Denver Water's customers. Stage 2 drought restrictions are severe and will likely result in damage to or loss of landscapes.
- **Stage 3 Drought:** If conditions warrant, Denver Water may implement a rationing program for an indefinite period of time to ensure, to the extent possible, that there is adequate water for essential uses.



The following images show the Colorado drought monitor from January 2019 and 2020 comparatively:

U.S. Drought Monitor Colorado



January 29, 2019
(Released Thursday, Jan. 31, 2019)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	15.91	84.09	66.35	41.02	22.04	2.79
Last Week <i>01-22-2019</i>	15.91	84.09	68.49	42.41	22.04	2.79
3 Months Ago <i>10-30-2018</i>	16.64	83.36	66.80	57.07	37.48	13.64
Start of Calendar Year <i>01-01-2019</i>	17.94	82.06	66.26	54.91	27.11	11.22
Start of Water Year <i>09-25-2018</i>	14.19	85.81	72.30	64.41	48.47	16.21
One Year Ago <i>01-30-2018</i>	0.59	99.41	75.90	29.21	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

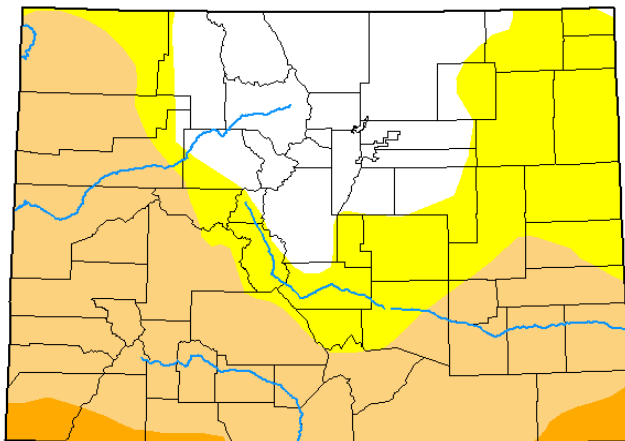
Author:

Brian Fuchs
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor Colorado



January 28, 2020
(Released Thursday, Jan. 30, 2020)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	22.39	77.61	51.19	3.30	0.00	0.00
Last Week <i>01-21-2020</i>	22.39	77.61	51.19	13.84	0.00	0.00
3 Months Ago <i>10-29-2019</i>	18.73	81.27	58.24	27.41	0.00	0.00
Start of Calendar Year <i>12-31-2019</i>	31.72	68.28	51.19	20.11	0.00	0.00
Start of Water Year <i>10-01-2019</i>	30.14	69.86	27.53	0.00	0.00	0.00
One Year Ago <i>01-29-2019</i>	15.91	84.09	66.35	41.02	22.04	2.79

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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:

