



2023

Annual Budget



Northern Water

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GENERAL MANAGER TRANSMITTAL LETTER

To the President and Board of Directors,

We are pleased to present the fiscal year 2023 budget which allows Northern Water to maintain its strong financial position while continuing to make a firm commitment to a reliable and high-quality wholesale water supply. Northern Water's sound fiscal health was noted in July 9, 2021, when Moody's Investor Service issued a credit rating of Aa1 to Northern Water's Certificates of Participation, Series 2021. Concurrently Moody's assigned an initial Aaa issuer rating to the District, noting a stable outlook, which supported Northern Water's strong issuance of Certificates of Participation, Series 2022. Standard & Poor (S&P) Global issued a AA+ rating.

The budget utilizes available resources to maintain and improve our aging infrastructure. This budget is designed to fulfill the organization's vision: "Northern Water will be a leader in ensuring a secure water future for Northern Colorado."

Northern Water addresses several key issues and priorities in the 2023 budget. This budget continues to place an emphasis on additional resources needed to manage new capital projects and programs effectively. Programs to protect and conserve water supplies are part of planned activities along with the continuation of permit work on new water supply projects. Maintaining one of the core priorities "collect and deliver water" is also included.

Fiscal Year 2023 Budget Summary and Highlights by Fund

District Enterprise Fund

Total Sources of Funds are estimated to be \$78.3 million, or approximately 39.0 percent lower than the fiscal year 2022 budget. Key components included with the fiscal year 2023 budgeted sources are:

- Property and Specific Ownership Tax revenues totaling \$30.0 million:
 - \$3.1 million increase (or approximately 12 percent) due to increased property tax revenues and reappraisals of property which will occur in 2023
- Water assessments totaling \$12.3 million
- Charges for Services totaling \$8.9 million reflects an increase of \$383,820 (or 5 percent) due to increased labor charges for new capital projects
- \$2.77 million from indirect cost recovery as approved by the Board of Directors in 2021 for implementation in 2023
- Other operating revenues totaling \$2.6 million
- Other non-operating revenues totaling \$20.6 million reflects an increase of \$15 million due to a decrease in anticipated grant revenues

Total Uses of Funds are estimated to be \$113.2 million, or approximately 5 percent higher than fiscal year 2022. Key components included within fiscal year 2023 budgeted uses are:

- Operating expenses of \$41.1 million reflect an increase of \$3.2 million (or approximately 9 percent) compared to fiscal year 2022
- Staffing to increase by six full-time positions primarily due to filling open positions
- Increased labor and benefits expense of approximately \$1.3 million
- Reserve contribution of \$2.1 million, reflecting 5 percent of budgeted operating expenses
- Capital investments of \$41.9 million, approximately 114 percent lower than fiscal year 2022, due to decreased project costs anticipated for East Slope capital campus expansion (West Slope was completed in 2022)
- Other non-capital initiatives totaling \$21.9 million:
 - East Troublesome Fire Recovery, \$19.7 million
 - Airborne Snow Observatory Flights, \$1.4 million
 - Other initiatives - \$750,000
- Debt service totaling \$5.6 million, \$250,000 higher than in fiscal year 2022 due to the issuance of Series 2022 Certificates of Participation in June 2022

Southern Water Supply Project Water Activity Enterprise Fund

Total Sources of Funds are estimated to be \$3.4 million, \$895,000 higher than fiscal year 2022.

- \$3.4 million from assessments

Total Uses of Funds are estimated to be \$3.4 million, \$260,000 higher than fiscal year 2022.

- \$1.5 million for operating expenses
- \$983,300 for indirect costs
- Capital projects of \$831,000, \$141,000 lower than fiscal year 2022:
 - \$279,000 for SWSP II Boulder Isolation Valve
 - \$58,000 for Louisville Pump Study
 - \$493,000 for other capital projects

Pleasant Valley Pipeline Project Water Activity Enterprise Fund

Total Sources of Funds are estimated to be \$228,800, \$73,000 higher than fiscal year 2022.

- \$228,800 from assessments

Total Uses of Funds are estimated to be \$228,800, \$73,000 lower than fiscal year 2022.

- \$87,000 for operating expenses
- \$43,900 for indirect costs

Northern Integrated Supply Project Water Activity Enterprise Fund

Total Sources of Funds are estimated to be \$28.3 million, \$5.2 million lower than fiscal year 2022 with the full amount expected in proceeds from participant contributions.

Total Uses of Funds of \$28.2 million largely for the Northern Integrated Supply Project capital project for permit, design and land purchases for Glade Reservoir, South Platte Water Conservation Project and the Colo. Highway 287 relocation.

Northern Water Hydropower Water Activity Enterprise Fund

Total Sources of Funds are estimated to be \$1.3 million, \$59,000 lower than the fiscal year 2022 budget.

- \$1.3 million from energy revenue

Total Uses of Funds are estimated to be \$1.2 million, \$52,000 lower than in fiscal year 2022.

- \$393,000 for operating expenses
- \$120,600 for indirect costs
- \$639,000 for debt service

We believe the budget for Northern Water's eighty-sixth year of operation meets the Board's conservative fiscal management and management's commitment to accountability and strong fiscal management.

Respectfully,



Bradley D. Wind
General Manager

DISTINGUISHED BUDGET PRESENTATION AWARD



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Northern Colorado Water Conservancy District
Colorado**

For the Fiscal Year Beginning

October 01, 2021

Christopher P. Morrill

Executive Director

ABOUT NORTHERN WATER

Northern Water is a public agency created in 1937 to contract with the U.S. Bureau of Reclamation (Reclamation) to build the Colorado-Big Thompson Project (C-BT Project) and provide supplemental water to Northeastern Colorado. C-BT Project water helps irrigate more than 615,000 acres of farm and ranch land and supplements the water needs of more than one million people in eight Northeastern Colorado counties. Northern Water also engages in water management and planning activities for the purpose of meeting present and future water supply needs of water users within its boundaries. Northern Water has educational and water conservation programs, turf and landscape water use efficiency demonstration programs, public educational programs, water-efficient landscape grants, and publications on water planning and management.



The majority of C-BT Project water comes from mountain snowmelt in the upper reaches of the Colorado River basin west of the Continental Divide. Northern Water delivers on average 210,000 acre-feet of untreated water each year to the South Platte River Basin. In 2022, agricultural and municipal/industrial deliveries were 82,139 and 116,881 acre-feet, respectively. The C-BT Project was constructed and is mostly owned by the United States through Reclamation. Northern Water owns the portions of the C-BT Project downstream of Horsetooth Reservoir and Carter Lake. Northern Water and Reclamation jointly operate and maintain the C-BT Project.

Northern Water's financial structure is defined by the terms and conditions of Colorado's Water Conservancy Act and its Repayment Contract with Reclamation. The Board retains the authority granted in the Water Conservancy Act to establish wholesale water assessment rates. Also, in accordance with the Repayment Contract with Reclamation, Northern Water collects a 1 mill levy property tax on real property located within the eight counties of its boundaries and assesses for water allotment contracts. Except under certain circumstances that currently do not apply to Northern Water, the Water Conservancy Act does not allow an increase in the 1 mill levy. Water allotment contracts are perpetual contracts between Northern Water and water users for the delivery of raw water from the C-BT Project for use within Northern Water boundaries. The Board holds a rate hearing in August of each year at which the rates are set for the next year's water allotment contract assessments. The C-BT Project is funded by a diverse revenue stream led by property taxes, water assessments and charges for services. Together these three sources comprise more than 88 percent of Northern Water's annual revenue. Northern Water's fiscal year ends September 30.

The Repayment Contract obligates Northern Water to pay the costs of operation, maintenance, repair and replacement of certain single purpose water supply C-BT Project works. In addition, the Repayment Contract obligates Northern Water and Reclamation to share equally all the costs of operation, maintenance, repair and replacement of joint multi-purpose works. These works are used both for diversion and distribution of water and hydropower productions.

A private market in allotment contracts has developed as the demand for water supplies within Northern Water boundaries has changed. Under current practices, a holder of a water allotment contract may sell the right to hold the units represented by an allotment contract to another person or entity who is eligible to hold an allotment. So long as the statutory criteria and Board policies are satisfied, the Board has historically approved such transfers. With increasing urbanization along the northern Front Range, the current trend of ownership changing from agricultural to municipal and industrial use is expected to continue. The Board has a current policy limiting the quantity of contract units that can be held by one person or entity. In addition to the permanent transfer of contract units, a holder may annually lease the right of delivery of the water in any year to a water user within Northern Water boundaries that has demonstrated a need for such water.

HISTORY

The early 1930s brought great hardship to the state of Colorado. The economy was struggling because of the nation's 1929 stock market crash and the Great Depression. Scores of Colorado workers were out of jobs and finding it difficult to make ends meet. At the same time, a devastating, multi-year drought was gripping the West. Colorado farming operations were going out of business as fields dried out and crops withered without the water they needed to grow and thrive. One-third of the farms in Larimer County were put up for sale.

The Idea Behind the Colorado-Big Thompson Project

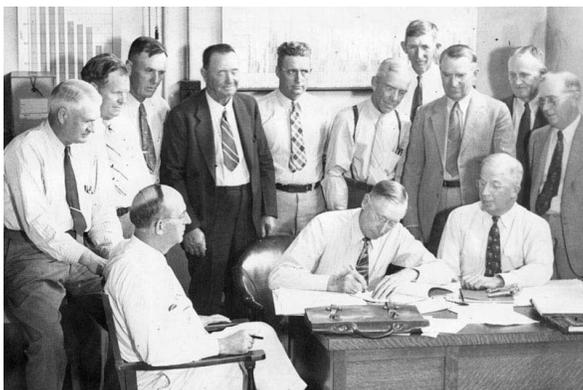
Then came plans for the C-BT Project. The idea was to divert water from the headwaters of the Colorado River on the west side of the Continental Divide. That water would travel through a lengthy tunnel underneath Rocky Mountain National Park to Northeastern Colorado where farmers desperately needed water to supplement their agricultural operations. The project would create hundreds of jobs and make available vast quantities of supplemental water to the parched plains. The idea to bring Colorado River water to the East Slope was not a new one; the state had been exploring that possibility since the 1880s when Colorado commissioned studies to determine if such an endeavor was feasible.



Crews at work on the Adams Tunnel near the East Portal in Estes Park.

Northern Colorado Water Users Association

In the summer of 1933, the Greeley Chamber of Commerce organized the Grand Lake Committee to pursue surveying and funding a water diversion project that would become the C-BT Project. The committee was the predecessor to the Northern Colorado Water Users Association (NCWUA), which formed in 1935 and proposed the C-BT Project to supply water to Northeastern Colorado farmers. The NCWUA was composed of civic leaders who recognized the need for a project like the "Big Tom" as it would come to be known. After discussions with Reclamation, the NCWUA determined the need for an organization with taxing authority and the ability to contract with the federal government to build the project.



Charles Hansen and J.M. Dille signing the 1937 repayment contract with the U.S. Bureau of Reclamation.

Northern Water Created

In 1937, after months of discussion, the state legislature passed the Water Conservancy Act. It established the framework under which Northern Water would be created later the same year. Northern Water and its newly created Board of Directors had much work to do before construction could begin. They had to obtain congressional authorization and necessary appropriations. They needed to negotiate a repayment contract with the U.S. Department of the Interior. They also had to guarantee that water users would repay a portion of project costs. To meet this requirement, on June 28, 1938, Northern Water sought and secured residents' approval on a property tax.



Construction of Green Mountain Dam and Power Plant on the Blue River in 1942.



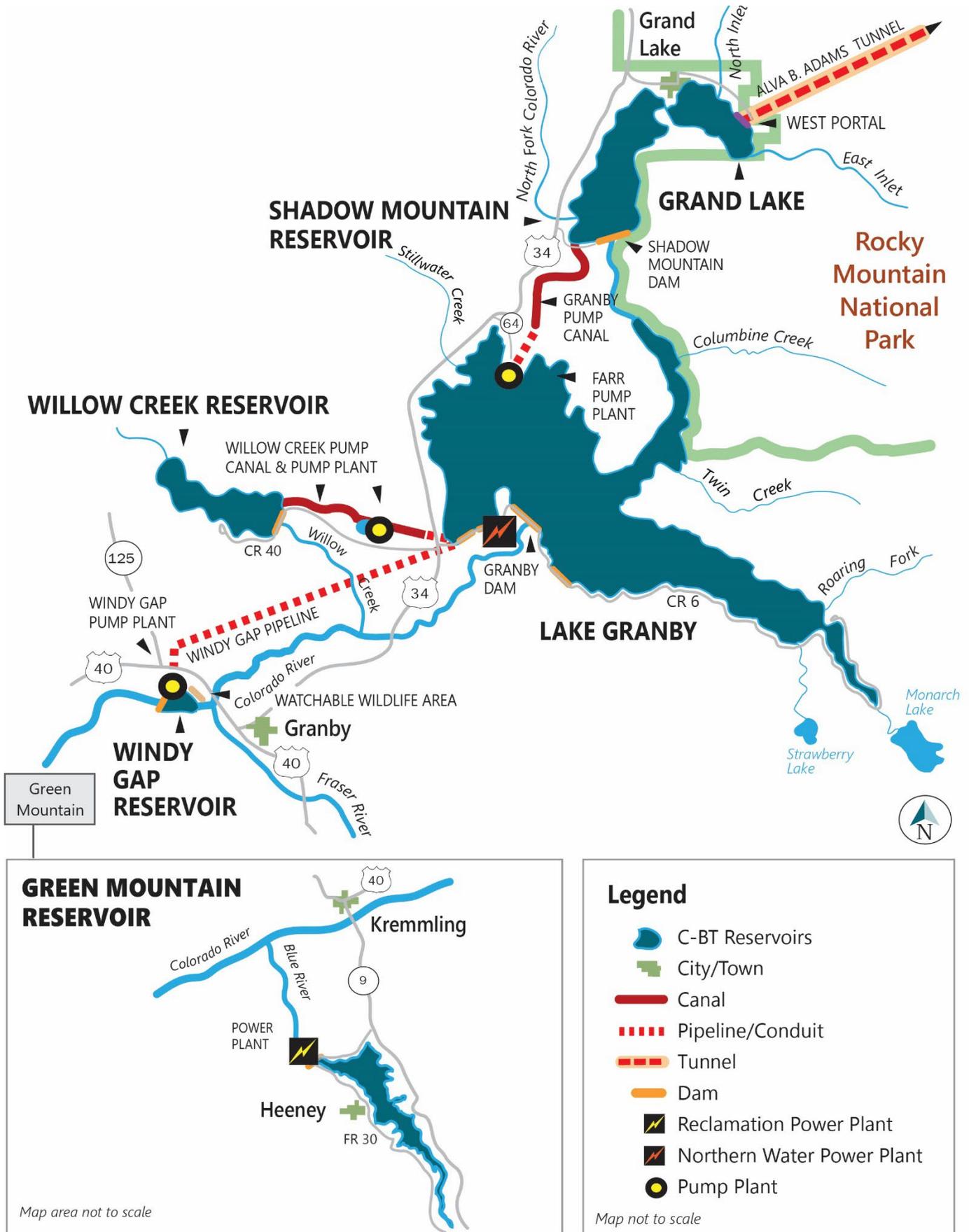
Crews work on installing concrete panels for the Pole Hill Canal in 1952.

Construction of the Colorado-Big Thompson Project

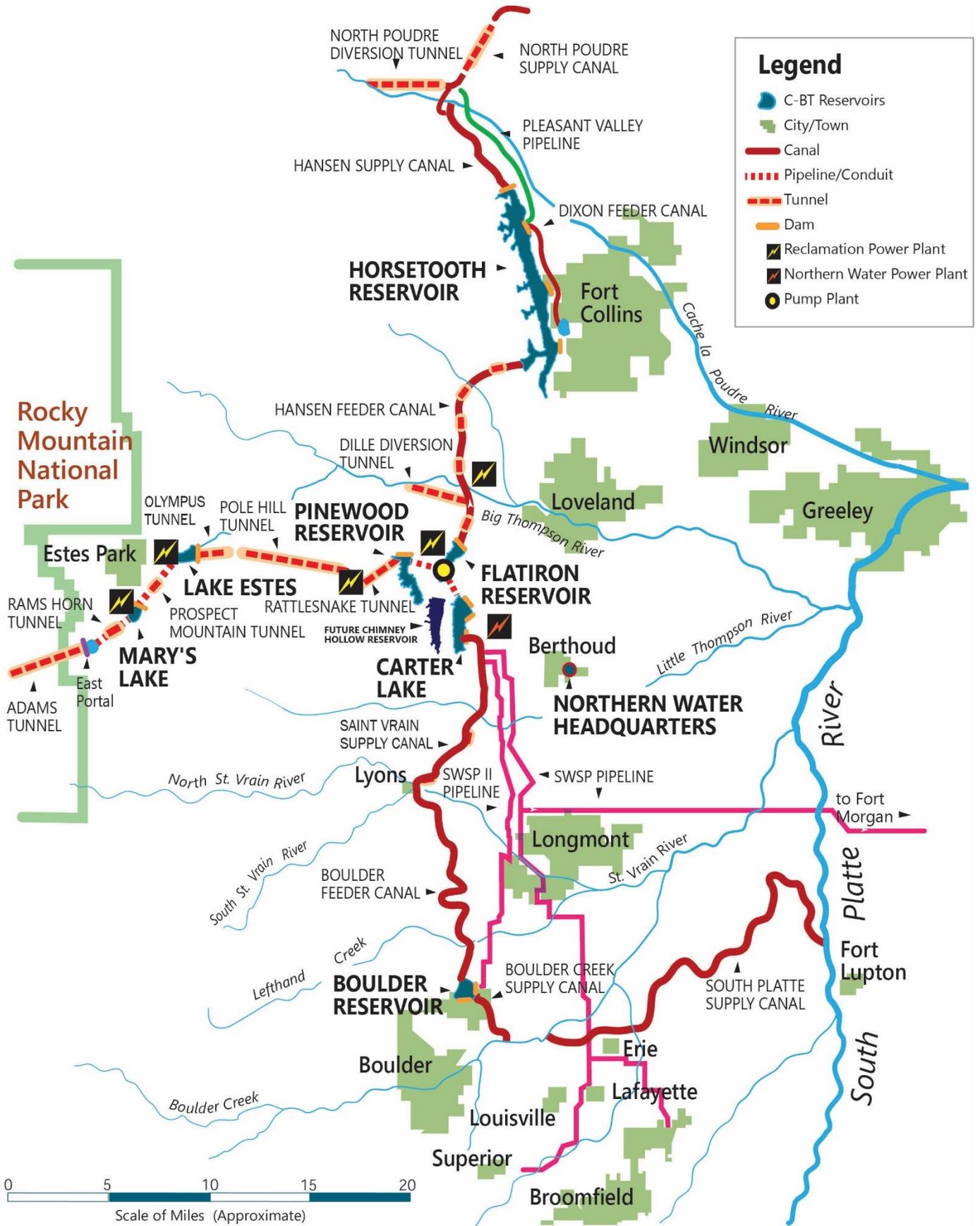
Reclamation oversaw construction on the more than 100 features of the C-BT Project. Work began in 1938 and took nearly 20 years to complete. On July 5, 1938, Northern Water signed a repayment contract with the United States, agreeing to pay up to \$25.0 million during a 40-year repayment period. Crews began work in 1938 on Green Mountain Reservoir, which would store water that could compensate the West Slope for the water that would be diverted to the East Slope.

During the next two decades, C-BT Project construction yielded several significant historical moments and plenty of challenges. The first water deliveries from the C-BT Project began in 1947. For a decade, Northern Water made interim deliveries. Reclamation declared the project to be substantially complete in 1957, the first year of full water deliveries. All Northern Water's indebtedness incurred for the construction of the C-BT Project was paid in full in 2001.

Colorado-Big Thompson West Slope Collection System



Colorado-Big Thompson East Slope Distribution System



Southern Water Supply Project

In 1999, Northern Water completed construction of the original Southern Water Supply Project pipeline, which consists of 110 miles of pressurized, buried pipeline conveying C-BT Project and Windy Gap Project water to areas located within Northern Water and Municipal Subdistrict boundaries. Total construction costs, funded from participants contributions, for the project totaled \$73.4 million. The primary purpose of the project is to distribute the already developed C-BT Project and Windy Gap Project water supplies to communities whose water supply demands are increasing and who need delivery of raw water during the winter months when the C-BT canal system is shut down.

Construction started in August 2018 on the Southern Water Supply Project II pipeline and was completed and operational in April 2020. The raw water pipeline project delivers high-quality C-BT Project and Windy Gap Project water from Carter Lake to the City of Boulder, the Left Hand Water District, the Town of Berthoud and the Longs Peak Water District. The pipeline provides a secure, year-round water supply to all four of these entities.

The total project cost, including design, permitting, administration, management and right-of-way costs was approximately \$44.0 million. All costs were borne by the four project participants.

The Southern Water Supply Project II pipeline traverses from Carter Lake south to the City of Boulder's Boulder Reservoir Water Treatment Plant, a total distance of 20 miles. The first 12 miles parallels the original Southern Water Supply Project pipeline from Carter Lake to St. Vrain Road near the Vance Brand Municipal Airport in Longmont. The last 8 miles heads south and west to the Boulder Reservoir Water Treatment Plant. The pipeline is 36-inch and 30-inch diameter steel pipe and is separate from the original pipeline.

Pleasant Valley Pipeline

Northern Water completed construction of the Pleasant Valley Pipeline in 2004 at a cost of \$30.6 million. The 8.5-mile buried pipeline carries Poudre River water from the Munroe Gravity Canal to the Fort Collins and Soldier Canyon water treatment plants during the summer. In the winter, flows are reversed, sending water from the Soldier Canyon outlet at Horsetooth Reservoir to Greeley's Bellvue treatment plant near the Poudre River. The pipeline is operated in conjunction with the pipeline participants and the North Poudre Irrigation Company, which operates the North Poudre Supply Canal. All costs of the project were borne by the five project participants.

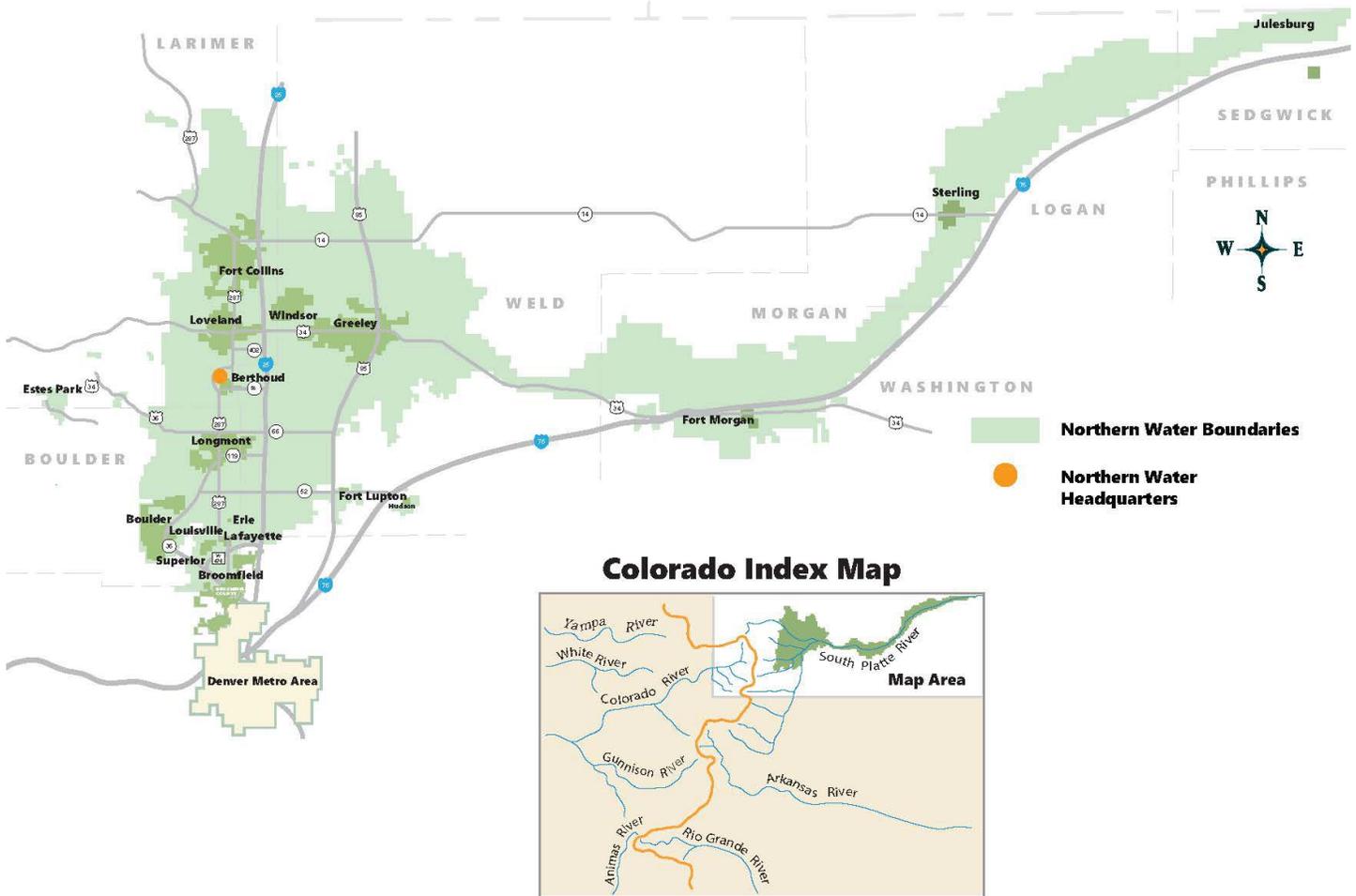
Northern Integrated Supply Project

The proposed Northern Integrated Supply Project is a collaborative effort among 15 water providers (participants) to provide approximately 40,000 acre-feet of new reliable water supply, which would meet a portion of the participants' estimated current and future water supply needs. In 2003, NISP was established and started the Environmental Impact Statement (EIS) process with the U.S. Army Corps of Engineers. A draft EIS was released in 2008, then a Supplemental Draft EIS in 2015. The Corps released the Final EIS on July 20, 2018, with a Record of Decision anticipated for winter 2022. The project proposes the construction of two new reservoirs, Glade and Galeton, with capacities of 170,000 and 45,624 acre-feet, respectively. All funding of the permit related costs is funded by cash contributions from the participants.

Hydropower

In 2010, the Hydropower Water Activity Enterprise was established to construct and operate small renewable energy facilities. Construction of the Robert V. Trout Hydropower facility was completed in May 2012, at the cost of \$6.2 million. The Granby Hydropower facility became operational in May 2016 and cost \$5.2 million. The two hydropower facilities together generate enough power annually for approximately 1,600 households. Debt financing was used to fund the construction costs of both power facilities. Revenue from sales of energy will support all costs related to the hydropower plants, including debt service.

SERVICE AREA



More than one million people live within Northern Water's boundaries, which encompasses 1.6 million acres (2.5 percent of the state's land mass) in portions of eight counties of Northeastern Colorado: Boulder, Broomfield, Larimer, Logan, Morgan, Sedgwick, Washington and Weld. Colorado-Big Thompson water supplements native water supplies helping to irrigate approximately 615,000 acres served by 120 ditch, reservoir and irrigation companies, as well as 60 municipal and rural water districts and several industrial users.

LARGEST EMPLOYERS

Rank	Larimer County Employer	Employment
1	Colorado State University	7,676
2	UCHealth: Poudre Valley Hospital	6,860
3	Poudre School District	5,342
4	Thompson School District R2-J	2,183
5	City of Fort Collins	2,000
6	Larimer County	1,899
7	Columbine Health Systems	1,621
8	Broadcom Inc.	1,590
9	Banner Health: McKee Medical Center	1,500
10	Hewlett-Packard	1,440
	Sum of largest employers	32,111
	Full labor force December 2021	207,229

Rank	Weld County Employer	Employment
1	JBS Swift Beef Company	6,000
2	Banner Health: Northern Colorado Medical Center	3,560
3	Vestas	2,710
4	Greeley/Evans School District 6	2,276
5	Weld County Government	1,783
6	University of Northern Colorado	1,532
7	UCHealth	1,060
8	State Farm Insurance	950
9	City of Greeley	905
10	AIMS	817
	Sum of largest employers	21,593
	Full labor force December 2021	165,660

Rank	Boulder County Employer *	Employment
1	Medtronic PLC	2,470
2	Boulder Community Health	2,440
3	Ball Aerospace & Technologies Corp.	1,680
4	IBM Corporation	1,670
5	Seagate Technology	1,440
6	Good Samaritan Medical Center	1,430
7	Google	1,300
8	Centura Health: Longmont United and Avista Adventist Hospitals	1,280
9	Sierra Nevada Corporation	750
10	Kaiser Permanente	750
	Sum of largest employers	15,210
	Full labor force December 2020	196,991

Rank	Broomfield City and County Employer	Employment
1	Lumen (formerly CenturyLink)	1,800
2	Oracle	1,620
3	SCL Health Revenue Service Center	1,500
4	Hunter Douglas Window Fashions	980
5	City and County of Broomfield	835
6	Vail Resorts	740
7	Danone North America	670
8	Ball Corporation	540
9	Broadcom, Inc.	475
10	VMware	450
	Sum of largest employers	9,610
	Full labor force December 2021	38,500

Source of largest employers: Reporting Entity 2021 Annual Comprehensive Financial Report

* Source of largest Boulder County Employer: 2020 Annual Comprehensive Financial Report

Top Ten Employers – Combined

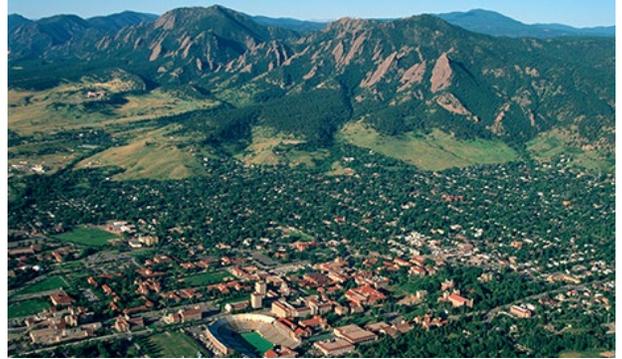
Rank	Employer	County	Employment
1	Colorado State University	Larimer	7,676
2	UCHealth: Poudre Valley Hospital	Larimer	6,860
3	JBS Swift Beef Company	Weld	6,000
4	Poudre School District	Larimer	5,342
5	Banner Health	Weld	3,560
6	Vestas	Weld	2,710
7	Medtronic PLC	Boulder	2,470
8	Boulder Community Health	Boulder	2,440
9	Greeley/Evans School District 6	Weld	2,276
10	Thompson School District R2-J	Larimer	2,183
	Sum of largest employers		41,517

LARGEST COUNTIES IN SERVICE AREA



Larimer County

Established	1861
Estimated Populations for 2020	356,899
Unemployment Rate for 2020	6.3%
Per Capita Income for 2020	\$55,884
Land Area (square miles)	2,640
Most Populous County in Colorado	6 th



Boulder County

Established	1861
Estimated Populations for 2019	327,164
Unemployment Rate for 2019	2.4%
Per Capita Income for 2019	\$69,239
Land Area (square miles)	742
Most Populous County in Colorado	8 th



Weld County

Established	1861
Estimated Populations for 2020	331,895
Unemployment Rate for 2020	7.2%
Per Capita Income for 2020	\$50,198
Land Area (square miles)	3,987
Most Populous County in Colorado	9 th



Broomfield County

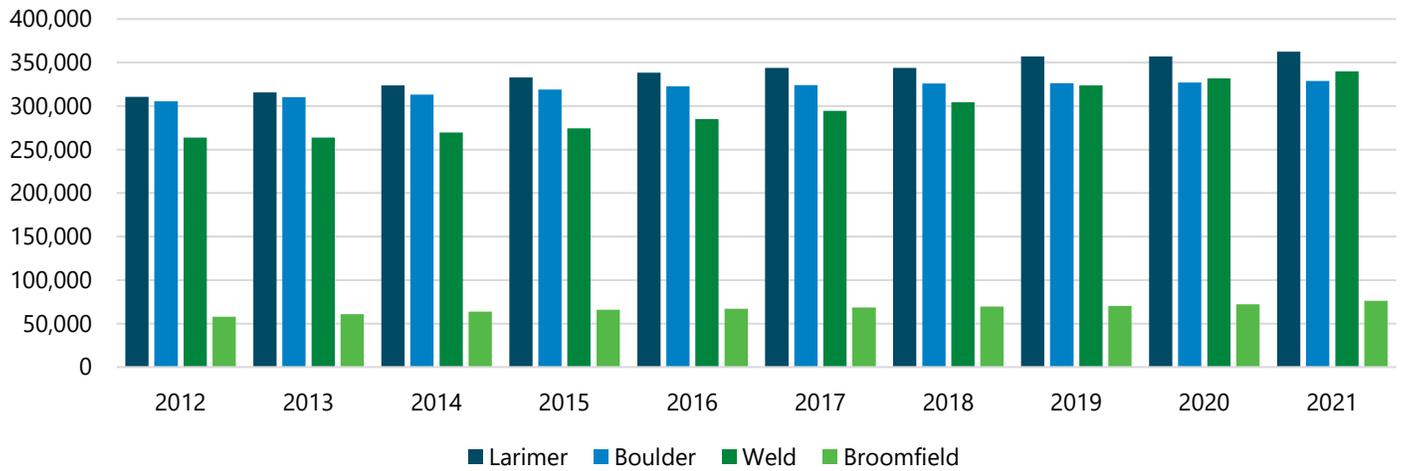
Established	1998
Estimated Populations for 2020	71,950
Unemployment Rate for 2020	6.4%
Per Capita Income for 2020	\$72,775
Land Area (square miles)	33.6
Most Populous County in Colorado	12 th

Boulder, Weld and Larimer counties have the highest populations, accounting for roughly 90 percent of Northern Water's total population. Northern Water's boundary population as of December 2021 is approximately 1,037,717.

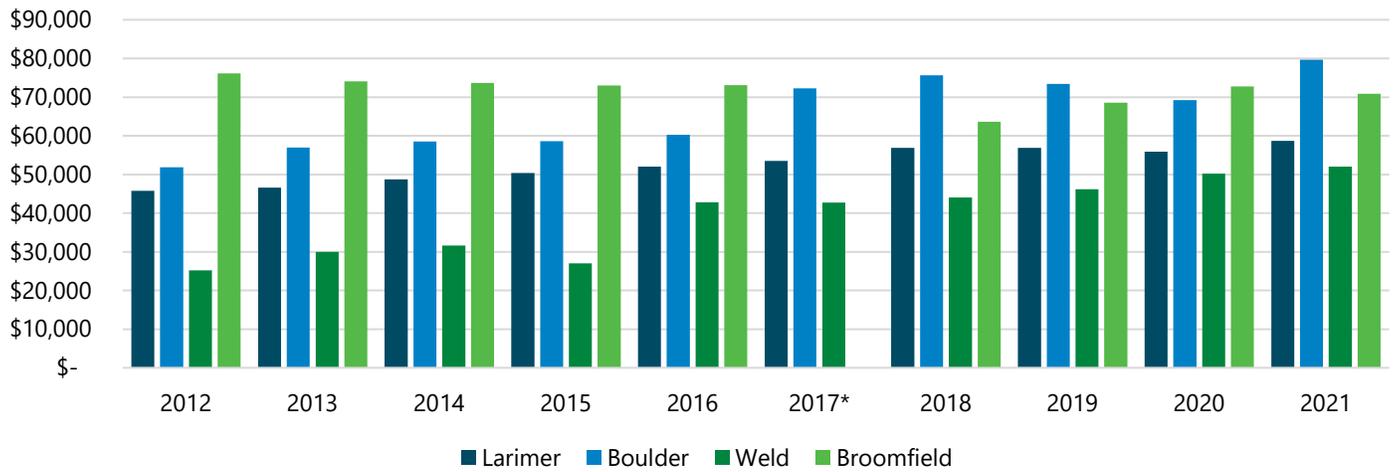
- From 2019 to 2021 Weld County has grown 2.5 percent.
- Larimer County is the largest county in the district with a population of 356,899.
- Boulder has had the lowest increase in population in the last year at 0.3 percent.

Sources: Colorado Department of Local Affairs, State Demography Office, County websites, Bureau of Labor Statistics, U.S. Census - extrapolated from 2010 by US Census, County ACFRs.

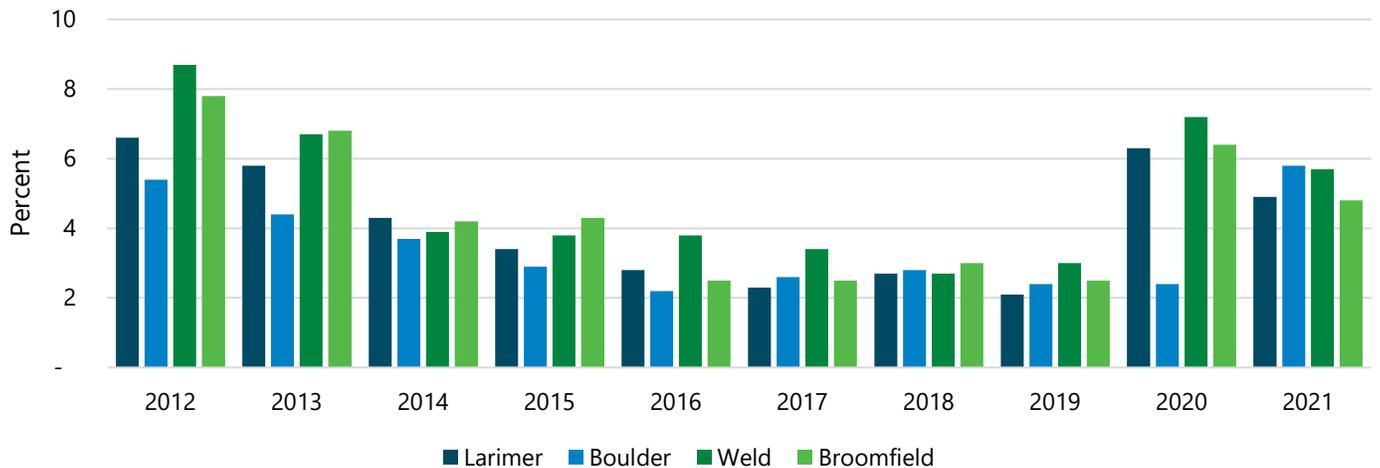
Population Trend By County



Per Capita Income by County*



Unemployment Trend by County



Sources: Colorado Department of Local Affairs, State Demography Office, County websites, Bureau of Labor Statistics, U.S. Census - extrapolated from 2010 by US Census, County ACFRs.

*No Broomfield County data available in 2017.

BOARD OF DIRECTORS

The 13-member Board is the policy-making body of Northern Water. Among other duties, the Board sets the wholesale water assessment rates, adopts the annual budget and appropriation, determines the amount of water available for delivery annually through its quota process and approves the transfers of allotment contracts. Directors from the counties within Northern Water boundaries are appointed to four-year terms by district court judges. Three Board seats are up for appointment each year. When a Director’s term expires, he or she continues to serve until the judge reappoints or replaces him or her. Northern Water officers are elected by the Board at its annual organizational meeting each October. The general manager of Northern Water is appointed by and serves at the pleasure of the Board. The Board holds its public meetings twice a month. Directors are paid \$100 per meeting up to a maximum of \$2,400 per year.

Past Presidents

Charles D. Hansen	1937-1953	16 years	Gordon Dyekman	1976-1991	15 years
Jacob S. Schey	1953-1955	2 years	William Bohlender	1991-1998	7 years
J. Ben Nix	1955-1976	21 years			

Current Board of Directors



Mike Applegate
President
Larimer County
Sept. 28, 1991 – Sept. 28, 2023



Dale Trowbridge
Vice President
Weld County
Aug. 15, 2014 – Sept. 28, 2023



Bill Emslie
Larimer County
Sept. 28, 2005 – Sept. 28, 2025



Jennifer Gimbel
Larimer County
July 15, 2019 – Sept. 28, 2024



Sue Ellen Harrison
Boulder County
Sept. 28, 2009 – Sept. 29, 2026



Don Magnuson
Weld County
Sept. 28, 2004- Sept. 28, 2024



Gene Manuello
Logan County
Sept. 28, 2018 – Sept. 28, 2026



Rob McClary
Sedgwick County
Sept. 28, 2011 – Sept. 28, 2023



David Nettles
Weld County
Oct. 18, 2018 – Sept. 28, 2026



John Rusch
Morgan and Washington Counties
April 12, 2002 – Sept. 28, 2025



Todd Williams
Boulder County
Sept. 28, 2017 – Sept. 28, 2025

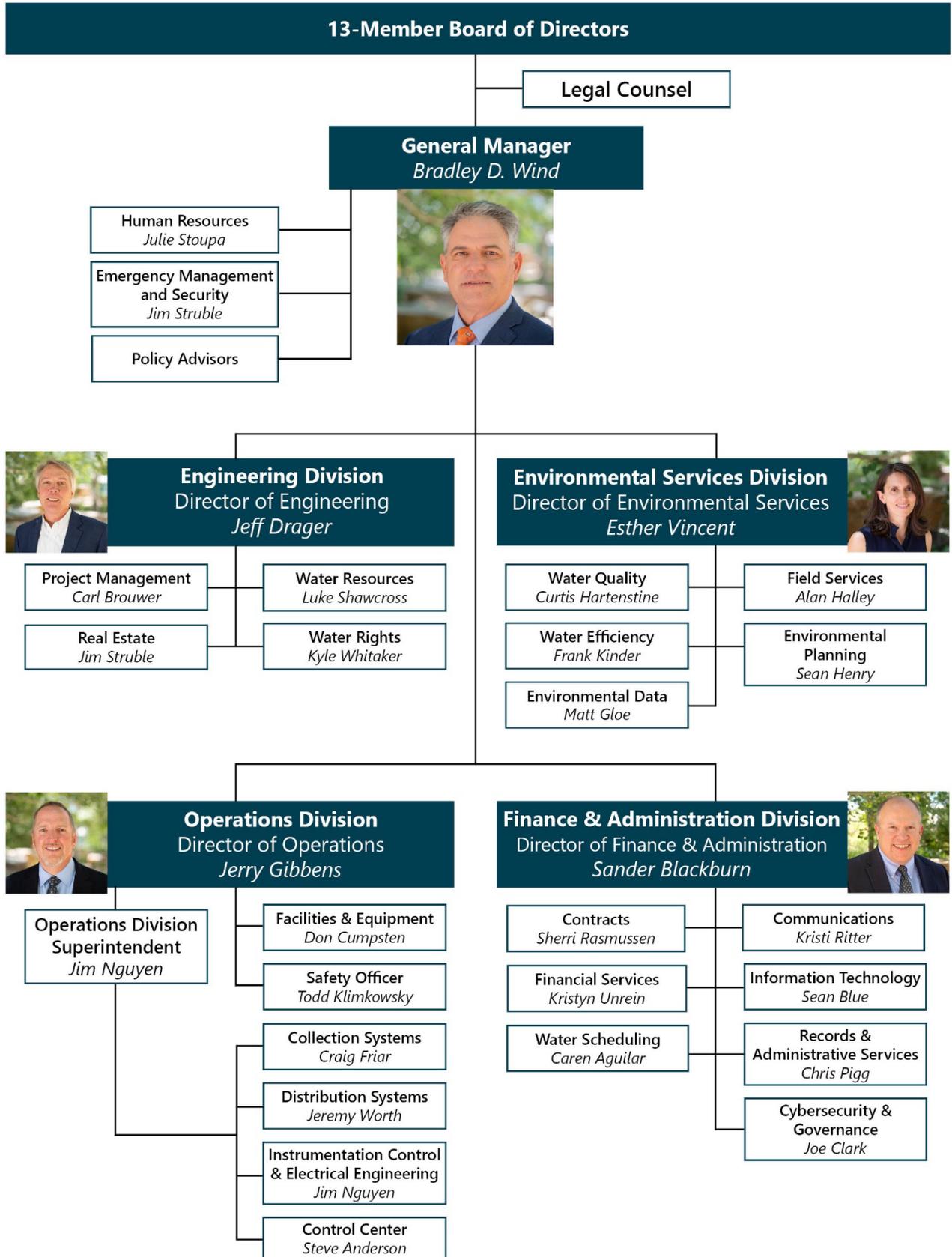


Dick Wolfe
Broomfield County
April 7, 2022 – Sept. 28, 2025



Dennis Yanchunas
Boulder County
Aug. 20, 2010 – Sept. 28, 2024

ORGANIZATIONAL CHART



OUR BUSINESS PLAN

Our Mission

Provide water resources management, project operations and conservation services for project beneficiaries.

Our Vision

Northern Water will be a leader in ensuring a secure water future for Northern Colorado.

Our Priorities

- Collect and deliver water
- Protect and conserve water supplies
- Plan and implement new water supply projects
- Cultivate operational and organizational excellence
- Maintain and strengthen relationships

Our Values and Principles

- Collaborative, proactive and progressive leadership
- Water resources conservation
- Environmental stewardship
- Personal and corporate ethical integrity and professionalism
- Solution-oriented service
- Regional cooperation



BUDGET PROCESS

The budget process provides an opportunity to align short-term objectives and actions at the program level business plans to Northern Water’s long-term mission and values. The Board, general manager, division directors and staff participate in the development of the budget.

The budget is presented to the Board for consideration and adoption in August to align it with the adoption of water assessments which are also approved. The Board, at its regular meeting of May 12, 2022, appointed Bradley Wind, Jerry Gibbens, Sander Blackburn, Kristyn Unrein, Fahim Ghafoori and Myles Baker as budget officers and directed them to prepare and submit the requisite budgets of Northern Water for fiscal year 2023. A notice is published, as required by law, in all the counties located wholly or partly within Northern Water boundaries stating the annual budget is available for inspection by the public, including the date and time for public hearing. This year’s budget review process included a Board workshop on June 30, 2022.

The 2023 budget was prepared utilizing the accrual method of accounting. This is the same basis of accounting used for Northern Water’s audited financial statements.

Budget Schedule

Task	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
Budget instructions issued to all department managers											
Formulate key goals and objectives											
Identify major budget assumptions											
Review and final recommendations of budget by Senior Management team											
Appointment of budget officers and prepare budget reports											
Deliver budget to the Board											
Board holds public hearing and adopts the budget											
File budget with the State of Colorado											

Amending the Budget

Senior Management is authorized to add or revise budget amounts between operating expenses and projects. Any revisions that exceed the total appropriation for the fund, must be approved by the Board. All contracts over \$100,000, whether budgeted or unbudgeted, must be authorized by the Northern Water Board. Purchase of capital assets over \$100,000, whether budgeted or unbudgeted must be authorized by the general manager.

HUMAN CAPITAL

Staffing

Total full-time positions funded are 183.