Richard Heim
NCEI/NOAA

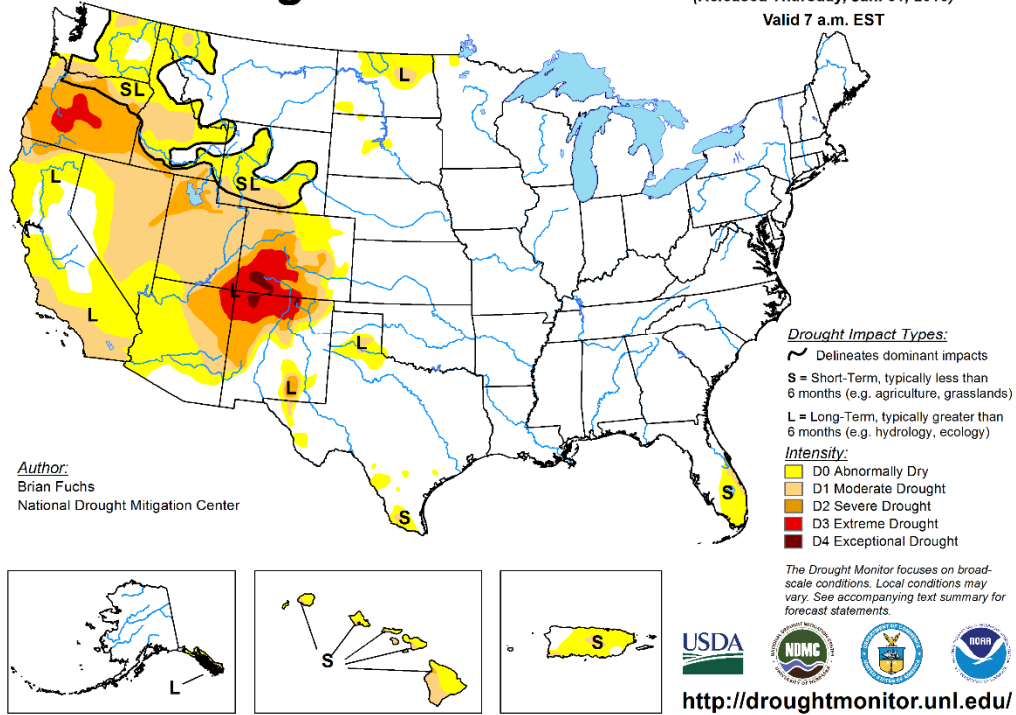


droughtmonitor.unl.edu

The following images show the National drought monitor from January 2019 and 2020 comparatively:

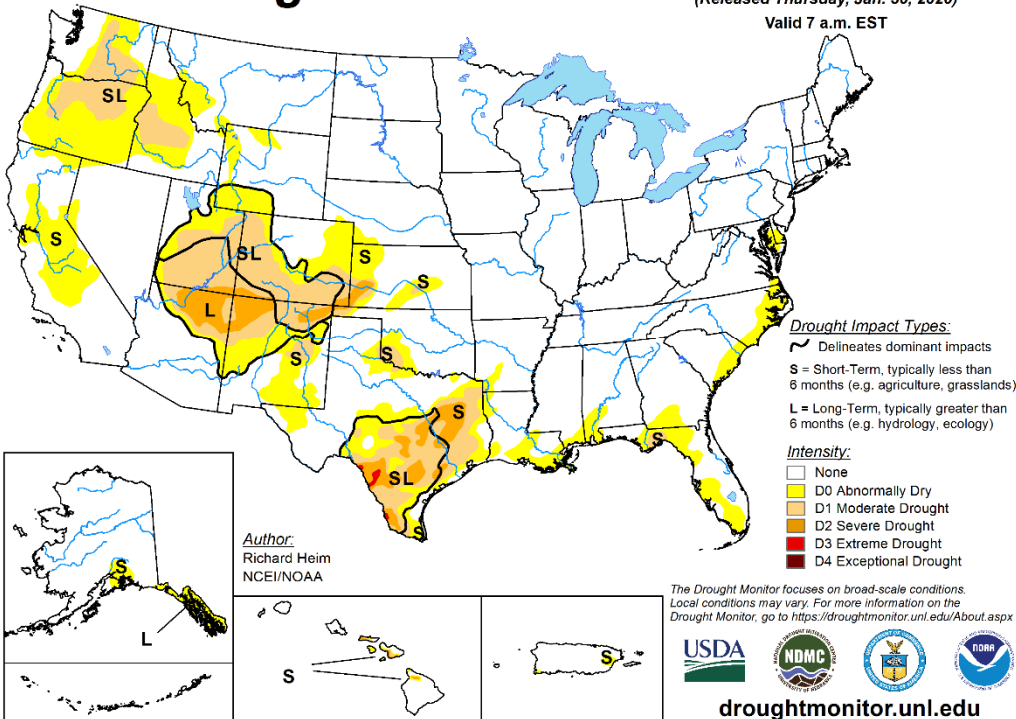
U.S. Drought Monitor

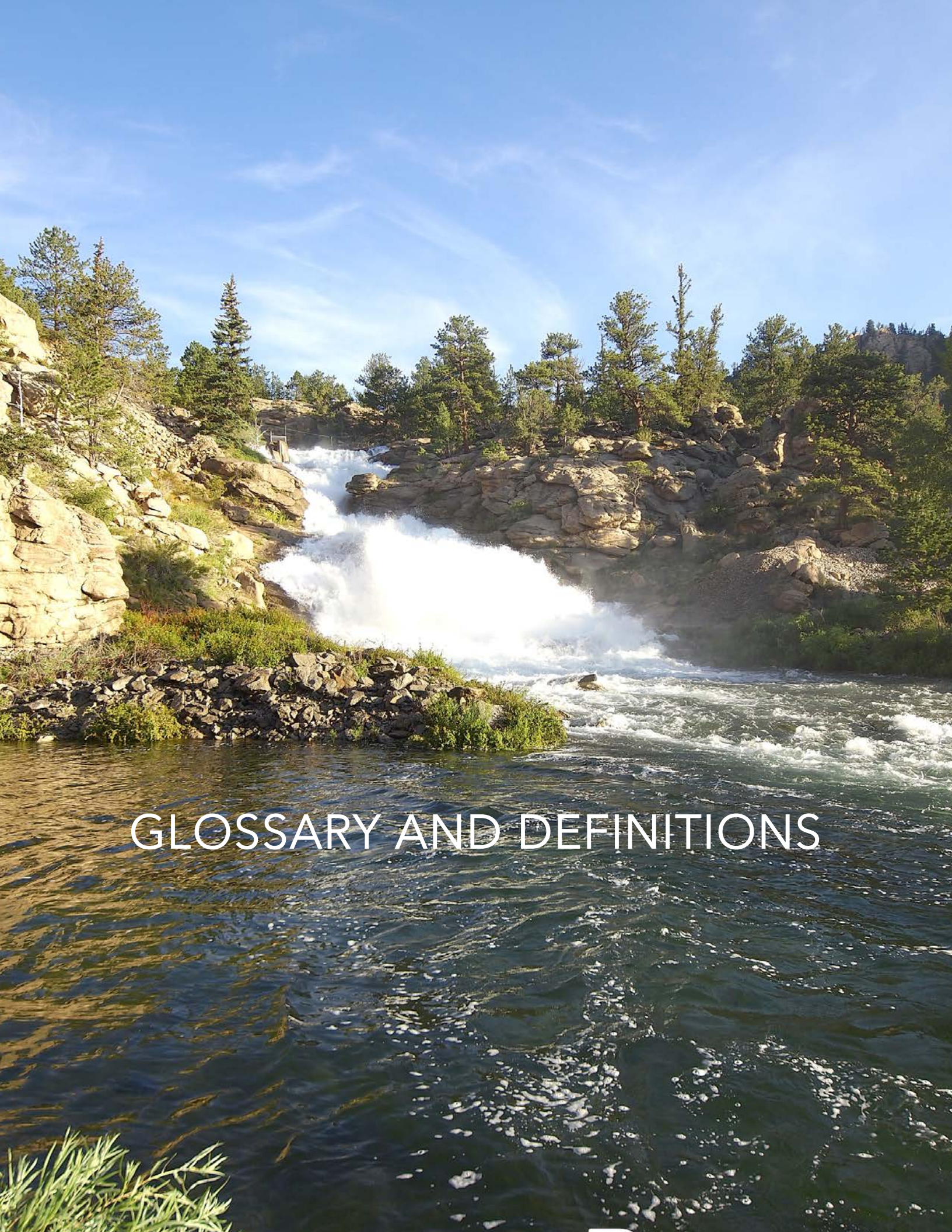
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U.S. Drought Monitor

January 28, 2020
(Released Thursday, Jan. 30, 2020)
Valid 7 a.m. EST





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.

annual yield

Maximum basic demand the water supply could meet throughout a period of historical or synthesized hydrological conditions.

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 their 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 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 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; 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.

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 (CSA)

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 non-recurring 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.

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 planning

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 for 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.

SBE

Small business enterprise

SMWBE

Small, minority-owned, women-owned business enterprises

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.