Summary of positions planned for:

Filled and funded	169
Vacant and funded	14
Total positions	183

The following are newly funded positions for the upcoming budget year:

Operations Division

Dam Safety/Water Runner
Custodian (West Slope – new Willow Creek Campus)
Fleet Services Supervisor

Finance & Administration Division

Network Administrator

Engineering Division

Construction Manager
Water Resources Engineer I/II

Environmental Services Division

Schedule of Employees by Division

	Full Time	Open Full Time	Total Full Time	Percent of Total	Part Time
2021					
Operations	52	7	59	34%	4
Engineering	25	6	31	18%	1
Environmental	23	1	24	14%	0
Finance & Administration	49	9	58	34%	4
Total	149	23	172	100%	9
2022					
Operations	54	8	62	33%	0
Engineering	28	4	32	17%	1
Environmental	26	4	30	16%	0
Finance & Administration	54	8	62	33%	0
Total	162	24	186	100%	1
2023					
Operations	60	3	63	34%	0
Engineering	32	2	34	19%	1
Environmental	27	0	27	15%	0
Finance & Administration	58	1	59	32%	0
Total	177	6	183	100%	1

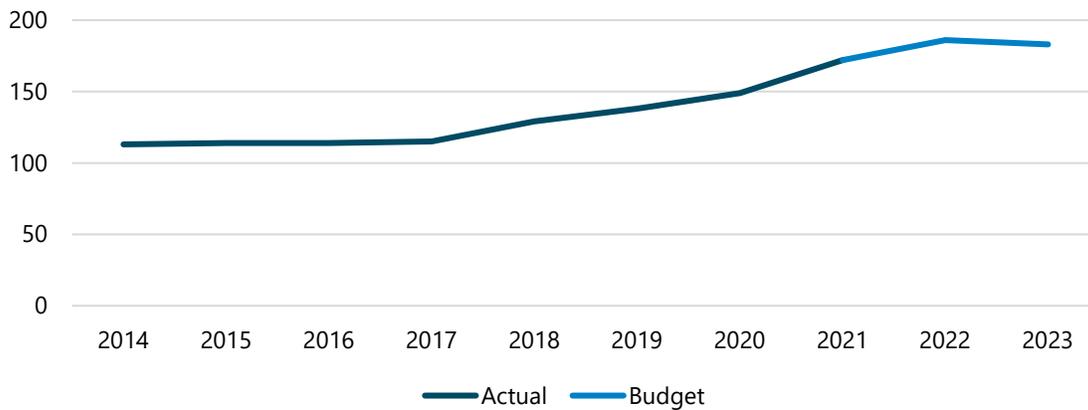
Labor Expenditures

Labor expenditures are accounted for individually within the organizational divisions of Operations, Engineering, Environmental Services and Finance & Administration, and further defined by key activities within each respective division. Labor costs including benefits and capitalized labor are budgeted at \$27,476,819 for fiscal year 2023 compared \$26,116,226 for fiscal year 2022. Out-of-pocket benefit costs are projected at 42.2 percent of labor and thus 2023 out-of-pocket benefits are estimated at \$8,154,161 compared to \$7,594,080 for 2022. Total labor and benefit expense for fiscal year 2023 is expected to increase from fiscal year 2022 by \$1,360,593 due to an increase of new positions and step and pay structure increases.

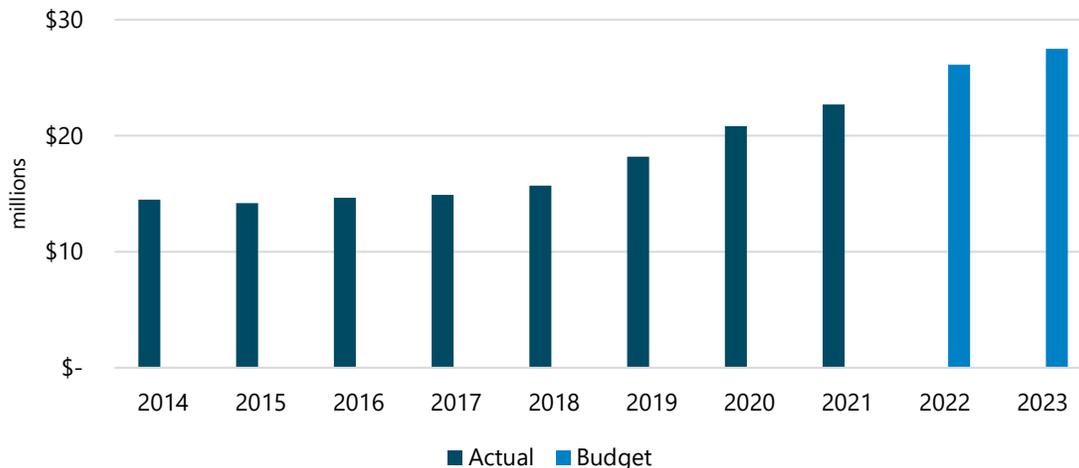
The increase in staffing is related to filling open positions, new and expanded services, and support for two new major water projects. Fiscal year 2023 labor costs and out-of-pocket benefit costs are projected to be 17.1 percent and 7.2 percent, respectively, of total uses of funds. A 6 percent increase to Northern Water’s salary pay structure is included in the fiscal year 2023 anticipated labor expenditures. Northern Water (District Fund) utilizes activity-based costing and thus charges labor to other funds, operations, programs and projects according to actual labor worked. Northern Water’s fiscal year 2023 budget encompasses labor costs for 183 full-time equivalent positions approved by the Board of Directors.

Full Time Employees

More employees for new/expanded services and support for two major water projects.



Fully Burdened Labor Cost



Grade and Step

The table below shows the pay increase percentages for each grade level step, as well as the length of service in each step and the approximate percentage of employees in each step.

	Increase	Service	Percentage of Employees
Step 1	5%	6 months	1.2%
Step 2	5%	1 year	2.5%
Step 3	5%	1 year	2.5%
Step 4	5%	1 year	8.6%
Step 5	5%	2 years	18.5%
Step 6	5%	2 years	15.4%
Step 7	5%	3 years	17.3%
Step 8	5%	4 years	13.6%
Step 9	5%	5 years	9.9%
Step 10	5%	6 years	8.0%
Step 11	5%		2.5%

The fiscal year 2023 budget includes an additional \$127,475 to fund ongoing movement in the Grade and Step Plan.

Employee Turnover

The table below shows recent employee turnover rates, as well as average years of seniority as of the end of each of the past calendar years.

	Dec. 31 2018	Dec. 31 2019	Sept. 30 2020	Sept. 23 2021	Sept. 30 2022
Number of employees as of date listed	128	134	149	162	167
Average years of active employment	12.6	13.5	11.6	9.7	8.9
Turnover rate (number/percentage)	7/5.4%	15/11.0%	12/8.0%	14/8.6%	17/10.2%
Average years for discontinued employees	12.6	14.0	15.4	16.0	9.2

FISCAL POLICIES

Balanced Budget

Northern Water has not adopted a fiscal policy on a balanced budget. Northern Water considers the budget to be balanced when the sources of funds equals the uses of funds. On occasion, the planned use of reserves, along with budgeted operating revenues are equal to or greater than budgeted expenditures.

Reserve Fund Policy

The Board established the following unrestricted reserves and target funding levels to address the inherent risks and uncertainties in operating, maintaining, protecting, replacing and bettering Northern Water, the C-BT Project and water supplies collected and delivered by the C-BT Project.

Reserve	Purpose	Target Funding
Operating Reserve	Covers potential interruptions in Northern Water fund revenue streams; used to smooth and stabilize assessments	100 percent (twelve months) of anticipated District fund annual operating costs not including depreciation
Capital Reserve	Funds capital repair, replacement or betterment of the C-BT Project and Northern Water properties; funds other capital activities that may be undertaken by Northern Water	Minimum of 1 percent and up to 2 percent of the most recently estimated gross (non-depreciated) asset value of C-BT Project and Northern Water properties
Fleet Replacement Reserve	Funds timely replacements, upgrades and additions to Northern Water's fleet of vehicles, equipment and other mobile machinery	50 percent of Northern Water fund operations equipment accumulated depreciation
Exposure Reserve	Covers extraordinary, unforeseen events not otherwise covered by reserves or insurance	Risk-based economic qualification of potential exposures

Northern Water will budget and fund from its annual operating budget equivalent to or exceeding 5 percent of the annual District fund operating budget for that year to fund reserves unless financial conditions dictate otherwise.

Revenues

The Northern Water enterprise funds are financed through assessments, tax revenues, charges for services and energy revenues.

Expenditures

Northern Water continues to find new ways to operate more efficiently while setting high standards in maintaining its facilities.

Risk Management

Northern Water is exposed to various risks of loss related to torts, (Colorado Governmental Immunity Act limits general liability to \$387,000 per person and \$1,093,000 per occurrence) theft of, damage to and destruction of assets; errors and omissions; and natural disasters. Northern Water carries commercial insurance for these risks. Settled claims resulting from these risks did not exceed commercial insurance coverage in any of the past three years.

Investments

The Board established an Investment Policy Statement (IPS) for funds not used to meet current liquidity requirements. The purpose of the IPS is to establish the investment restriction standards, investment objectives, delegation of authority, prudence, ethics and conflicts of interest, authorized securities and transactions, portfolio maturities and liquidity, safekeeping and custody, portfolio performance and reporting. The investment objectives in order of priority are safety, liquidity, return and diversification.

Capital Policy

Assets that have a service life of more than one year and have an initial cost of \$5,000 or more are capitalized. Assets not meeting these criteria are expensed. Depreciation is computed using the straight-line method over the estimated useful life.

Basis of Accounting

Northern Water financial statements are prepared using the accrual basis of accounting with the economic resources measurement focus as prescribed by the Governmental Accounting Standard Board (GASB). Under this approach, all assets, deferred outflow of resources, liabilities and deferred inflow of resources are reported in the Statement of Net Position. Revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

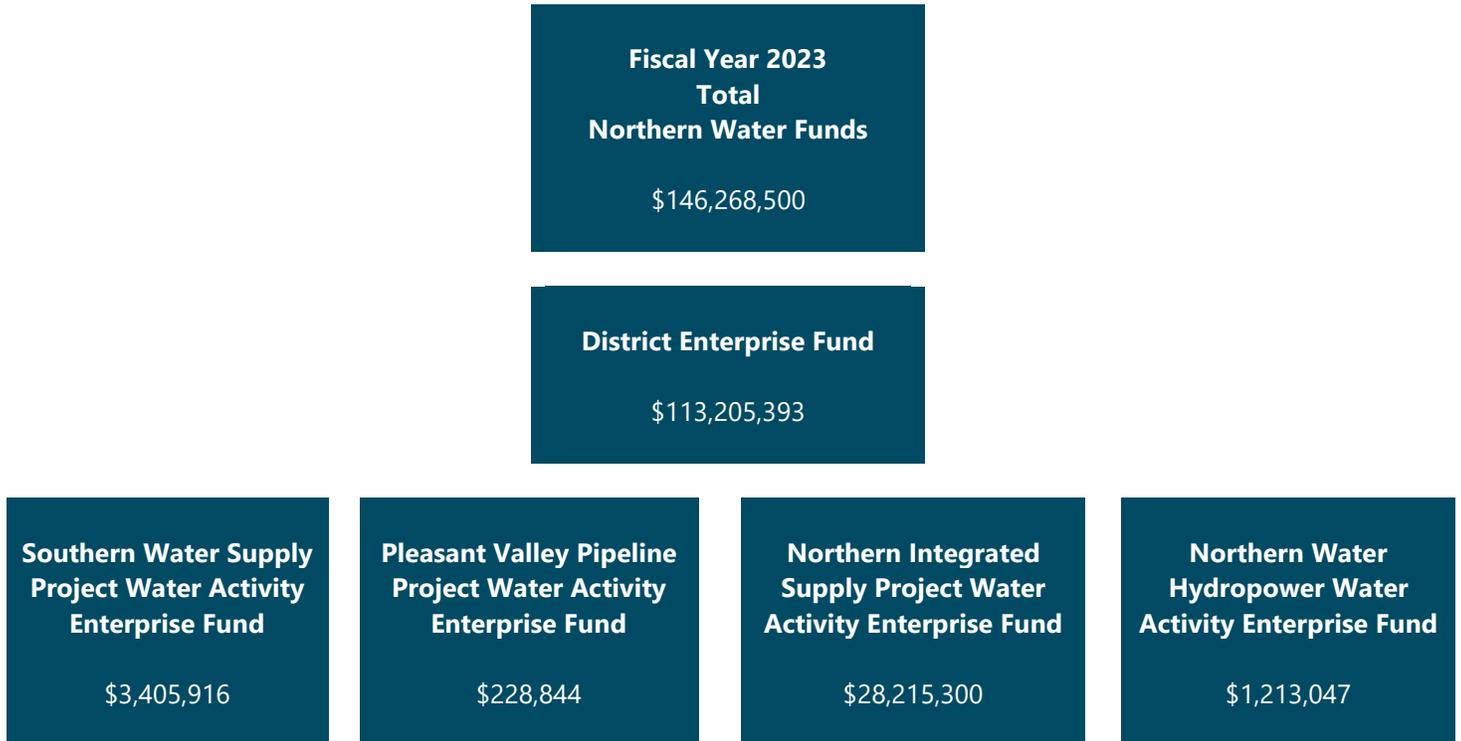
Capital Contributions

Capital contributions consist of payments from participants for the funding of the various projects. In the Statement of Revenues, Expenses and Changes in Net Position, capital contributions are recognized after nonoperating revenues (expenses).

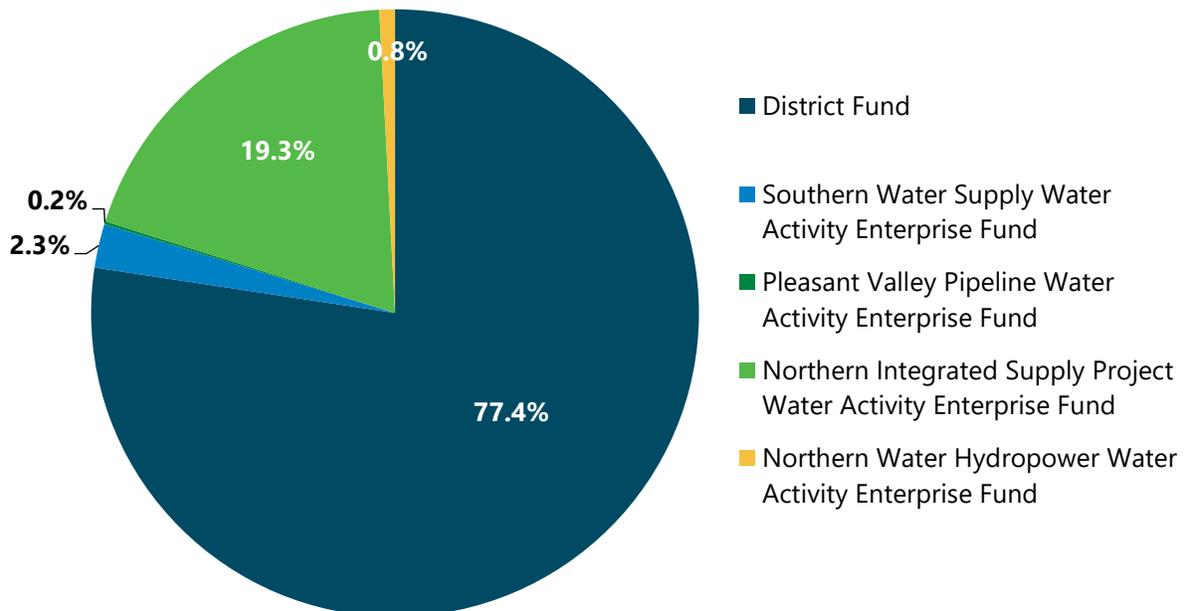
FUND STRUCTURE AND BUDGET APPROPRIATIONS – ALL FUNDS

Northern Water is comprised of five enterprise funds that use activities of the organization to track financial performance and budgetary oversight of its business-type operations. All the business-type enterprise funds are major funds and are equally distinct and financially independent funds. The four water activity enterprise funds have been established in accordance with Colorado Statutes, as “Enterprises” and are excluded from the application of Article X, Section 20, of the Colorado Constitution. The District Enterprise Fund is the owner of the four water activity enterprise funds.

Northern Water Budget Appropriations by Enterprise Funds



Percentage of Appropriation by Fund



ORGANIZATIONAL METRICS

The Senior Management team has begun to establish metrics to measure the major priorities established by the organization. These metrics will be continually developed and refined as we implement an updated strategic plan in 2023 and 2024. Following are the current measurements with explanation and analysis. These metrics do not currently encompass all details of the priorities but are just one of the many tools to ensure the organization is maintaining its priorities and commitments to serve the water needs of Northern Colorado.

Priority: Collect and Deliver Water

As a raw water supplier, it is incumbent that Northern Water deliver water to municipalities and water districts at a reasonable and consistent cost. As a result, one approach the organization has taken is to monitor and measure its efficiencies related to employees, assets, liabilities, debt, revenue and total expenses per average annual volume of water delivered measured in acre-feet. The efficiency metrics include:

- Employees per thousand acre-feet delivered is intended to measure employee efficiency.
- Assets per acre-feet delivered includes all assets divided by water deliveries. This metric is an indicator of asset efficiency of water delivered.
- Liabilities per acre-feet delivered includes all liabilities divided by water deliveries. This metric is an indicator of liability efficiency of water delivered.
- Debt per acre-feet delivered includes all debt divided by water deliveries. This metric is an indicator of debt efficiency of water delivered.
- Revenue/receipts per acre-feet delivered includes all revenues, assessments, charges for services and other receipts divided by water deliveries. This metric is an indicator of revenue efficiency of water delivered.
- Total expenses per acre-feet delivered includes all Distribution and Collection Systems expenses and capital costs divided by water deliveries. This metric is an indicator of cost efficiency of water delivered.

Increases from 2020 to 2021 were in part due to:

- Increased staffing related to the Windy Gap Firing Project, conservation efforts, campus development and more.
- Increased assets related to investment growth and property tax collections.
- Increased liabilities, expenses and debt associated with a growing organization.
- Increased revenues/receipts due to grant funding for fire recovery, COP proceeds and other initiatives.

Fiscal Year	2020	2021
Employees per thousand-acre-foot delivered	0.69	0.95
Assets per acre-foot delivered	\$ 918	\$ 1,670
Liabilities per acre-foot delivered	\$ 49	\$ 441
Debt per acre-foot delivered	\$ 13	\$ 359
Revenue/receipts per acre-foot delivered	\$ 223	\$ 370
Expenses per acre-foot delivered	\$ 153	\$ 274

Sources: Acre-feet delivered reported in Northern Water 2021 Annual Comprehensive Financial Report. 2022 data not available at this time.

Priority: Protect and Conserve Water Supplies

Northern Water views water efficiency as an integral part of its management strategy with long-range planning that encourages appropriate stewardship of water resources. The supplemental water that is provided through the C-BT Project is diverted from the Colorado River. With known pressures on Colorado River water supplies, it is critically important that Northern Water makes the best use of this resource and support regional water resilience by promoting water efficient and drought tolerant landscapes. For example, we have developed metrics around public outreach, education and our water efficiency grant program to help measure a segment of our Protect and Conserve Water Supplies priority.

Environmental Services Outreach and Education

Public outreach and education are an important function of Environmental Services. These outreach opportunities are utilized to educate the public about water savings. In fiscal year 2022, the Environmental Services Department participated in 62 events. This is an increase of 11 from fiscal year 2021.

Environmental Services Impressions

In fiscal year 2022, Northern Water’s Environmental Services made 1,213 impressions at the various events. An impression in this case is the number of times we engage with people. This was an increase of 313 from fiscal year 2021. The annual goal is 1,000 impressions.

<u>Fiscal Year</u>	<u>Events</u>	<u>Impressions</u>
2021	51	900
2022	62	1,213

Fund Landscape Conversion Projects to Low-Water Alternatives

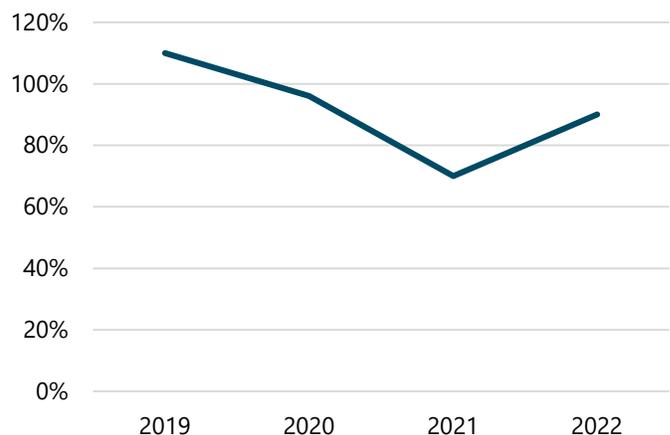
Northern Water offers grants to homeowners’ associations and public agencies to convert their landscape to low water alternatives. This is a competitive process and in fiscal year 2022, 90 percent of the budgeted grant money was distributed to fund the conversion of 302,803 square feet.

<u>Fiscal Year</u>	<u>Square Feet</u>	<u>% of Budget Used</u>
2019	133,445	110.0%
2020	161,120	96.0%
2021	72,303	70.0%
2022	302,803	90.0%

**Low Water Landscape Conversions
(Sq. Ft.)**



**Percent of Budgeted Grant
Dispersed**



Priority: Maintain and Strengthen Relationships

Engaging with stakeholders and the public is an important piece of Northern Water’s goal to maintain and strengthen its relationships. Throughout the last two years, Northern Water has put a focus on pushing information through various channels.

Social Media - Northern Water District

Public engagement and transparency are important to Senior Management and the Northern Water Board of Directors. Northern Water uses social media as a tool to engage with our stakeholders and keep them informed on organizational activities. In terms of social media, Northern Water measures impressions and engagement.

<u>Fiscal Year</u>	<u>Impression</u>	<u>Engagement</u>
2021	519,019	28,958
2022	508,340	29,136

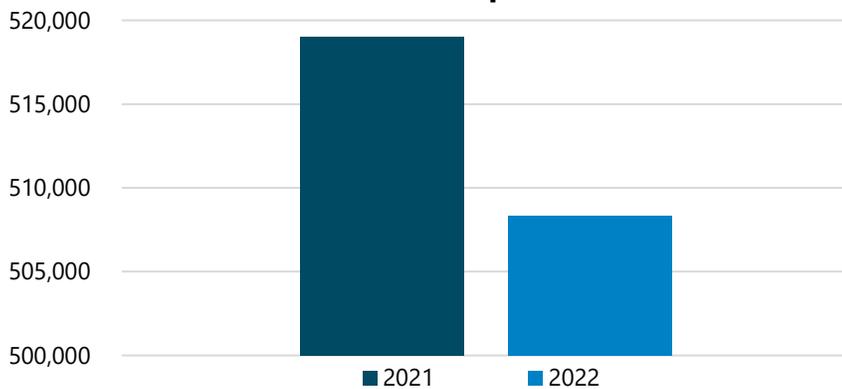
Impressions

Impressions are the number of times a person sees content across social media platforms (Twitter, Facebook, Instagram and LinkedIn). In fiscal year 2022, Northern Water’s total impressions across all District (excluding NISP) social media accounts were 508,340. This was a decrease of 2.1 percent from fiscal year 2021. The greatest number of impressions was from LinkedIn, which accounted for 47 percent of the total.

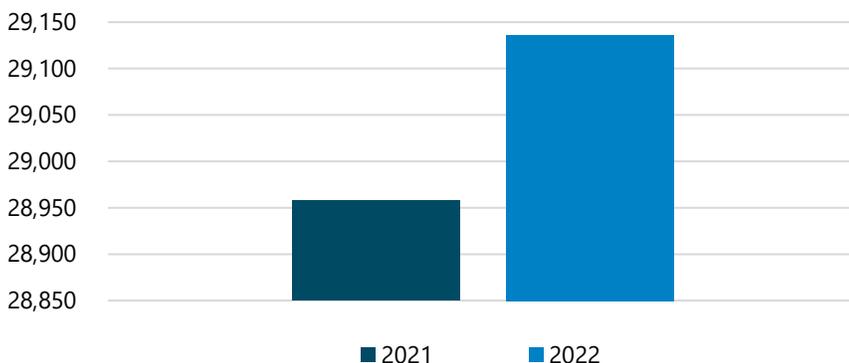
Engagement

Engagement is the number of times people comment, like or share content. Total social media engagement for fiscal year 2022 was 29,136, which was an increase of 1,778 or 0.6 percent. The most engagement came from LinkedIn, which accounted for 52 percent of all engagement. Facebook had 3 percent of the impressions and 32 percent of the engagement. Conversely, Twitter had 15 percent of the impressions, but only 9 percent of engagement.

Social Media Impressions



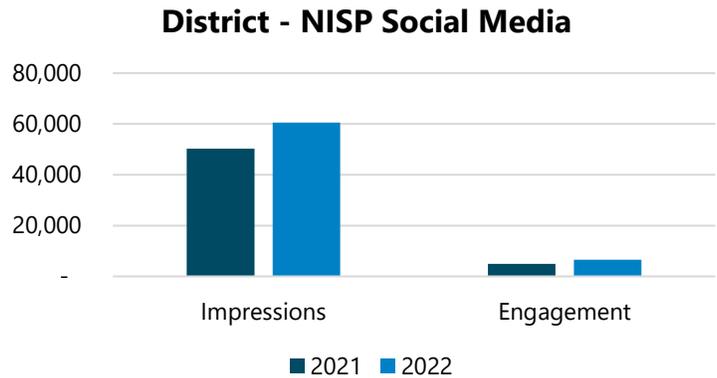
Social Media Engagement



Social Media - Northern Integrated Supply Project

The Northern Integrated Supply Project enterprise is in the design and development stage. Northern Water uses social media to keep the public current on its progress. In fiscal year 2022, total impressions were 60,542, an increase of 10,251 or 20 percent. Engagement increased in fiscal year 2022 by 32 percent.

Fiscal Year	Impression	Engagement
2021	50,291	4,907
2022	60,542	6,507



Website Analytics

The Northern Water website is a useful tool to provide information to the public. It is a great source for news and information, program details, water data, public disclosures, annual reports, meeting agendas and minutes, and Board of Directors information. Northern Water tracks the number of users, page views and duration of visits.

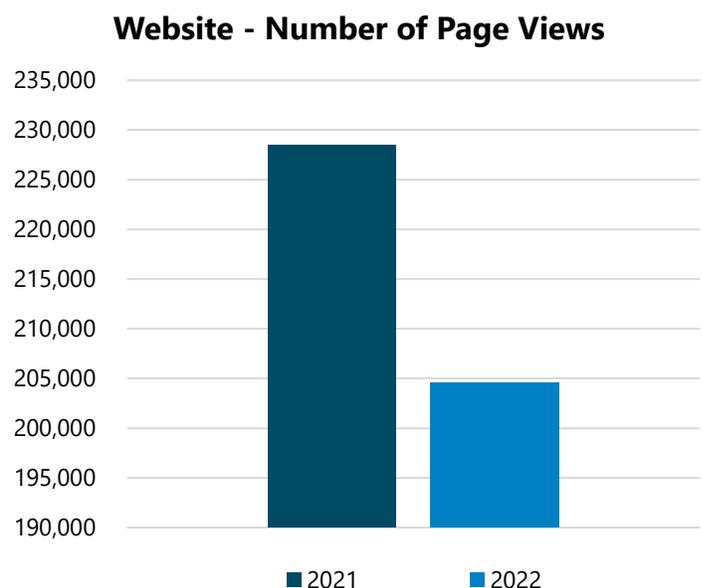
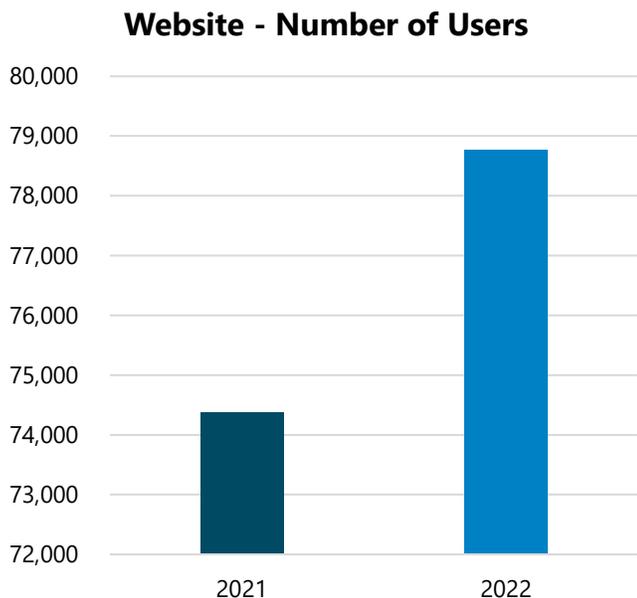
Users

Northern Water had 78,761 users visit their website in fiscal year 2022. This was an increase of 4,394 or 6 percent. There were 1.4 sessions per user and 1.9 pages per session. Northern Water continues to work on increased information for the website to increase these statistics.

Page Views

In fiscal year 2022, website visitors accrued 204,536 page views, which was a decrease of 23,971 or 10 percent.

Fiscal Year	Users	Page Views	Duration
2021	74,367	228,507	1.55
2022	78,761	204,536	1.38



Priority: Cultivate Operational and Organizational Excellence

Northern Water uses various financial ratios to measure organizational excellence, as well as the overall financial health. As a result, the organization monitors the following ratios:

- Asset-to-Liabilities is a credit granting ratio that is useful in determining an organization's borrowing ability. Ideally the ratio should be at least 2.0 or higher.
- Debt-to-Assets is a leverage ratio that measures the degree to which an organization has used debt to finance its assets. The lower the ratio, the less debt that has been utilized to finance its assets.
- Operating Ratio is a ratio that measures an organization's operational efficiency.
- Current Ratio is a liquidity ratio that measures an organization's ability to pay short-term obligations.
- Current Assets as a Percent of Revenues is another liquidity ratio that measures an organization's ability to pay its obligations, particularly those resulting from unexpected events. The higher the current assets as a percent of revenue, the more capable the organization is of paying unforeseen events.

In comparing fiscal year 2020 to fiscal year 2021, there is a decrease in the Assets-to-Liabilities and increase in Debt-to-Assets. This is a result of increased borrowing for the Campus Development Project at the Berthoud headquarters. Prior to 2020, Northern Water had not borrowed funds since 2002.

Additionally, the Current Ratio decreased in fiscal year 2021 as compared to 2020 as a result of more cash being used toward watershed recovery expenses. The operating ratio remained consistent in both years. Finally, the Current Assets as a Percent of Revenues increased significantly as a result of maintaining higher cash balances on hand.

Fiscal Year	2020	2021
Assets-to-Liabilities	18.8	3.8
Debt-to-Assets	0.0	0.2
Operating Ratio	0.7	0.7
Current Ratio	24.4	11.1
Current Assets as a Percent of Revenues	198.0%	262.0%



DISTRICT ENTERPRISE FUND

Northern Water, together with the United States Bureau of Reclamation, jointly operates and maintains the Colorado-Big Thompson Project, a large and complex natural resource development consisting of over 100 structures integrated into a transmountain water diversion, storage and delivery system.

Budget Summary

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Beginning Cash & Reserves						
Restricted	2,295,393	55,295,393	59,724,876	2,295,393		
Unrestricted	88,518,745	87,683,536	93,458,637	124,214,628		
Total	90,814,138	142,978,929	153,183,513	126,510,021		
Sources of Funds						
Revenue Sources						
Property and Specific						
Ownership Tax	26,963,388	26,870,689	26,870,689	30,006,934	3,136,245	11.7%
Water Assessments	12,059,790	12,018,132	12,018,132	12,383,949	365,817	3.0%
Charges for Services	7,276,338	8,512,896	8,512,896	8,896,716	383,820	4.5%
Indirect Costs	-	2,773,800	-	2,773,800	-	0.0%
Other Operating Revenues	4,320,428	2,480,650	2,480,650	2,656,595	175,945	7.1%
Intergovernmental - Grants (includes ASO)	13,000	2,500,000	1,800,000	1,470,000	(1,030,000)	-41.2%
Fire Recovery	12,303,953	32,980,000	14,578,000	17,878,000	(15,102,000)	-45.8%
Transfer from Fleet Reserves for Fleet & Equipment Carryover	-	-	-	1,156,508	1,156,508	n/a
Other Nonoperating Revenues	3,401,602	120,475	120,475	95,600	(24,875)	-20.6%
Interfund Loan Receivable-						
Hydropower Fund	222,198	287,437	1,703	287,437	-	0.0%
Earnings on Investments	447,267	476,170	621,288	655,240	179,070	37.6%
Capital Contributions / Bond Proceeds	63,256,895	38,500,000	37,332,213	-	(38,500,000)	-100.0%
Sale of Assets	243,281	65,000	65,000	79,000	14,000	21.5%
Total Sources	130,508,139	127,585,249	104,401,045	78,339,779	(49,245,470)	-38.6%
Balance Sheet Source (Use)	(1,403,485)	-	-	-		
Total Funds Available	219,918,792	270,564,178	257,584,558	204,849,800		

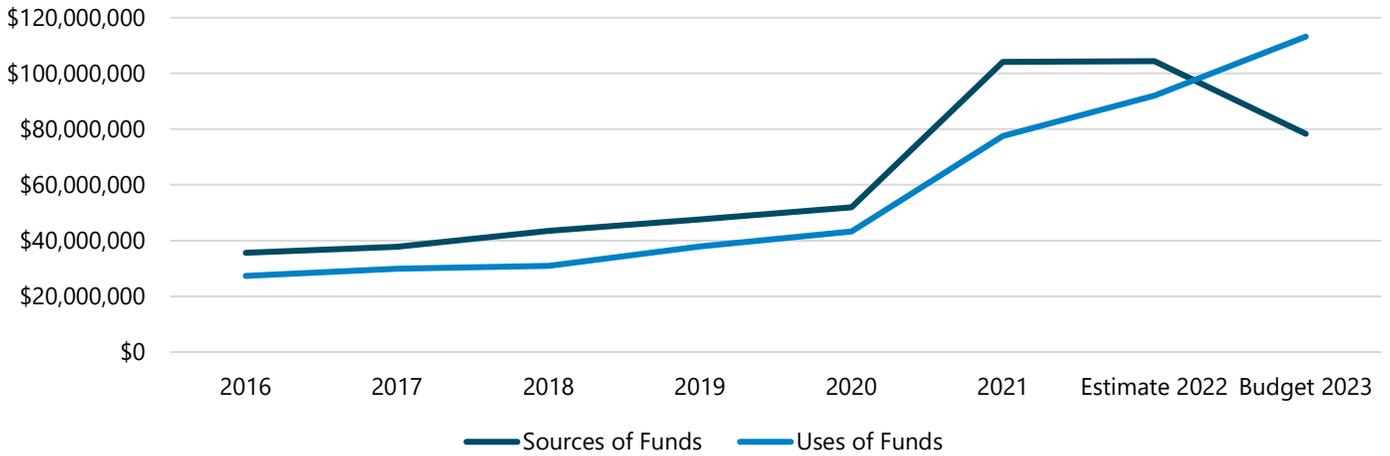
Budget Summary (continued from page 34)

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Uses of Funds						
Operating Expenses						
Fleet & Equipment	906,248	1,067,369	1,067,369	950,353	(117,016)	-11.0%
Facilities	1,878,977	2,095,422	2,095,422	2,241,054	145,632	7.0%
Operation & Maintenance Programs	6,486,309	6,967,104	8,874,455	9,168,885	2,201,781	31.6%
	19,945,148	27,773,180	27,773,180	28,793,029	1,019,849	3.7%
Total Operating	29,216,682	37,903,075	39,810,426	41,153,321	3,250,246	8.6%
Capital & Initiatives						
Capital Assets	1,679,939	2,211,500	1,009,637	1,485,113	(726,387)	-32.8%
Fleet & Equipment (FY2022 Carryover)	-	-	-	1,156,508	1,156,508	n/a
Capital Projects - Facilities	468,436	267,256	267,256	113,000	(154,256)	-57.7%
Capital Projects - Other	3,794,486	5,294,660	5,294,660	5,844,187	549,527	10.4%
Capital Projects - Campus Development	14,626,262	50,395,594	20,500,000	33,359,633	(17,035,961)	-33.8%
East Troublesome Fire Recovery	14,704,484	35,020,000	15,118,000	19,738,000	(15,282,000)	-43.6%
Airborne Snow Observatory Flights Initiative	16,246	2,500,000	2,500,000	1,470,000	(1,030,000)	-41.2%
Initiatives - Other	-	-	-	749,736	749,736	n/a
Contribution to Chimney Hollow Outlet Works	-	2,000,000	2,000,000	-	(2,000,000)	-100.0%
Contribution to Colorado River Connectivity Channel	-	1,000,000	1,000,000	-	(1,000,000)	-100.0%
Total Capital & Initiatives	35,289,853	98,689,010	47,689,553	63,916,177	(34,772,833)	-35.2%
Debt Service						
Contracts Payable	323,416	331,918	331,918	323,416	(8,502)	-2.6%
Certificates of Participation	-	5,002,400	2,216,763	5,254,813	252,413	5.0%
Total Debt Service	323,416	5,334,318	2,548,681	5,578,229	243,911	4.6%
Net Pension Liability						
Unfunded Pension Plan Liability	129,125	-	-	-	-	n/a
Total Unfunded Pension Plan Liability	129,125	-	-	-	-	n/a
Contingency Appropriation	-	250,000	-	500,000	-	n/a
Reserve funding (5 percent)	1,776,203	1,877,754	1,990,521	2,057,666	179,912	9.6%
Total Uses	66,735,279	144,054,157	92,039,181	113,205,393	(30,848,764)	-21.4%
Ending Cash & Reserves						
Restricted	59,724,876	2,295,393	76,557,089	17,500,000	^	
Unrestricted	93,458,637	124,214,628	88,988,288	74,144,407		
Total	153,183,513	126,510,021	165,545,377	91,644,407		
Total Funds Accounted For	219,918,792	270,564,178	257,584,558	204,849,800		

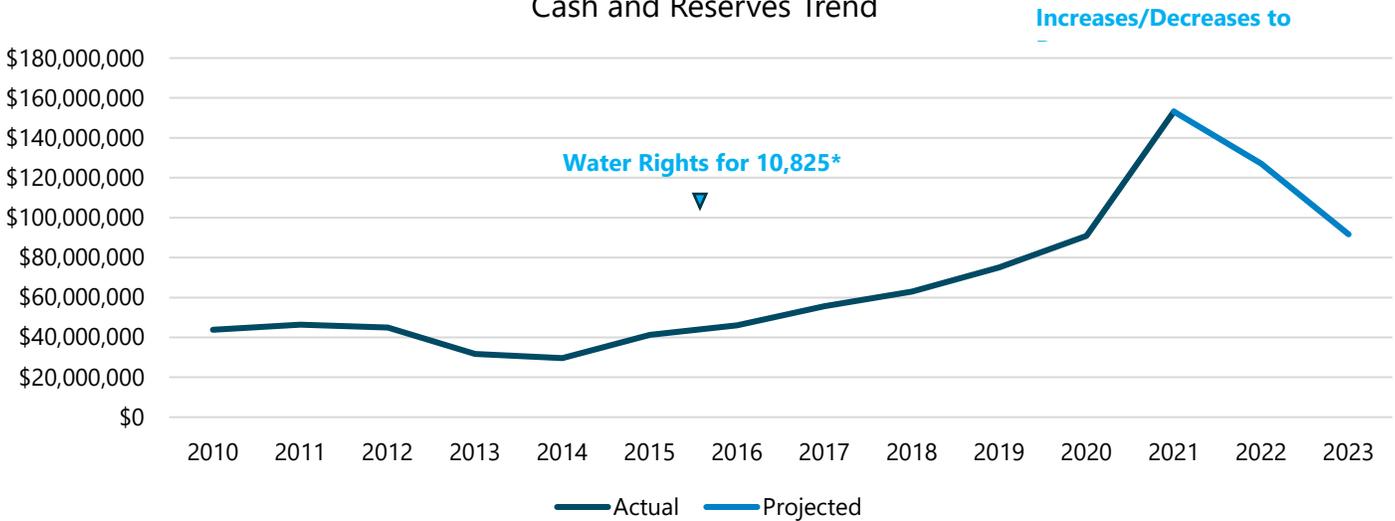
Fiscal Year 2023 Budget

Beginning Cash and Reserves \$126,510,021	Sources of Funds \$78,339,779	Uses of Funds \$113,205,393	Ending Cash and Reserves \$91,644,407
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District Enterprise Funds
Sources and Uses of Funds



District Enterprise Fund
Cash and Reserves Trend



The District Enterprise Fund’s liquidity position has historically been strong. At fiscal year-end 2020, unrestricted cash and investments totaled \$88.5 million, representing about 1,106 days of operating expenses on hand and during the past five fiscal years, this metric has been not lower than 400 days.

*10,825 Water is stored water made available by Colorado water users to enhance flows in the 15-mile reach of the Colorado River as part of the Upper Colorado River Endangered Species Recovery Program. The 10,825 acre-feet of stored water is split between the East Slope water users contribution released from Lake Granby (5,412.5 acre-feet) and the West Slope water users portion (5,412.5 acre-feet) released from Ruedi Reservoir. The U.S. Fish and Wildlife Service manages and schedules the releases from Lake Granby and Ruedi Reservoir for habitat and species purposes in the reach of the Colorado River from the Gunnison River confluence upstream 15 miles to the Grand Valley Irrigation Canal diversion structure.

District Enterprise Fund Overview

The District Fund is an enterprise fund established to record all revenues and expenses associated with the wholesale water operations and maintenance of the C-BT Project, which collects and delivers, on average, more than 200,000 acre-feet of untreated water each year. The water is a supplemental water supply (higher water quota in dry years and lower water quota in wet years) for irrigation, industrial and municipal use in Northeastern Colorado. The District Fund budget operating expense and capital use is \$105,069,498 for fiscal year 2023 compared to \$136,592,085 for fiscal year 2022. This represents a decrease of \$31,522,587 or 23.1 percent from the fiscal year 2022 budget.

Revenues

The fiscal year 2023 District Enterprise Fund budgeted revenues are \$78,339,779 compared to \$127,585,249 for fiscal year 2022, a decrease of \$49,245,470 or 38.6 percent. A new revenue source for fiscal year 2022 budget included \$32,980,000 for fire recovery expense reimbursements that decreased to \$17,878,000 in fiscal year 2023.

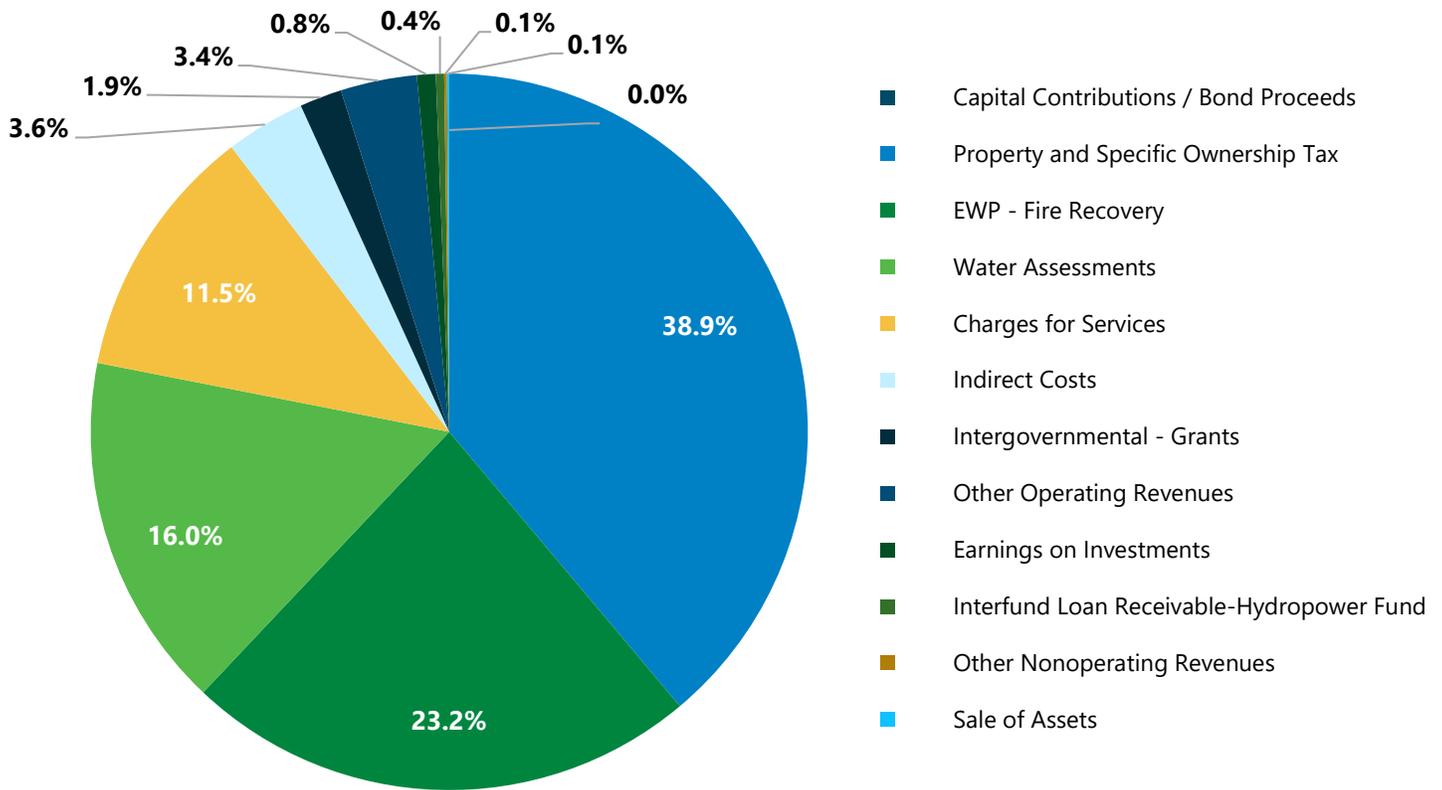
In July 2021, the District issued Certificates of Participation, Series 2021 to fund its East and West Slope campus expansion. The certificates have a par value of \$52,050,000 with a stated interest rate of 4 percent to 5 percent and were sold at a premium of \$11,365,647 to yield net proceeds of approximately \$63,415,647. Annual debt service consisting of principal and interest is due on the certificates starting in July 2022. Proceeds from the issuance are held in a trusteed account. The District draws upon the funds by submitting monthly disbursement requests.

In March 2019, Northern Water engaged a third-party consultant to conduct an Indirect Cost Allocation study. Working closely with District staff, the consultant has identified and quantified indirect costs applicable to District enterprise funds. The evaluation was intended to establish adequate documentation of indirect costs, an allocation basis and general principles of cost allocation for future application. The purpose of the study was to analyze and support modifications to methods, practices and policies used to allocate labor, overhead, facility and fleet costs to the District enterprises. Generally, the District has not sought to recover costs associated with indirect labor, overhead or facilities from its enterprises in the past.

The goals of the study were to (1) develop a fair and equitable basis of indirect cost allocation to Reclamation, the District activity enterprises, the Municipal Subdistrict and other services, and (2) review the appropriateness of existing indirect costs already charged to enterprise funds such as fleet usage chargebacks. The Northern Water Board of Directors originally requested that indirect costs be included in the fiscal year 2022 budget; however, the Board of Directors approved its final resolution to implement the approved cost allocation methodology beginning in fiscal year 2023.

A summary of district fund sources is provided in the chart and table below.

District Fund - Sources of Funds



District Enterprise Fund Revenues

	Budget	Percent of Total Sources of Funds
Capital Contributions/Bond Proceeds	\$0	0.0%
Property and Specific Ownership Tax	\$30,006,934	38.9%
EWP – Fire Recovery	\$17,878,000	23.2%
Water Assessments	\$12,383,949	16.0%
Charges for Services	\$8,896,716	11.5%
Indirect Costs	\$2,773,800	3.6%
Intergovernmental – Grants	\$1,470,000	1.9%
Other Operating Revenues	\$2,656,595	3.4%
Earnings on Investments	\$655,240	0.8%
Interfund Loan Receivable – Hydropower Fund	\$287,437	0.4%
Other Nonoperating Revenues	\$95,000	0.1%
Sale of Assets	\$79,000	0.1%
Total	\$77,183,271	100.0%

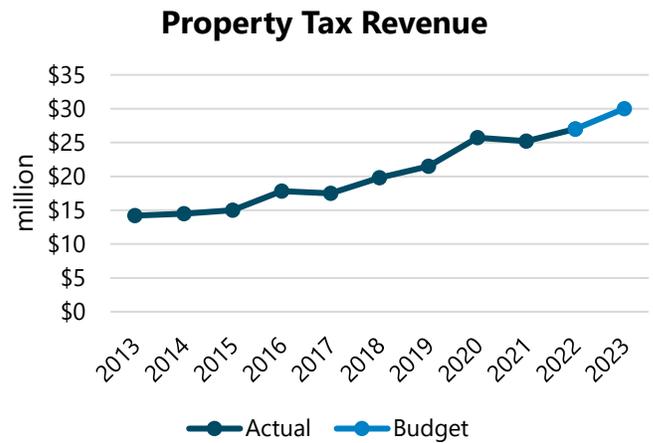
DISTRICT ENTERPRISE FUND OVERVIEW

Property and Specific Ownership Tax Revenue (38.3% of Total Sources of Funds)

The repayment contract approved by the voters requires Northern Water to levy and collect Ad Valorem property taxes to meet its obligations under the repayment contract. Northern Water levies on the assessed value of real and personal property over a very large tax base in eight counties located within Northern Water’s boundaries. In fiscal year 2023, ad valorem taxes are estimated to be \$28,400,767 or 36.3 percent of the total District Enterprise Fund revenues. Fiscal year 2023 is not a property reassessment year and Northern Water’s taxable real property is projected to be flat compared to that of fiscal year 2022. On average, Northern Water collects 99.5 percent of the total value. The tax millage rate is 1.00 (1 mill = \$1 of property tax for every \$1,000 of assessed value) representing no increase since 1957. Throughout time, this revenue has grown as assessed values have grown. These increase is related primarily to strong economic conditions within Boulder, Weld and Larimer Counties. The combined counties make up roughly 92 percent of the property tax collections. Weld County generates half of its property tax assessment from oil and gas property valuation in the Denver-Julesburg Basin (D-J Basin). Some consider the D-J Basin as one of the premier geographic areas for oil and natural gas resources in the United States. However, with the population growth, the recent residential development in the service area has helped diversify the tax base away from oil and gas. A summary is provided in the chart and table below.

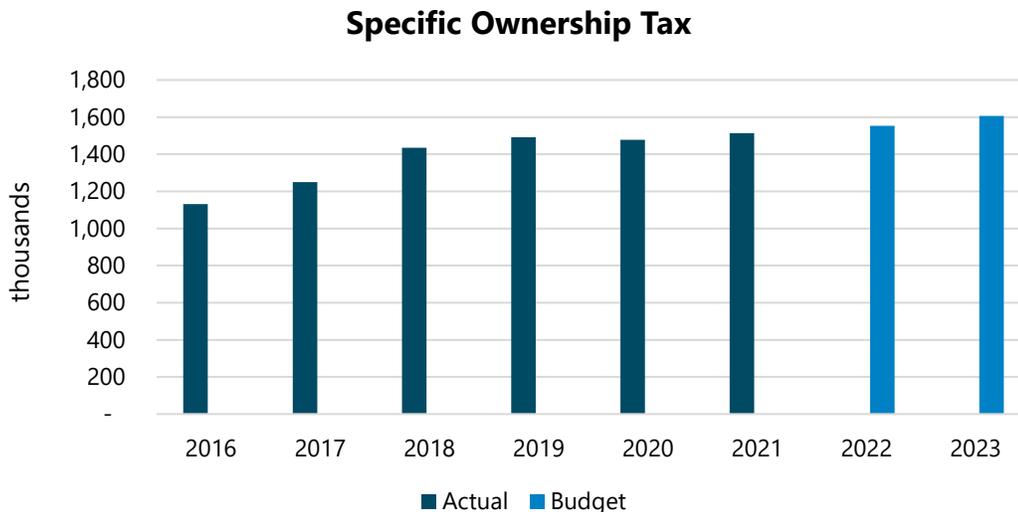
Breakdown by County

	Budget	Percent of Total Property and Specific Ownership Tax
Boulder County	\$9,110,135	30.4%
Larimer County	\$7,263,004	24.2%
Weld County	\$11,735,066	39.1%
Broomfield County	\$1,028,382	3.4%
Morgan County	\$601,015	2.0%
Logan County	\$232,983	0.8%
Sedgwick County	\$32,612	0.1%
Washington County	\$3,738	0.0%
Total	\$30,006,934	100.0%



Specific Ownership Tax

A type of Ad Valorem tax on motor vehicles.



Water Assessments Revenue (15.8% of Total Sources of Funds)

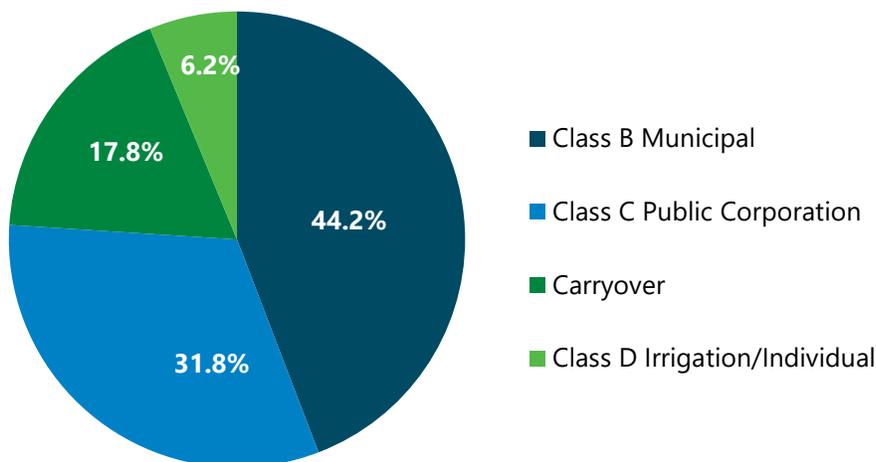
Northern Water is obligated to assess water assessments to meet funding obligations under the Repayment Contract. Wholesale water assessments are collected annually from water supply contract holders based on C-BT Project units held. The assessments are not contingent on delivery of water and must be paid without regard to water deliveries. The rates for water allotment contract assessments are set by class of service, Class B, C and D for municipalities, corporations and individuals, respectively.

In fiscal year 2014, the water assessment rates were examined by a consultant who recommended rate structure modifications as part of a multi-year financial management plan. The rate structure adjustments serve to meet current and projected operating and capital cost requirements, as well as to maintain adequate reserves. Also, the open-rate irrigation units have transitioned from an ability-to-pay-basis to a net cost of services basis. The study suggested the Board give annual forward guidance on future assessments including a range of estimated future open-rate assessments. Consequently, fiscal year 2023 wholesale open-rate water assessments are projected to increase \$365,817 or 3 percent from fiscal year 2022 budget based on the following rates: \$30.60 per acre-foot for agricultural users, \$50.55 per acre-foot for municipal/industrial users and \$1.50 per acre-foot for Unit 2 charges (special charge to allottees downstream of Boulder Reservoir). Holders of allotment contracts entered into prior to 1959 are assessed, regardless of end use, a fixed amount of \$1.50 per unit per year. When a unit is transferred, sold or altered, the contract is changed from the original fixed rate to an open-rate assessment.

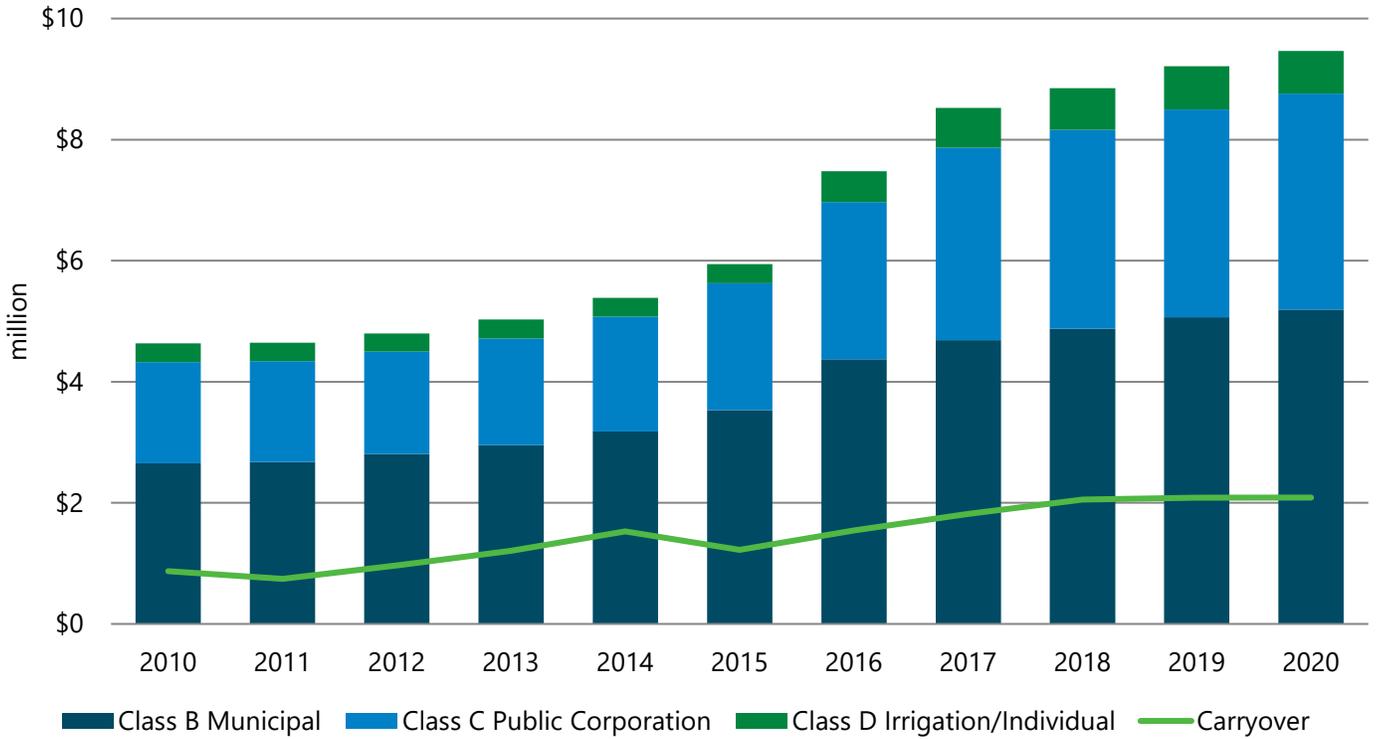
On average throughout the last 10 years, 578 units are annually transferred and changed to open-rate assessments. The trend in water allotment contract ownership changes within Northern Water is from agricultural ownership to municipal ownership. Also included in water assessments are revenues related to the Carryover Program, which is available to customers to store undelivered C-BT Project water in Northern Water facilities from year to year. The Carryover Program revenue depends on the number of subscribers and water assessment rates. Carryover water revenue is expected to be \$2,200,000 for fiscal year 2023, an increase of \$100,000 or 5 percent from the fiscal year 2022 budget. Fiscal year 2023 budget was based on a three-year average with a projected water assessment rate increase of 2.7 percent. A summary is provided in the chart and table below.

Water Assessments by Class of Service

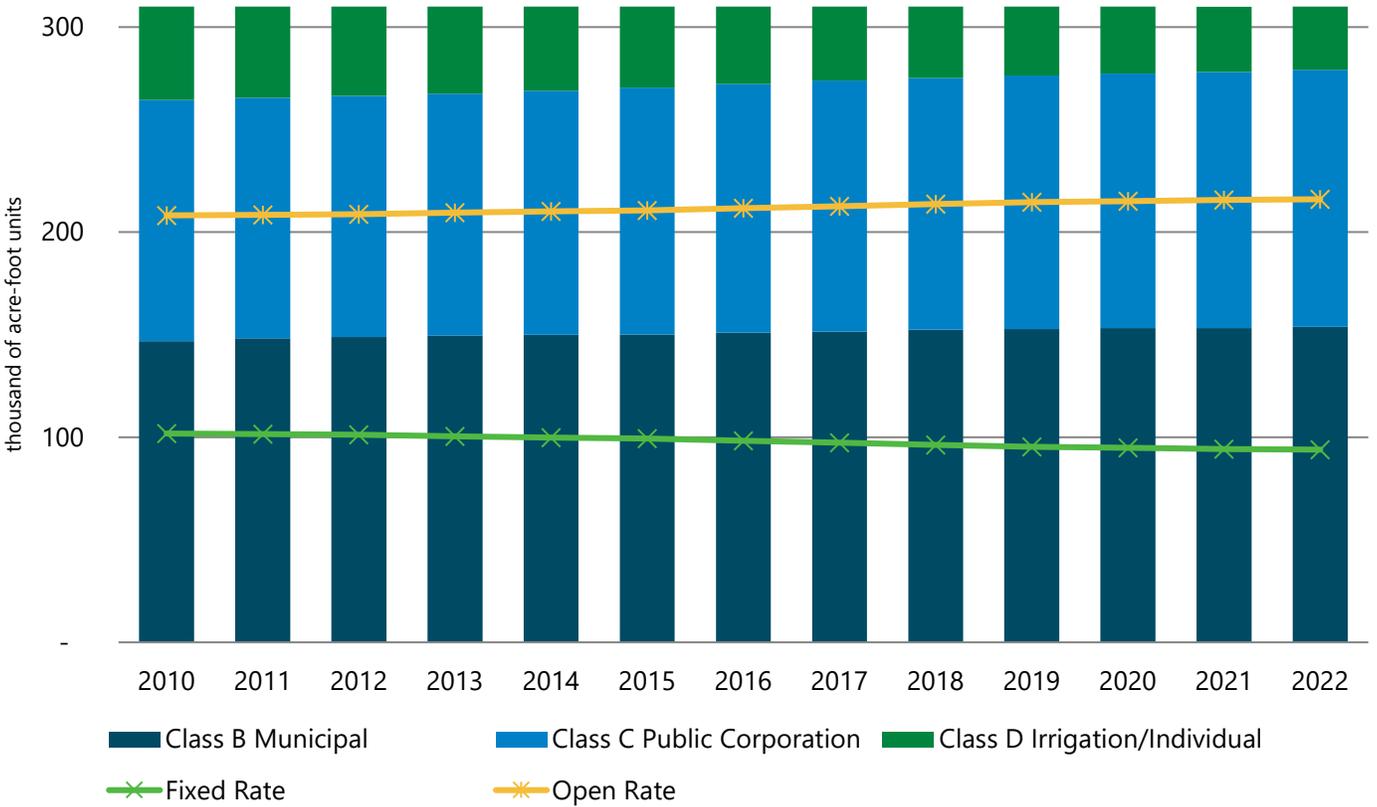
	Budget	Percent of Total Water Assessments
Class B Municipal	\$5,471,162	44.2%
Class C Public Corporation	\$3,942,661	31.8%
Carryover	\$2,200,000	17.8%
Class D Irrigation/Individual	\$700,126	6.2%
Total	\$12,383,949	100.0%



Water Assessments by Class of Service

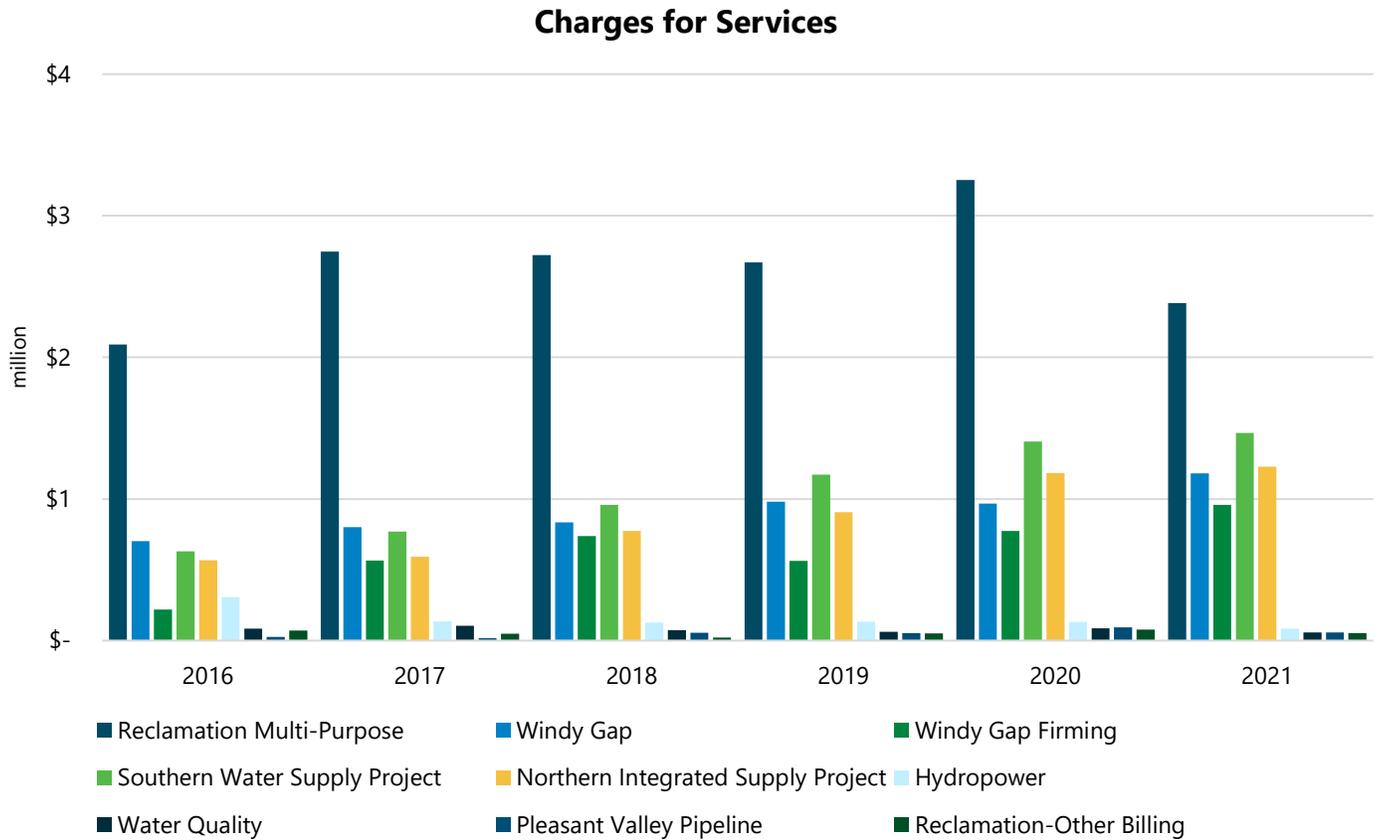


C-BT Ownership by Water Allotment Contract Class



Charges for Services (7.5% of Total Sources of Funds)

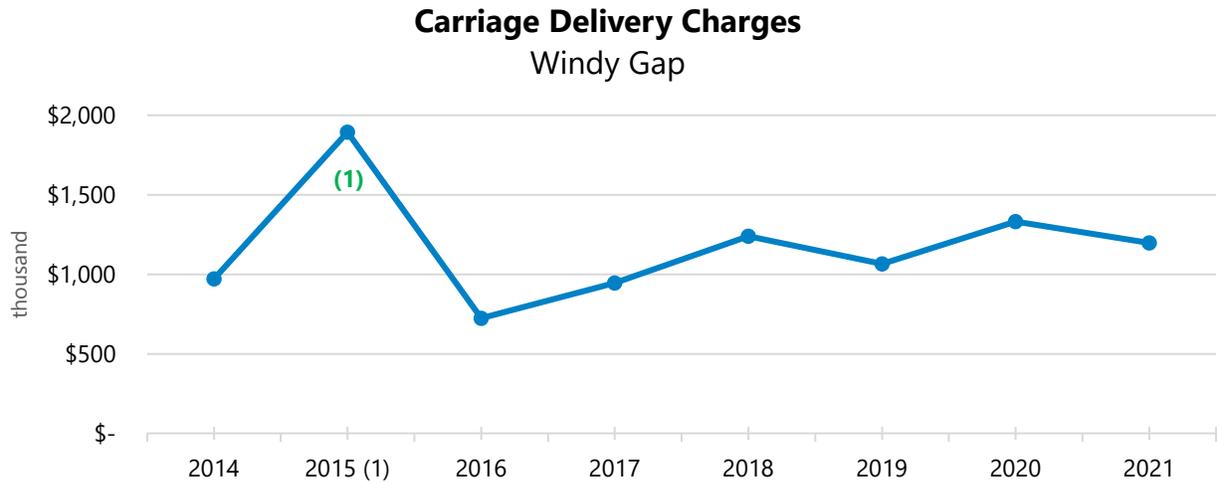
Charges for Services revenues are generated from providing administrative, engineering and operation and maintenance services to the Northern Water activity enterprises, the Municipal Subdistrict and others such as Reclamation for C-BT Joint Works. Northern Water (District Fund) charges its costs for these services to the benefitted entity and is reimbursed for these costs. Fiscal year 2023 revenues are projected to decrease 1.7 percent or \$130,588 as the result of lower number of labor hours billed. A summary is provided in the chart and table below.



	Budget	Percent of Total Charges for Services
Reclamation Multi-Purpose	\$2,620,000	29.5%
Northern Integrated Supply Project Enterprise	\$1,800,000	20.2%
Southern Water Supply Project Enterprise	\$1,352,603	15.2%
Windy Gap Firming Enterprise	\$1,146,180	12.9%
Windy Gap Enterprise	\$1,465,948	16.5%
Hydropower Enterprise	\$168,510	0.0%
Pleasant Valley Pipeline Enterprise	\$107,994	0.0%
Reclamation Special Billing	\$235,481	0.0%
Total	\$8,896,716	100.0%

Other Operating Revenue (3.4% of Total Sources of Funds)

Most of the Other Operating Revenues include carriage delivery charges, seasonal transfer to higher rate, water conveyance credits and water carriage credit. Carriage delivery charges represent the use by the Municipal Subdistrict of the C-BT Project conveyance and storage system. Winter delivery fees are for water delivered from C-BT Project facilities in the winter months, November through March. Rule 11 charges are when customers transferring water are charged the assessment differential if water is transferred to a higher-rate user from a lower-rate user. Water conveyance and carriage credits are fees from the use of the C-BT Project shared equally between Northern Water and Reclamation. Fiscal year 2023 Other Operating Revenues are projected to be \$2,656,595, an increase of \$175,945 or 7 percent compared to fiscal year 2022. A summary is provided in the chart and table below.



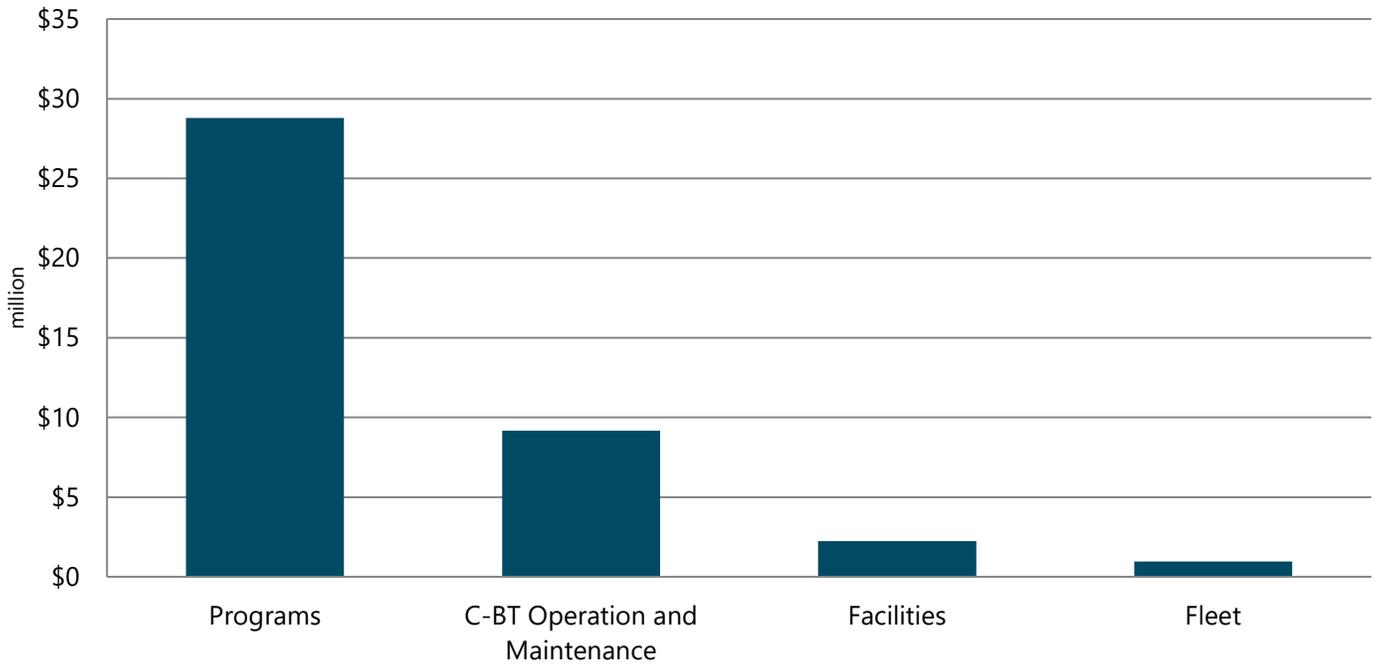
(1) The carriage delivery assessment is calculated on the costs of providing the service and on total water carried through the C-BT Project Adams Tunnel. When less water is carried through the tunnel, Windy Gap Project water becomes a larger percent of the total, resulting in higher water delivery revenue. In 2015, the water carried through the Adams Tunnel was 113,856 acre-feet, the lowest since the Windy Gap Project began delivering.

	Budget	Percent of Other Operating Revenues
Carriage Delivery – Windy Gap	\$1,400,000	52.7%
Rule 11	\$714,695	26.9%
Carriage Credit – Reclamation	\$350,000	13.2%
Water Conveyance – Reclamation	\$100,000	3.8%
Transfer Fees	\$29,000	1.1%
Winter Delivery Fees	\$20,600	0.8%
Regional Pool Fees	\$19,500	0.7%
Irrigation Class Fees	\$9,800	0.4%
Power Interference	\$10,000	0.4%
Non Allottee Industrial Water Accounts	\$3,000	0.1%
Total	\$2,656,595	100.0%

Total Operating Expenses

The fiscal year 2023 District Enterprise Fund budgeted operating expenses are \$41,153,321. A summary is provided in the chart and table below.

Operating Expenses by Function

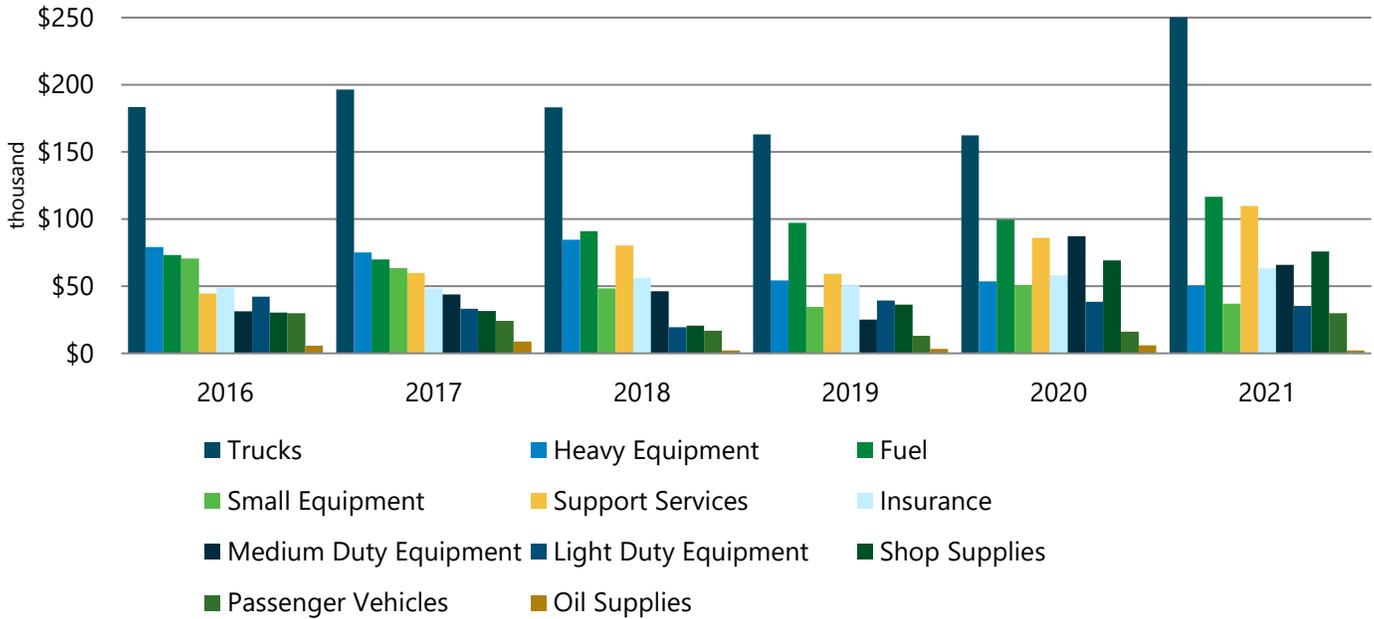


	Budget	Percent of Total Operating Expenses	Labor	Non-Labor
Programs	\$28,793,029	70.0%	\$13,481,651	\$15,311,378
C-BT Operation and Maintenance	\$9,168,885	22.3%	\$4,345,446	\$4,823,439
Facilities	\$2,241,054	5.4%	\$1,458,554	\$782,500
Fleet	\$950,353	2.3%	\$450,353	\$500,000
Total	\$41,153,321	100.0%	\$19,736,004	\$21,417,317

Fleet Expenses (0.8% of Total Uses of Funds)

Fleet expenses are used for the operation and maintenance costs of Northern Water’s vehicles and major equipment. The fiscal year 2023 fleet expenses are expected to be \$950,353. This represents a decrease of \$117,016 or 11 percent from the fiscal year 2022 budget mainly due to less maintenance, repair and labor costs related to fleet service. A summary of historical actual expenditures and the fiscal year 2023 budget is provided in the chart and tables below.

Breakdown of Fleet Expenses



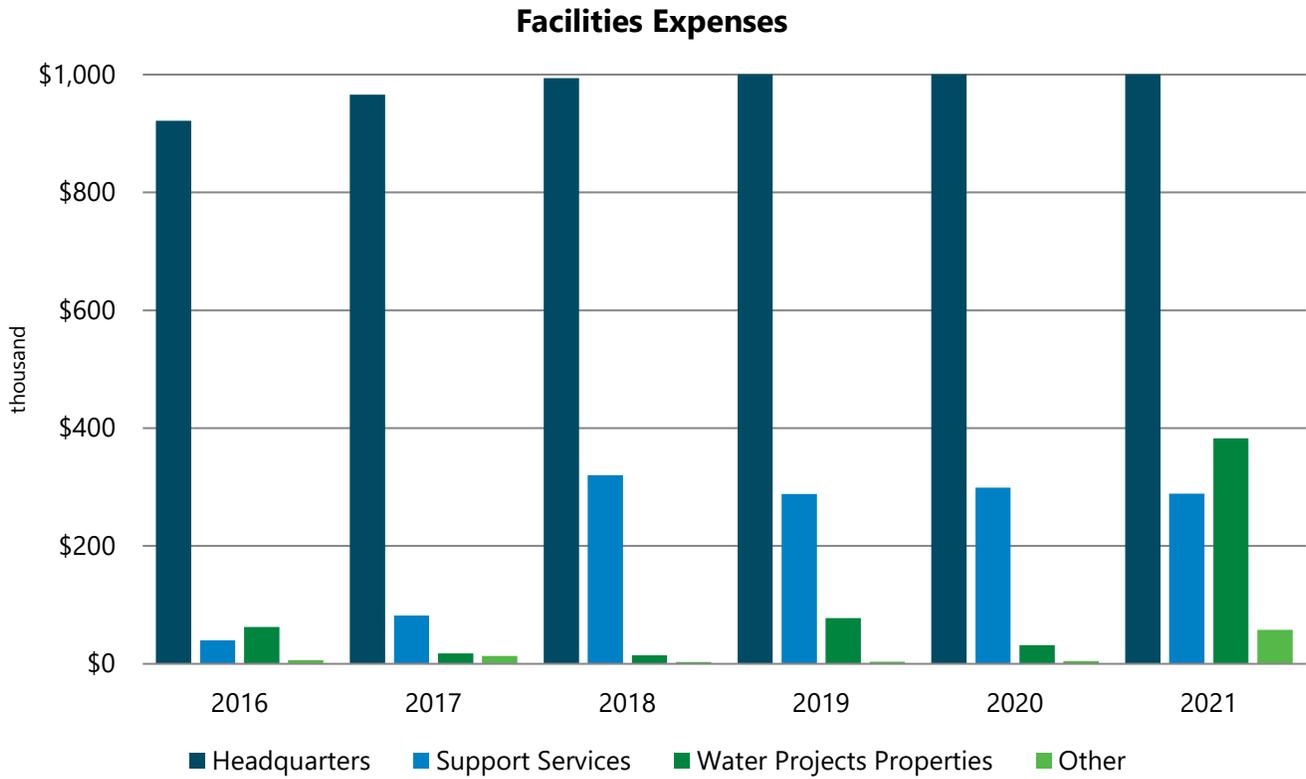
	Budget	Percent of Total Fleet Expenses
Support Services	\$389,769	41.0%
Fuel	\$175,480	18.5%
Trucks	\$108,000	11.4%
Light Duty Equipment	\$59,000	6.2%
Insurance	\$52,000	5.5%
Shop Supplies	\$65,000	6.8%
Heavy Equipment	\$9,104	1.0%
Medium Duty Equipment	\$35,000	3.7%
Small Equipment	\$30,000	3.2%
Passenger Vehicles	\$15,000	1.6%
Oil Supplies	\$12,000	1.3%
Total	\$950,353	100.0%

Expenses by Category

Non-Labor	\$450,353	47.4%
Labor	\$500,000	52.6%
Total	\$950,353	100.0%

Facilities Expenses (2% of Total Uses of Funds)

Facilities expenses are used for the operation and maintenance costs of Northern Water’s Berthoud headquarters facility and property held for future water supply projects. The fiscal year 2023 facilities budget is projected at \$2,241,054. This represents an increase of \$145,632 or 7 percent more than fiscal year 2022 budget. A summary is provided in the chart and tables below.



	Budget	Percent of Total Facilities Expenses
Headquarters	\$1,747,341	78.0%
Support Services	\$423,723	18.9%
Water Project Properties	\$49,990	2.2%
Other	\$20,000	0.9%

Total	\$2,241,054	100.0%
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Expenses by Category

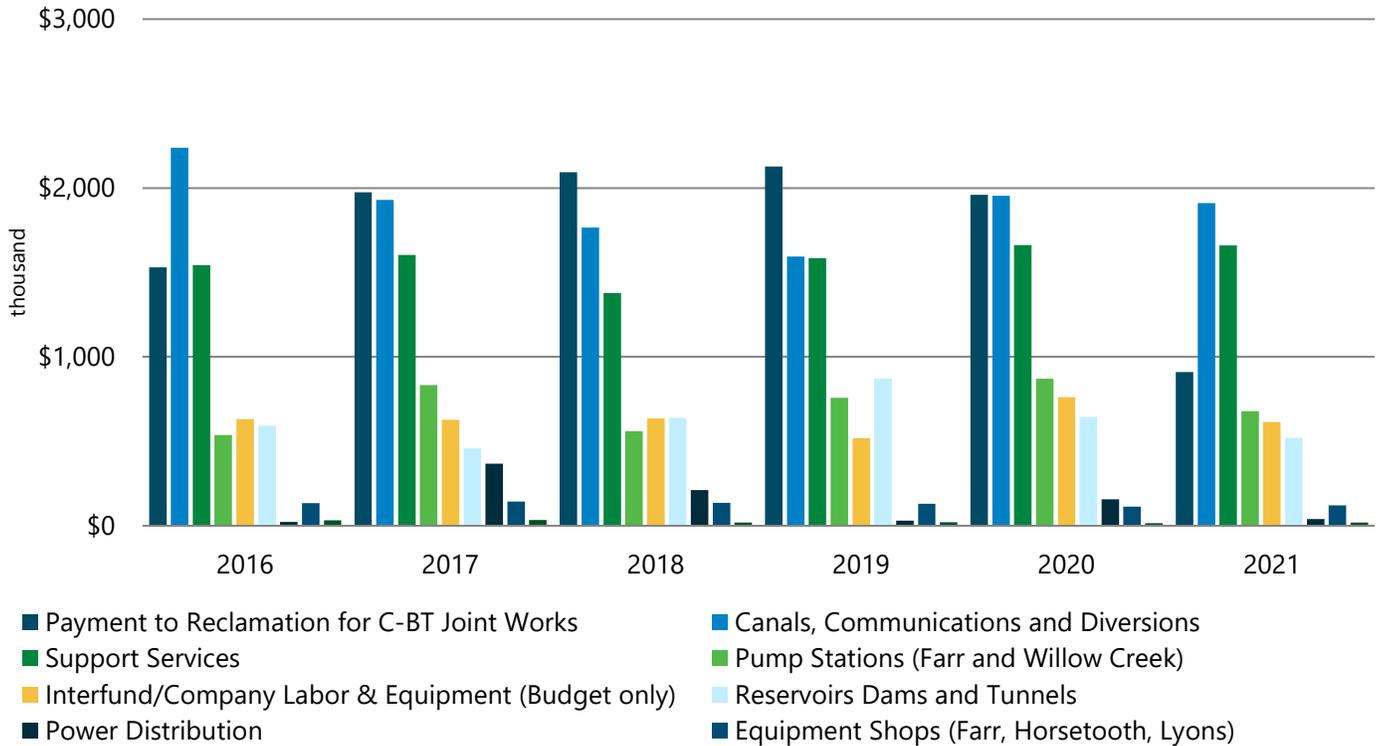
Non-Labor	\$1,458,554	65.1%
Labor	\$782,500	34.9%

Total	\$2,241,054	100.0%
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C-BT Operation and Maintenance Expenses (8.1% of Total Uses of Funds)

Operation and maintenance expenses are the non-capital labor, materials and services costs necessary to operate and maintain the C-BT Project. Major infrastructure maintained include reservoirs, dams, dikes, canals, pumping plants, pipelines and tunnels. The fiscal year 2023 operation and maintenance budget totals \$9,168,885, which represents a 32 percent increase from the fiscal year 2022 budget. In addition, \$1,907,351 was erroneously excluded from fiscal year 2022 operations and maintenance budget. A summary is provided in the chart and tables below.

C-BT Operation and Maintenance Expenses by Project Feature



	Budget	Percent of Total Operation and Maintenance Expenses
Canals, Communications and Diversions	\$2,115,908	23.1%
Payment to Reclamation for C-BT Joint Works	\$1,900,000	20.7%
Support Services	\$1,759,276	19.2%
Pump Plants (Farr and Willow Creek)	\$1,172,820	12.8%
Reservoirs Dams and Tunnels	\$852,571	9.3%
Interfund/Company Labor and Equipment (budget only)	\$1,171,435	12.8%
Equipment Shops (Farr, Horsetooth and Lyons)	\$89,655	1.0%
Power Distribution	\$79,500	1.0%
Steam Gaging	\$27,720	0.3%
Total	\$9,168,885	100.0%

Expenses by Category

Non-Labor	\$4,345,446	47.4%
Labor	\$4,823,439	52.6%
Total	\$9,168,885	100.0%

C-BT operation and maintenance program expenses include activities by the Collection Systems, Distribution Systems, Control Center, and Facilities and Equipment departments as described in the following sections.

Division: Operations - Collection Systems

Business Plan Priority: Collect and deliver water

The Collection Systems Department is responsible for operating and maintaining the C-BT and Windy Gap projects on the West Slope in Grand County. The department has staff members with extensive experience in civil, mechanical and electrical trades.

During the spring and early summer runoff seasons, natural inflows are collected in Lake Granby along with water pumped from Willow Creek and Windy Gap reservoirs. The department coordinates with Reclamation to send water to the East Slope through the West Portal of the Adams Tunnel in accordance with the annual operating plan. The Farr Pump Plant pumps water from Lake Granby to Shadow Mountain Reservoir to maintain required elevations in Grand Lake, to replenish storage in Carter Lake and Horsetooth Reservoir on the East Slope, and to fulfill Reclamation's hydropower generation objectives. The Northern Water control center is located at the Farr Pump Plant, but will move to the new Willow Creek Campus in Grand County in late 2022. Northern Water operators monitor and control West Slope pump plants, both hydropower plants and the Southern Water Supply Project.

In 2022, the Collections Program:

- Replaced programmable logic controllers at Farr Pump Plant.
- Automated gate controls at Shadow Mountain pier nose.
- Improved seepage monitoring at Granby Dike 3 in coordination with Reclamation.
- Replaced three unit coolers at Farr Pump Plant.
- Completed a canal improvement study for Willow Creek.
- Automated Farr Pump Plant units for remote start capability.
- Dredged silt from Windy Gap forebay.

In 2023, the West Slope Collection Systems Program intends to:

- Rebuild the forebay silt wall at Windy Gap Reservoir.
- Complete an electrical study of a transformer replacement changing the transformers at Windy Gap to give more redundancy.
- Expand the Willow Creek gatehouse building.
- Design a siphon breaker for Granby Pump Canal.
- Replace hydraulic pressure unit at Willow Creek Pump Plant.
- Install cameras on pump and motor floors at Farr Pump Plant.
- Acquire standby generators for West Portal, Shadow Mountain, Willow Creek and Granby Dam.

Division: Operations - Distribution Systems

Business Plan Priority: Collect and deliver water

The Distribution Systems Department services and maintains the East Slope water distribution system and delivers water from Carter Lake and Horsetooth Reservoir to C-BT and Windy Gap project allotment contract owners and project participants. The department operates and maintains a variety of facilities including pumping plants, a hydroelectric generation plant, several open canals, siphons, trash racks, pipelines and reservoirs. The department is responsible for the continuous and uninterrupted operation of water delivery infrastructure.

In 2022, the East Slope Distribution Systems Program:

C-BT Project:

- Completed a rehabilitation project at the Canfield canal.
- Applied crack-seal to the Hansen Feeder Canal 550 section Jessup.
- Completed the Carter Lake annual outlet works inspection.
- Replaced the floor at Carter Lake outlet works.
- Fabricated and installed new check boards at Erie turnout for winter deliveries.
- Completed a cross-drain repair on the Hansen Supply canal.
- Replaced concrete on the St Vrain Supply canal.
- Completed concrete repairs on Bennet Chute.
- Cleaned out debris from the Dille diversion structure.
- Replaced the steel cover on the entrance and exit of tunnel number three above Masonville siphon.
- Installed a guard gate at the Union turnout on the Masonville Siphon.
- Installed a guard rail around various distributions systems turnout.
- Completed rehabilitation of the KOA for a crew staging area
- Improved the access road at the Munroe diversion.
- Installed a guard rail at the Carter Lake tower.
- Improved the Highway 52 and York Street overflow structure.
- Installed a guard rail at Chimney Hollow Reservoir overlook.
- Sprayed all dams on Horsetooth Reservoir and Carter Lake in house.
- Repaired drain line on Hertha turnout.
- Completed Spence siphon and meter rehabilitation projects.
- Re-established road access above Bobcat ridge to the entrance of tunnel number three.
- Installed mechanical seals in the Masonville siphon.
- Replaced concrete panels on the Hansen Feeder Canal 550 section.
- Applied polyurea sealant on the Hansen Feeder Canal 550 section above Masonville.
- Repaired a leak on the Dixon canal.

Southern Water Supply Project:

- Replaced the bypass valve on SWSP I and II pipelines.
- Completed testing of Eastern Pump Plant.
- Replaced blowoff valves on SWSP I.
- Improved the SWSP II access road.
- Installed venturi taps at Longmont flow control and the Fort Morgan pressure release valve.

Pleasant Valley Pipeline:

- Improved road access to the PVP north section.
- Installed new automatic drive through gate actuators.

Trout Hydropower Plant:

- Completed annual maintenance and inspections.

In 2023, the East Slope Distribution Systems Program intends to:

C-BT Project:

- Upgrade the power supply at Boulder Reservoir.
- Improve the Carter Lake catwalk.
- Upgrade the gates at Boulder White Rock/ Left hand pool.
- Complete a fencing project at the Dixon canal.
- Complete upgrades to the Little Thompson turnout.
- Install an automatic gate at the Longmont turnout.
- Rebuild the blowoffs and Smith Siphon and Spence Siphon.
- Repair the St. Vrain Supply Canal Culvert on the Parrish Property.
- Complete Boulder Creek Supply Canal structure inspections.
- Complete road repairs at Boulder Reservoir due to seepage.
- Re-engineer the City of Loveland overshot gate.
- Replace the spare sump pump at the Horsetooth Valve House.
- Install double gate actuators at the Hansen Supply Canal.
- Rehab the Lower Boulder Pool.
- Renovate the Lyons shop.
- Replace four cattle guards along the St. Vrain Supply Canal.
- Replace tape wrap on the Reclamation section of the Horsetooth Penstocks.
- Armor the north shore of the Boulder Reservoir.
- Improve the Boulder Creek Supply Canal winter deliveries.
- Rehabilitate the Hansen Feeder Canal 550 Section Capacity.
- Continue to work on the meter rehabilitation project.
- Install Concrete Precast Buildings.
- Replace culverts on the Lower Boulder Canal.
- Complete a study to determine what is needed to rehabilitate the Lyons Chute.
- Complete a needs assessment on the Adams Tunnel.
- Apply polyurea to 6,600 linear feet of the Hansen Supply Canal north of the Howard Road Bridge.

Southern Water Supply Project:

- Replace Broomfield Anode Well Niwot Road - B5.
- Replace Broomfield Anode Well County Line Road - B7.
- Replace blowoffs at Broomfield 122+75, 153+90 and 198+95.
- Paint the Erie Flow Control Vault and the Longmont Vault.
- Replace the Louisville Superior 10-inch Isolation Valve.
- Replace the Louisville 100 HP Spare Motor.
- Repair, install and replace the Superior 150 HP spare motor.
- Repair, install and replace the SWSP II Isolation Valve (Lefthand).
- Complete the Louisville Pump Study.
- SWSP II Isolation Valve (Boulder) (Carryover from 2022).
- Complete a Cathodic Assessment on the Broomfield Pipeline.
- Install clay lining and armor the North Poudre Munroe canal.
- Install venturi taps on the SWSP I pipeline.
- Replace lighting in vaults and pump plants.

Pleasant Valley Pipeline:

- Complete the Munroe / PVP Actuator and Gear Box Water Supply Project.

Trout Hydro Plant:

- Complete annual maintenance and inspections.

Division: Operations - Control Center

Business Plan Priority: Collect and deliver water

The Control Center Department works with the Collection and Distribution departments and is responsible for the monitoring and operations of all pump plants, hydropower plants, water control equipment and facilities, and reservoir elevations within Northern Water's collection and distribution systems. Monitoring and operations occur year-round. The Control Center Department also prepares, and issues clearances as requested, per the Hazardous Energy Control Program. The department has staff members with experience in the seasonal operations of the above-mentioned facilities and structures. The operators go through an extensive training syllabus through their first three years with Northern Water.

In 2022, the Control Center Program:

- Prepared and issue the necessary clearances for all work to be performed that falls under the Hazardous Energy Control Program. A few are listed below:
 - Clearance for replacement of Windy Gap Unit 2 Intake Gate Shaft.
 - Clearance for Pilot Program winter water delivery preparedness at Boulder Reservoir valve house.
 - Clearance for canal rehab below the Lower Boulder Diversion turnout.
 - Clearance for winterization of St. Vrain Supply Canal.
 - Clearance for winterization of Horsetooth Guard Gates.
- Created a PowerPoint for Hazardous Energy Control Program training.
- Updated the Standard Operating Procedures for department.

In 2023, the Control Center Program intends to:

- Prepare and issue the necessary clearances for all work to be performed that falls under the Hazardous Energy Control Program. A few are listed below:
 - Clearances for annual maintenance of the Farr Pump Plant Units 1, 2 and 3.
 - Clearance for annual maintenance of the Carter Lake Outlet Structure.
 - Clearance for annual maintenance of the Windy Gap Pump Plant Units 1, 2, 3 and 4.
 - Clearance for winterization of St. Vrain Supply Canal.
 - Clearance for winterization of Horsetooth Guard Gates.
- Updating Standard Operating Procedures for all facilities (this is an ongoing process).
- Move into the new Operations Control Center at the Willow Creek Campus.

Division: Operations - Facilities and Equipment

Business Plan Priority: Cultivate operational and organizational excellence

The Facilities and Equipment Department responsibilities include: budgeting for and maintaining all of the Berthoud headquarters campus which includes nine buildings; assisting with the design and construction management of Phase II Campus Development; planning for the best care of this investment associated with heating and ventilation, electrical, mechanical, structural, custodial, grounds and landscape needs; continuing to support the additional Lincoln office rental property until Phase II Campus Development is complete; assisting in special projects including modernization of existing headquarters, supporting new remodel and construction infrastructure; and continuing to assist all staff and events by maintaining the cleanliness of facilities offices, workspace areas, shipping and receiving, restocking supplies, and removing surplus equipment and supplies.

Other responsibilities include specifying and ordering approved vehicles and equipment while maintaining the existing fleet and heavy equipment. This includes general maintenance, make-ready services, Department of Transportation inspections and removal of surplus vehicles and equipment.

The department supports the new on-site fuel island, all Northern Water staff members with various projects and off-site facilities and pump plants as our trades may apply. The department also supports special events on and off site.

In 2022, the Facilities and Equipment Department:

- Assisted with enhancing the security of Northern Water's facilities.
- Replaced ADA door openers in Building A.
- Updated the lighting on the first floor in Building B.
- Began roof repairs and installation on snow falling devices on existing buildings.
- Assisted with the first round of office moves.
- Supported Phases I and II of the Berthoud Campus Development project.

In 2023, the Facilities and Equipment Department intends to:

- Assist with office moves.
- Assist other staff in conducting Board Meetings in an alternate location on campus for several months.
- Support Building A remodel efforts for the next two years.
- Replace the main chiller in Building A with two APC chilled and hot water pumps.
- Continue replacement of individual pneumatic VAV box controls of the HVAC system.
- Upgrade the cooling by installing soft starting controls (VFD) fan speed to maintain a more accurate cooling tower water temperature. The system will be tied into the Trane building BAS automation system.
- Oversee roof repairs and installation of snow falling devices on existing buildings.
- Assist with office furniture and equipment replacements, upgrades and workstation changes.
- Install overhead garage door operators in Building B.
- Replace the water feature pump.
- Install new landscaping, irrigation infrastructure and upgrade controllers.

2023 Budgeted Equipment Replacements and Additions

Equipment

- LD-13: standard front loader arms will replace the high lift.
- FL-8: Bobcat Telehandler with 6,000-pound capacity will be added West Slope.
- LD-17: Cat 914 rubber tire loader will replace LD-9.
- LD-18: Bobcat S450 T4 V2 skid steer will replace LD-11.
- EX-3: John Deere 210G LC excavator will be added to the East Slope.
- EX-4: Bobcat E35 33HP R2 series compact excavator will replace BH-10.
- Skid steer snow blower will be added to the West Slope.
- LM-9: Walker mower will replace LM-8 East Slope Campus.

- BT-7: Water Sample Boat to replace BT-1.

Large Trucks

- T-82: Class 8 dump truck will replace T-40.

Medium Trucks

- T-81: 1-ton DRW extended cab 4x4 flatbed will replace T-53 on the West Slope.
- T-80: 1-ton DRW extended cab 4x4 utility body will replace T-64 on the East Slope.
- T-79: 550 DRW extended cab 4x4 service body with crane will replace T-39 on the East Slope.

Pickups

- P-132: 1-ton SRW 4x4 regular cab with plow will replace P-77.
- P-131: 1/2-ton crew cab 4x4 tech with utility camper will replace P-98.
- P-130: 3/4 -ton regular cab 4x4 long bed with V-Plow will replace P-85.
- P-129: 3/4 -ton extended cab 4x4 long bed with tech utility camper will replace P-82.

SUV's

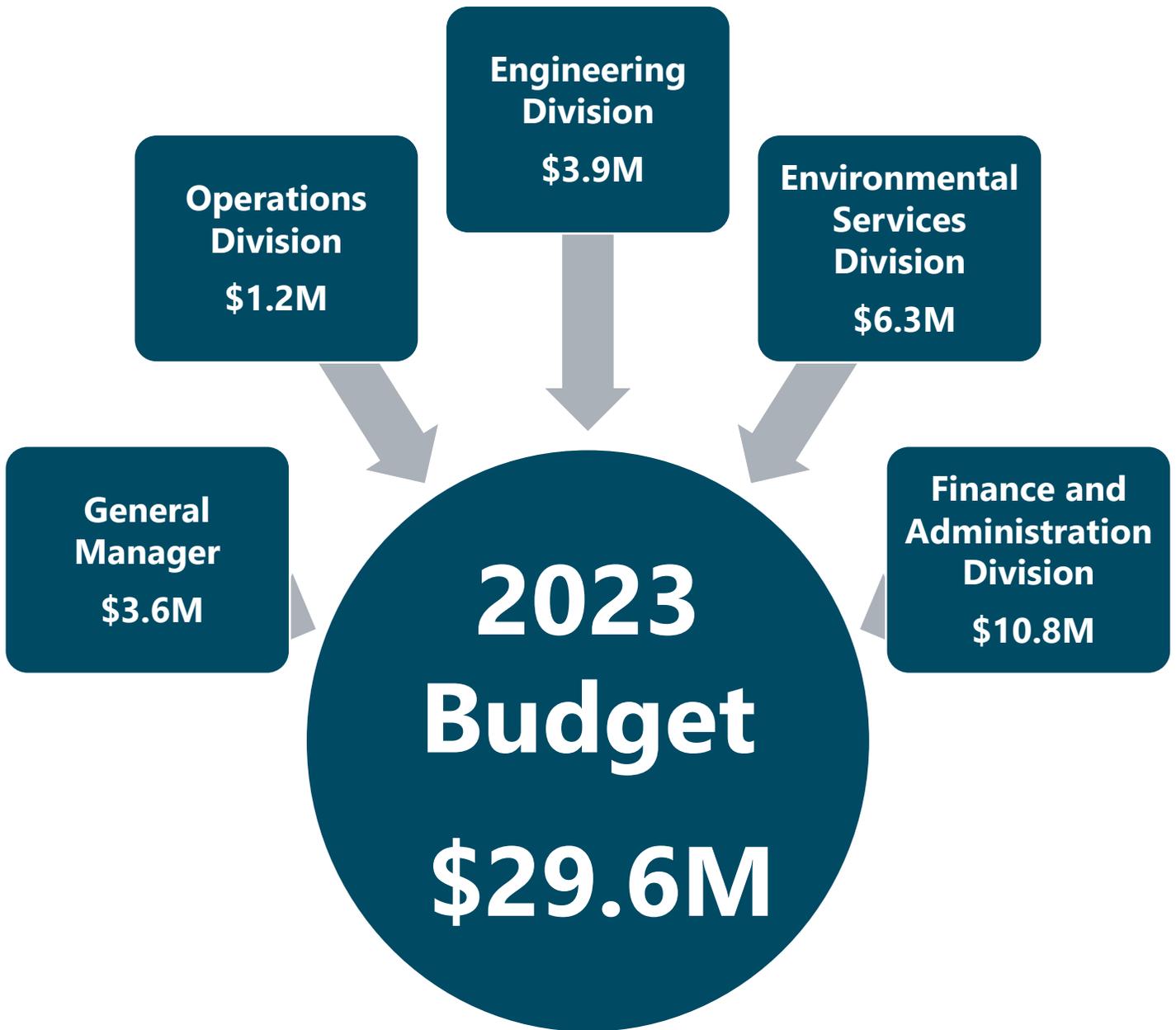
- V-35: Hybrid SUV for fleet checkout will replace V-25.

Sedan

- S-31: Electric hybrid for fleet checkout will replace S-27.

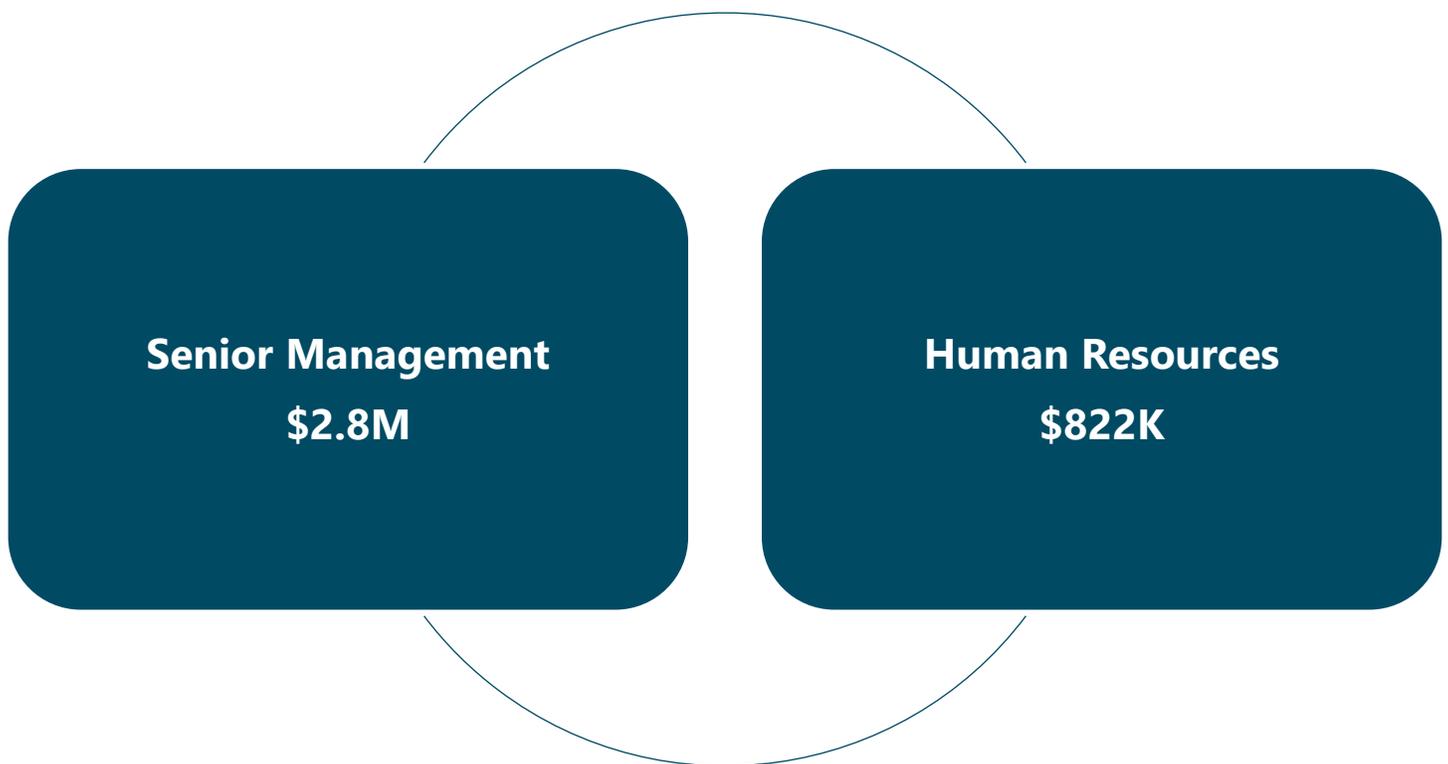
Programs Expenses (25.4% of Total Uses of Funds)

Program expenses are the cost of 23 programs unique to Northern Water that provide administrative, environmental and engineering functions to the organization. The fiscal year 2023 program budget totals \$29.6 million consisting of \$25.3 million for Northern Water division expenses, an additional \$4.4 million Charges for Services (interfund labor expense), and \$500K contingency fund. A summary is provided in the chart below.



General Manager Programs

The general manager is appointed by the Board and provides organizational leadership to implement Board policies. Senior Management provides organizational leadership for the divisions and Northern Water. Human Resources manages employee health benefits, compensation, recruitment, and other human resource policies and procedures.



DISTRICT ENTERPRISE FUND OVERVIEW: PROGRAMS

Division: Senior Management Program

Business Plan Priority: Cultivate operational and organizational excellence, and maintain and strengthen relationships

Northern Water's Senior Management team oversees all aspects of Northern Water's day-to-day operations and carries out the directives of the general manager and the Board of Directors. The Senior Management team also develops long-range strategic plans and is always prepared to respond to unforeseen circumstances.

In 2022, the Senior Management Program:

- Hired 29 new staff to backfill existing positions and fill new positions necessary to meet increased workload requirements throughout the organization.
- Oversaw Infor Finance, Supply Chain and HR/Payroll system to multi-tenant CloudSuite.
- Oversaw Cameron Peak and East Troublesome Fire recovery efforts, including entering into agreements with the Natural Resources Conservation Service to serve as local sponsors for the Emergency Watershed Protection Program for the East Troublesome Fire recovery effort.
- Oversaw Berthoud Campus and Willow Creek Campus Phase I construction activities.
- Oversaw Series 2022 Certificates of Participation debt issuance of \$37 million to fund Berthoud Campus Phase II campus development activities.
- Celebrated the completion of Willow Creek Campus with a public grand opening event.

In 2023, the Senior Management Program intends to:

- Provide general oversight of all Northern Water activities and enterprises.
- Participate in various regional and statewide cooperative programs including recovery programs, stream management and river basin studies.
- Participate in statewide, regional and national discussions and strategies related to Colorado River drought conditions.
- Protect and develop water rights assets.
- Concentrate on risk management, including procurement and administration of general liability and other insurance.
- Develop and enforce policies, rules and procedures.
- Continue to refine Northern Water's Strategic Plan to describe the organization's goals and values as it faces contemporary water supply challenges and opportunities over the next decade and beyond.
- Coordinate new positions and fill new and existing positions to backfill for retirements and meet increased workload requirements.
- Coordinate general legal counsel expenses and fees.
- Coordinate Northern Water Board of Directors meetings, conferences and other related expenses.
- Provide oversight of Cameron Peak and East Troublesome Fire recovery efforts, including entering into additional agreements with the Natural Resources Conservation Service and other potential funding agencies to continue East Troublesome Fire recovery efforts.
- Provide oversight of campus development programs consisting of Berthoud Campus Phases II and III final design and construction.
- Respond to major unforeseen contingency projects and expenses.

Senior Management	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Senior Management	\$459,083	\$854,821	\$854,821	\$487,014	-\$367,807	-43.0%
Legal Matters	652,347	780,137	\$780,137	870,000	89,863	11.5%
Board of Directors	252,055	377,966	\$377,966	322,889	-55,077	-14.6%
Senior Mgmt. Meetings	280,650	361,002	\$361,002	85,238	-275,764	-76.4%
General Programs	660,445	894,896	\$894,896	984,224	89,328	10.0%
Travel and Training	47,413	108,013	\$108,013	30,000	-78,013	-72.2%
Total	\$2,351,992	\$3,376,835	\$3,376,835	\$2,779,365	-\$597,470	-17.7%
Summary by Category						
Labor	\$1,262,584	\$1,869,817	\$1,869,817	\$1,415,865	-\$453,952	-24.3%
Non Labor	1,089,409	1,507,018	1,507,018	1,363,500	-143,518	-9.5%
Total	\$2,351,992	\$3,376,835	\$3,376,835	\$2,779,365	-\$597,470	-17.7%

Division: Senior Management - Human Resources Program

Business Plan Priority: Maintain and strengthen relationships

The Human Resources staff administers all employee benefits, such as medical, dental, life, long-term disability, retirement plans and workers' compensation. The department also reconciles billing statements for benefit payments and provides recommendations on benefit vendor selection, new benefits and plan changes. The staff assists employees with benefits enrollment and changes; resolves issues with medical and dental claims; and counsels and advises employees and managers on employment issues. The department provides leadership in recruiting, interviewing and training new employees. The department conducts ongoing salary surveys, makes compensation recommendations, maintains the employee handbook, maintains Human Resources Information Systems and provides relevant personnel reports on behalf of all employees.

In 2022, the Human Resources Program:

- Continued migration from Infor's human capital software S3 to GHR (Global Human Resources) by testing and verifying information. Scheduled classes, prepared training materials and facilitated two-hour training for all employees with an additional one-hour training for managers. Participated in Infor open houses to answer payroll and benefits questions from coworkers. Implemented required upgrades throughout the year.
- Introduced new discretionary and spot bonus programs with guidelines and request forms.
- Updated Employee Performance Self-Assessment and Supervisor Performance Review Form, based on input and feedback from managers. Returned to sending out performance review due date reminders to managers.
- Worked with Senior Management on plans to bring employees back to the office following COVID-19 pandemic restrictions requiring employees to work from home.
- Assisted Senior Management with calculating various market adjustment scenarios to present to the Board of Directors for its consideration of a likely one-time, hybrid salary structure change effective October 1, 2022, which included a dollar-per-hour and a percentage increase to wages.
- Presented details as they were made available by the Colorado Department of Labor and Employment about the implementation of Colorado's state-run paid FAMLI program to the Finance and Benefits Committee of Northern Water's Board of Directors in anticipation of the Board's decision to opt-in or opt-out of participating in the program by December 31, 2022.
- Presented details of FAMLI to employees in monthly newscasts and through Northern Water's electronic newsletter In the Pipeline. To gauge employees' levels of understanding about the leave insurance and their interest, Human Resources solicited their responses by using a survey during the newscasts and planned follow-up conversations with small groups of employees.
- Hired 29 new employees in various professions in a complicated market; conducted the new hire orientations and benefits enrollments for new employees using Infor's GHR employee self-service.
- Off boarded 19 employees, five of whom retired.
- Conducted annual renewal of insurance benefits to consider plan design improvements, determine premium increases and review the performance of existing benefit vendors.
- Resumed the in-person employee benefits fair following a two-year suspension due to the COVID-19 pandemic, which offered flu shots and blood draws and welcomed 16 vendors.

In 2023, the Human Resources Program intends to:

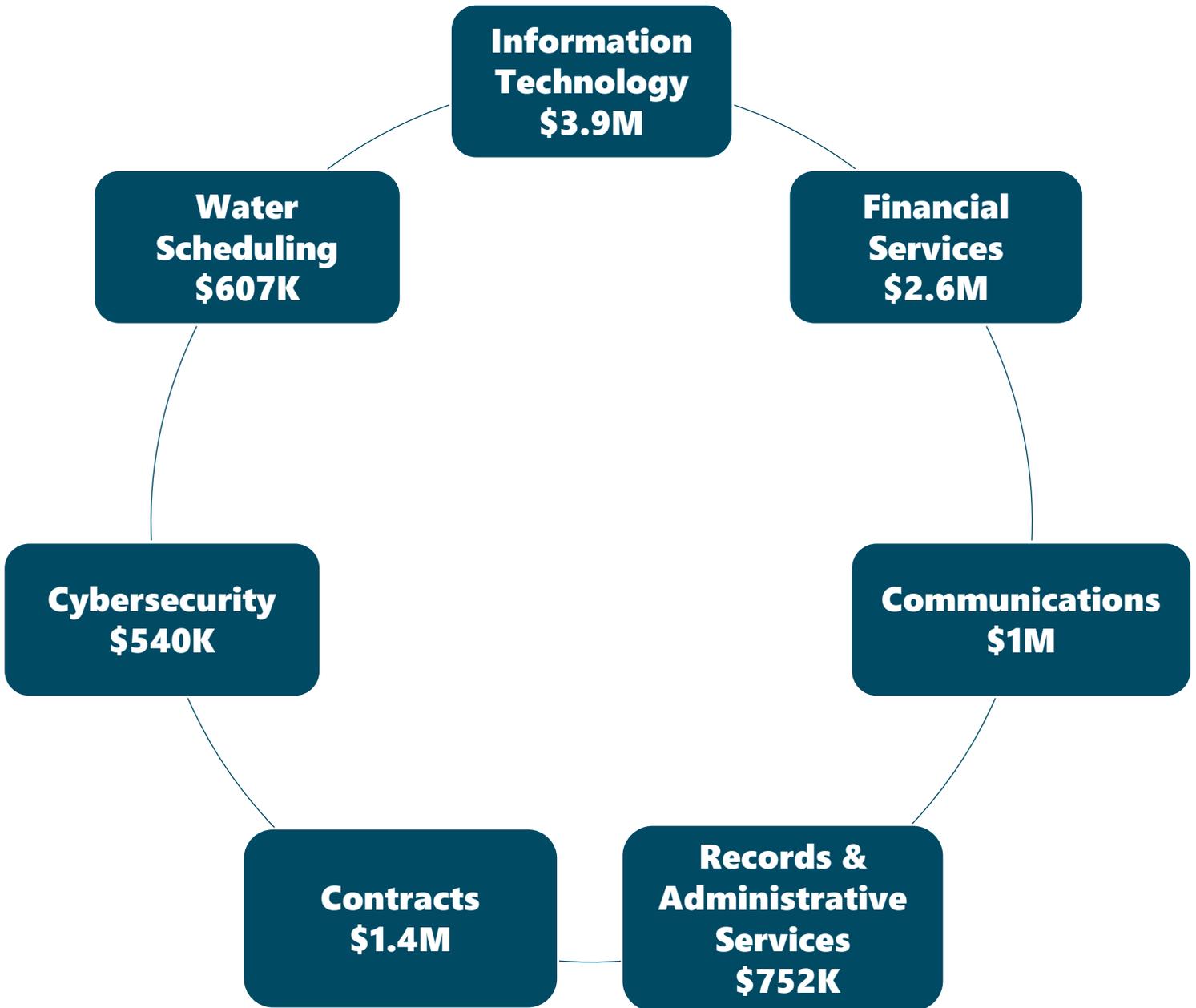
- Continue to learn about and follow the implementation of Colorado's state-run paid Family and Medical Leave Insurance (FAMLI) program and provide information to Northern Water's Board of Directors to enable them to make important decisions on the behalf of Northern Water and its employees.
- Issue a Request for Proposals to compensation consultants to provide a classification and compensation study and analysis of Northern Water's current compensation and classification structure and systems.
- Implement Infor's Talent Acquisition module. Applicants will complete job applications online allowing Northern Water managers to view applicants' resumes and cover letters within the same system.
- Maximize the Human Resources Information Systems system to its fullest potential.
- Support managers in recruiting and hiring approximately 24 new positions to bring departments up to full complement.

- Perform market research on existing jobs and make recommendations and adjustments when necessary.
- Review compensation for potential inequities, make corrections and validate positions according to pay grades.
- Introduce and provide training when appropriate and necessary. Offer mini-supervisor training throughout the year for recently hired or promoted supervisors or managers.
- Review benefits to determine if they are meeting the needs of the employees and are in line with Northern Water’s culture and vision, as well as being fiscally responsible.
- Conduct annual renewal of insurance benefits to consider plan design improvements, determine premium increases and review the performance of existing benefit vendors.
- Continue to save all files electronically and dramatically reduce the number of paper documents. Scan existing important paper documents to an electronic format in a new file management system.
- Plan and host the annual employee benefits fair.

Human Resources	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Human Resources						
General	\$394,980	\$445,938	\$445,938	\$548,837	\$102,899	23.1%
Benefits Management	12,538	15,201	\$15,201	15,005	-196	-1.3%
Employee Morale	2,454	5,184	\$5,184	83,125	77,941	1503.5%
Recruiting	145,291	135,840	\$135,840	91,028	-44,812	-33.0%
Retirements	9,325	3,168	\$3,168	23,269	20,101	634.5%
Travel and Training	15,963	19,543	\$19,543	61,000	41,457	212.1%
Total	\$580,551	\$624,874	\$624,874	\$822,264	\$197,390	31.6%
Summary by Category						
Labor	\$420,999	\$576,105	\$576,105	\$670,264	\$94,159	16.3%
Non Labor	159,552	48,769	48,769	152,000	103,231	211.7%
Total	\$580,551	\$624,874	\$624,874	\$822,264	\$197,390	31.6%

FINANCE AND ADMINISTRATION DIVISION PROGRAMS

The Finance and Administration Division provides support to Northern Water through office operations. Responsibilities include: management of water contracts and inclusions; administration of property and general liability; management of enterprise budgets, accounting and purchasing for the organization; information technology infrastructure and application support; maintaining geographic information of water and real estate ownership; cybersecurity and secure protection of our IT assets; controlling and managing all official records; administrative services; internal and external communications; events and meeting coordination; and management of all water scheduling activities.



Division: Finance and Administration - Administrative Program

Business Plan Priority: Maintain and strengthen relationships

The Administrative Services Program provides office and front desk support, Board of Directors and management support, meeting scheduling and support, board meeting preparation, management of office supply inventories, word processing support, and coordination of employee anniversary recognition and gifts.

In 2022, the Administration Program:

- Improved internal workflows to efficiently collect, schedule and approve topics to be presented at Northern Water’s Board and participant meetings.
- Developed new procedures to facilitate hybrid Board and participant meetings during the COVID-19 pandemic and the Berthoud Campus Development project.
- Provided direct meeting support for all Board of Director’s meetings, project participant meetings, and to staff working in the office and at remote locations.
- Supported staff development by attending multiple in-person and remote training sessions related to front desk security, Office 365 software, statute requirements and best practices for public meetings.

In 2023, the Administration Program intends to:

- Support hybrid Board and participant meetings during the Berthoud Campus Development project.
- Evaluate agenda format changes to conserve time and gain efficiencies during Board of Directors meetings.
- Support additional front desk security measures during and after the Berthoud Campus Development Project.
- Train Northern Water staff on board meeting procedures and protocol.
- Continue to provide word processing and meeting support to staff working in the office and from remote locations.

Administrative Services	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Administrative Support	\$153,873	\$363,684	\$363,684	\$58,619	-\$305,065	-83.9%
Workroom	16,315	26,715	26,715	4,723	-21,992	-82.3%
Travel and Training	24,725	44,310	44,310	36,899	-7,411	-16.7%
Total	\$194,913	\$434,709	\$434,709	\$100,241	-\$334,468	-76.9%
Summary by Category						
Labor	\$154,815	\$375,209	\$375,209	\$41,741	-\$333,468	-88.9%
Non Labor	40,098	59,500	59,500	58,500	-1,000	-1.7%
Total	\$194,913	\$434,709	\$434,709	\$100,241	-\$334,468	-76.9%

Division: Finance and Administration - Communications Program

Business Plan Priority: Maintain and strengthen relationships

The Communications Program provides internal and external communications and public outreach for Northern Water. Major functions and responsibilities include: media relations; website and social media content development and management; creation of printed educational and marketing materials; tours and public speaking activities; photos, graphics, video and display materials; events and meeting coordination; drafting official Board and committee meeting minutes; and all Northern Water internal and external communications activities.

In 2022, the Communications Department:

- Relunched the public tour program after two years of hiatus due to the COVID-19 pandemic. Northern Water conducted two East Slope tours that highlighted the C-BT Project infrastructure, as well as overviews of the Northern Integrated Supply Project and the Chimney Hollow Reservoir Project. Tours also conducted included a West Slope tour that provided an overview of our Collections operations, the Subdistrict's Windy Gap Project and Windy Gap Pump Plant, fire recovery efforts and the new Willow Creek campus. In addition to the public tours, Northern Water also conducted both an East and West Slope tour for employees to provide them with detailed insight into operations, especially given the large number of new employees since the start of the pandemic.
- Had a renewed presence at community events to engage with residents of the communities for which Northern Water provides water, sharing information about the organization's mission and key projects.
- Increased external communications to build the Northern Water brand and share its story through website articles, social media posts, videos, public relations and more.
- Generated a 70 percent increase on social media impressions in 2022 and a 104 percent increase on engagements. The total audience grew by 51 percent across all social media platforms. By studying social media analytics, the department was able to determine more-effective communication tactics.
- Increased video production to share more stories of projects and key programs through multimedia channels.
- Worked with Northern Integrated Supply Project participants to increase the presence of the project through website and social media updates, personalized content and presence at community events.
- Worked with partner organizations such as Water Education Colorado, Colorado River Water Users Association, South Platte Forum, Poudre River Forum and Colorado Farm Show to enhance Northern Water's presence across regional, statewide and interstate platforms.

In 2023, the Communications Department intends to:

- Increase external communications to build the Northern Water brand and share its story through various formats including website, social media and video communications.
- Continue public outreach associated with the Northern Integrated Supply Project with the federal Record of Decision anticipated in winter 2022.
- Continue to build social media engagement on all platforms utilizing analytics to determine appropriate tactics; further manage social media advertising opportunities to ensure success and increased engagement of investment.
- Determine improvements to the public tour programs that highlight the organization's core mission, while incorporating key projects, programs and partnerships that are essential to ongoing development.
- Work alongside the Campus Development team to host dedication events for the Phase I Berthoud projects, which include Buildings F and H. In addition, the department will help to communicate progress on the Phase II Berthoud projects.
- Increase awareness of the Water Efficiency Program through continued news articles, increased social media presence and communication with allottees and Participants about partnership opportunities.

Communications	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Communications						
Programs	\$683,407	\$1,012,679	\$1,012,679	\$980,496	-\$32,183	-3.2%
Travel and Training	51,843	34,328	34,328	30,698	-3,630	-10.6%
Total	\$735,250	\$1,047,007	\$1,047,007	\$1,011,194	-\$35,813	-3.4%
Summary by Category						
Labor	\$624,183	\$888,757	\$888,757	\$817,694	-\$71,063	-8.0%
Non Labor	111,068	158,250	158,250	193,500	35,250	22.3%
Total	\$735,250	\$1,047,007	\$1,047,007	\$1,011,194	-\$35,813	-3.4%

Division: Finance and Administration - Contracts Program

Business Plan Priority: Cultivate operational and organizational excellence

The Contracts Program oversees the entire contracting process for all water allotment contracts, construction contracts, professional services agreements, intergovernmental agreements and transfers for C-BT and Windy Gap projects by facilitating the preparation, approval and management of contracts. The Contracts Program provides administrative guidance in obtaining professional legal and risk management review of all contracts. Allotment contract change applications go through a well-defined review process with the Northern Water Board of Directors. The Contracts Program administers all inclusion petitions for Northern Water and the Municipal District, managing the Board of Director approval process and, when applicable, facilitating secretarial assent from Reclamation. The Contracts Program administers general insurance policies and handles all general liability claims. The Contracts Program collaborates closely with Northern Water’s Risk Manager to protect the organization’s interest.

In 2022, the Contracts Program:

- Assisted Information Technology in the rewrite and implementation of Northern Water’s Allotment System.
- Worked closely with water providers to remain current on any changes related to their service boundaries.
- Developed platforms to improve data collection, critical data management and status reporting.
- Collaborated with Financial Services to refine the internal contract process to enhance communication and performance among all areas involved in contract management.
- Streamlined agreement templates to improve efficiency.
- Worked with associated agencies to rectify boundary issues related to historical inclusions.
- Initiated participation in a property and liability insurance pool for cost savings and improved efficiency.
- Conducted quarterly insurance meetings with various programs within Northern Water to stay informed of new projects or new purchases requiring additional insurance requirements.

In 2023, the Contracts Program intends to:

- Work with Geographical Information System (GIS) and County Assessors to streamline landowner and legal description changes made to current allotment contracts.
- Refine approach to annual audits related to Class D Contracts and ownership within Boulder, Larimer and Weld counties.
- Update written contract procedures to reflect recent process enhancements and new software programs.
- Develop methods for improved internal data sharing.
- Continue quarterly insurance meetings with various programs to track and process insurance requirements.
- Develop metrics for documenting the number of allotment contract applications and transfers, contracts processed, certificates of insurance reviews and inclusion requests for the past fiscal year.

Contracts	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Contracts	\$129,756	\$240,451	\$240,451	\$364,699	\$124,248	51.7%
Allotments	195,282	260,956	260,956	497,344	236,388	90.6%
Inclusions	98,808	126,605	126,605	188,059	61,454	48.5%
Insurance	0	0	0	310,189	310,189	n/a
Travel and Training	10,146	11,782	11,782	5,000	-6,782	-57.6%
Total	\$433,992	\$639,794	\$639,794	\$1,365,291	\$725,497	113.40%
Summary by Category						
Labor	\$420,370	\$470,844	\$470,844	\$712,102	\$241,258	51.2%
Non Labor	13,622	168,950	168,950	653,189	484,239	286.6%
Total	\$433,992	\$639,794	\$639,794	\$1,365,291	\$725,497	113.4%

Division: Finance and Administration - Cybersecurity and IT Governance Program

Business Plan Priority: Cultivate operational and organizational excellence

The Cybersecurity and Governance Department provides added focus to cybersecurity threat preparedness. The department is responsible for developing and managing a systematic policy framework related to information technology governance and ensuring Northern Water’s compliance with related federal and state laws, including the 2018 Colorado Protections for Consumer Data Privacy law. Other duties tasked to the Cybersecurity and Governance Department include cybersecurity awareness training, support for searches related to the Colorado Open Records Act and legal discovery, and active participation and support to an internal IT Steering Committee.

In 2022, the Cybersecurity and IT Governance Program:

- Supported the annual financial audit by developing financial-based governance policies.
- Performed monthly financial system audits.
- Completed the data identification project to provide a baseline for data protection and classification.

In 2023, the Cybersecurity and IT Governance Program intends to:

- Lead the development and implementation of the system-wide risk management function of the information security program to ensure information security risks are identified and monitored. This will include producing and analyzing output from infrastructure, databases, data classifications or web application vulnerability assessments and developing spreadsheets, diagrams, matrices and reports.
- Develop and implement policies and practices to secure protected and sensitive data and ensure information security and compliance with relevant compliance and regulatory requirements such as personally identifiable information, payment card industry, Health Insurance Portability and Accountability Act, etc.
- Develop and implement a security awareness training program and continue education for Northern Water staff on security best practices.
- Perform tests to identify potential vulnerabilities and threats. Cybersecurity analysts also conduct internal and external audits on computer networks to understand their preparedness in dealing with an attack.
- Identify causes of breaches and develops backups and disaster recovery plans in case of a data breach or a cyber invasion.
- Coordinate and track all information technology and security-related audits.

Cybersecurity and Governance	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Cybersecurity and Governance	\$287,087	\$510,303	\$510,303	\$391,576	-\$118,727	-23.3%
Policy Administration	7,810	14,711	14,711	26,617	11,906	80.9%
Security	65,574	66,550	66,550	73,794	7,244	10.9%
Travel and Training	21,139	56,107	56,107	48,097	-8,010	-14.3%
Total	\$381,610	\$647,671	\$647,671	\$540,084	-\$107,587	-16.6%
Summary by Category						
Labor	\$379,729	\$614,671	\$614,671	\$497,084	-\$117,587	-19.1%
Non Labor	1,881	33,000	33,000	43,000	10,000	30.3%
Total	\$381,610	\$647,671	\$647,671	\$540,084	-\$107,587	-16.6%

Division: Finance and Administration - Financial Services Program

Business Plan Priority: Cultivate operational and organizational excellence

The Financial Services Program consists of budgeting, purchasing, payroll and accounting functions in support of Northern Water's Board of Directors, Senior Management and staff. The program provides support on matter relating to financial reporting, programs, grants, capital projects, investments, special projects, contracts, retirement and debt issuance while maintaining adherence to financial policies, procedures and regulatory compliance requirements.

The purchasing function secures goods and services using competitive and cooperative purchasing methods as outlined in Northern Water's Procurement Policy. This function processes requisitions, obtains quotations and manages requests for proposals.

The accounting function provides financial services including fund accounting, preparation of the Comprehensive Annual Financial Report, cash disbursements, payroll processing, fixed asset reporting, cash management, accounts receivable and protecting Northern Water's assets. The accounting function also maintains, monitors and enforces a system of internal control and segregation of duties. This function also provides financial planning for the annual budget and the five-year capital improvement program, analysis of operational productivity and special projects.

In 2022, the Financial Services Program:

- Earned the Award for Outstanding Achievement in Comprehensive Annual Financial Reporting for the 35th consecutive year for the District from the Government Finance Officers Association (GFOA).
- Earned the Distinguished Budget Presentation Award for the fourth consecutive year for the District and for the fifth consecutive year for the Subdistrict from the GFOA.
- Completion of the upgraded ERP software for budgeting, purchasing, payroll and accounting functions.
- Finalized the 2021 Rate Study, including recommendation of fiscal year 2023-2026 Forward Guidance to the Board of Directors
- Played an integral role in securing the Campus Development Series 2022 COPs issuance.

In 2023, the Financial Services Program intends to:

- Develop additional reporting from the Enterprise Resource Planning (ERP) system, including self-service options for staff.
- Implement additional modules which will continue to enhance the ERP system.
- Modify the budget preparation process to ensure Enterprise participants have what they need prior to their budget cycles.
- Review the Indirect Cost Allocation Model for any appropriate changes to the methodology.
- Continue to support the Northern Integrated Supply Project financing mechanisms.
- Continue to refine purchasing procedures.
- Develop a Rental Equipment Solicitation Policy.
- Continue to enhance the Accounting Policies and Procedures Manual.
- Develop a Grant Procedures Manual for staff.
- Implement additional Continuity of Operations Planning and cross-training among staff.

Financial Services	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Accounting Services	\$1,204,557	\$1,287,323	\$1,287,323	\$1,231,755	-\$55,568	-4.3%
Purchasing	237,636	445,544	445,544	242,403	-203,141	-45.6%
Treasury	598,073	757,102	757,102	879,287	122,185	16.1%
Budget	237,718	158,115	158,115	150,430	-7,685	-4.9%
Payroll	83,831	99,155	99,155	82,490	-16,665	-16.8%
Pension	12,004	16,743	16,743	19,424	2,681	16.0%
Travel and Training	18,325	27,292	27,292	16,500	-10,792	-39.5%
Total	\$2,392,146	\$2,791,274	\$2,791,274	\$2,622,289	-\$168,985	-6.0%
Summary by Category						
Labor	\$1,040,052	\$1,637,224	\$1,637,224	\$1,758,249	\$121,025	7.4%
Non Labor	1,352,095	1,154,050	1,154,050	864,040	-290,010	-25.1%
Total	\$2,392,146	\$2,791,274	\$2,791,274	\$2,622,289	-\$168,985	-6.1%

Division: Finance and Administration - Information Technology Services Program

Business Plan Priority: Cultivate operational and organizational excellence

The Information Technology Services Program supports Northern Water's technical and information resources. The IT Program is divided into four focus areas: Client Support Services; Geographical Information System (GIS); Network Infrastructure; Software Development and Application Support.

Client support services are responsible for client and system infrastructure support. Client services offer a broad range of support activities covering help desk calls, audio/visual support for internal and external meetings, and workstation management and mobile device support.

The GIS area is responsible for creating and maintaining geographic information. They provide geospatial support to Northern Water staff in the creation of datasets, analysis and maps for various projects and activities. GIS activities include developing water and ownership maps to support the inclusion and allotment department, and Real Estate/Security and Emergency Management department. GIS supports the property and Right-of-Way Department by generating maps of our property locations, easements and Northern Water infrastructure. GIS is also responsible for Northern Water's drone initiatives.

Network Infrastructure support provides the design, maintenance, and troubleshooting of Northern Water's network, security, and technical infrastructure. IT is responsible for all technical aspects of Northern Water's infrastructure, including servers, routers, switches, cybersecurity and firewalls.

Software Development and Application Support are responsible for Northern Water's custom and off-the-shelf enterprise applications. This group supports our Enterprise Resource Planning (ERP) software, Northern Water's website, document management system and many custom-developed applications. This group developed the current water management application. This group also supports Northern Water's databases.

Finally, IT Services is responsible for managing all electronic information. The department provides security, appropriate availability and accessibility to Northern Water information while maintaining business continuity through backup and recovery processes.

In 2022, the Information Technology Services Program:

- Completed the Backup and Content Indexing Solution Project. Northern Water's data backup solution (Commvault Hyperscale) was renewed through January 18, 2025. Backup and recovery solutions provide enterprise-grade protection and recovery of virtual machines, containers, databases, applications (including Cloud), endpoints and files. Backup solutions allow Northern Water to manage backed-up data and workloads efficiently and securely, both on-premises and in the Cloud. Completing this project has increased backup speeds, data retention and enhanced the protection of backups.
- Completed the Cybersecurity Continuous Monitoring Project which included hardware, software and third-party vendor services to allow for 24/7 security monitoring of Northern Water systems (e.g., SCADA and security assets). Northern Water now has monitoring to keep track of everything happening on the network and respond to threats in real time. The cybersecurity monitoring project provides Northern Water with the tools and time to immediately analyze, record and respond to potential threats.
- Upgraded Northern Water's in-house Water Management System to include the water contracts and accounting into one unified system. The new integration provides interconnectivity between Water Scheduling and Allotments screens, enhanced security and additional capabilities for the Allotments system. The IT team also added new water accounting screens to the Water Management System to provide the Water Scheduling Department with enhanced functionality regarding water orders and transfers while servicing water customers in real-time.
- Developed a software program to allow department managers to review/approve employees' time in Northern Water's Asset Management system and automatically export/import their time into Northern Water's time entry system. The new import process alleviates the need for manual intervention by IT each pay period.

- Supported the campus development initiatives by relocating data centers at the Farr Pump Plant to the new Willow Creek campus, installing and configuring networking equipment, connecting ethernet/phone lines, setting up audio-visual equipment and managing the relocation of technology equipment to the new campus.
- Established an in-house drone program. The first phase of the drone program will provide the Communications and Project Management departments with video and aerial imagery coverage. The drone initiative consisted of the GIS staff attending drone training at CSU and passing the FAA part 107 Certified UAS Pilots exam.
- Provided GIS and data collection support for the East Troublesome Fire activities. The GIS team facilitated the data collection efforts for Emergency Watershed Protection (EWP) and provided ongoing mapping support.
- Migrated Northern Water's Enterprise Resource Planning (ERP) system to a multi-tenant cloud SaaS solution to enhance security, cloud accessibility, improve collaboration, increase efficiency, and access to real-time data and reporting.
- Upgraded Northern Water's domain controller systems. The domain controllers provide authentication, authorization, password management and other network functions. The upgrade increases the security of the user authentication process and network transfer protocols.
- Expanded the Microsoft 365 environment to include Dynamics 365 Contact Relationship Manager (CRM) functionality to centralize and manage contact relationships and engagements. The new CRM system will integrate with our public-facing website and provide event management capabilities. This will also allow Northern Water to create more integrated solutions moving forward.
- Documented, created and instituted processes and flow maps for the NISP Real Estate acquisition project. This included the custom management software developed with Microsoft Dynamics and ESRI platforms for land acquisition management.

In 2023, the Information Technology Services Program intends to:

- Implement an Information Technology Service Management (ITSM) tool to provide a single repository to capture and relate all IT ongoings while streamlining IT service delivery, transparency and communication. One of the primary goals of the ITSM implementation is to increase end-user self-sufficiency and improve IT-business relationships. The project will help standardize IT processes, streamline tasks and provide the ability to make data-driven decisions while being transparent with IT daily operations.
- Conduct and oversee Northern Water's boardroom audiovisual (AV) system refresh. The AV hardware, software and programming are necessary to operate Northern Water and Municipal Subdistrict Board meetings. The project will include new monitors and equipment to enable video conferences. AV consulting services are required for calibration, programming and configuring the system.
- Upgrade the Unified Computing System (UCS) to run Cisco cybersecurity tools. The upgrade will give Northern Water five years of support and increased performance. Information Technology will also add an additional UCS server on the West Slope for redundancy.
- Implement the Instrument Control System (ICS) and Security System Recovery Project to enhance Northern Water's business continuity and disaster recovery capabilities. This project aims to securely manage image-level backups of SCADA, security and business critical devices to increase recovery time significantly.
- Upgrade Northern Water's firewalls, which are critical to cybersecurity and communication functions across all Northern Water Enterprises. The project includes adding new networking equipment to replace end-of-life equipment, increasing cyber defense capabilities. Adding additional functionality and hardware will allow Northern Water to operate securely from both East and West Slope facilities.
- Migrate critical services to a hybrid cloud to allow for redundancy and minimize the dependency on singular servers and infrastructure for core systems. Moving systems from on-premises to cloud-based will enable Northern Water to work during network outages. The Northern Water website and water management system are candidates for this transition in 2023.

Information Technology	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Programming	\$386,079	\$410,258	\$410,258	\$448,894	\$38,636	9.4%
IT Support Services	2,022,128	2,717,789	2,717,789	2,516,523	-201,266	-7.4%
Geographic Information System	197,618	276,749	276,749	339,342	62,593	22.6%
Policy Administration	9,208	13,512	13,512	23,913	10,401	77.0%
IT General	206,999	169,211	169,211	347,764	178,553	105.5%
Travel and Training	63,243	195,707	195,707	179,276	-16,431	-8.4%
Total	\$2,885,275	\$3,783,226	\$3,783,226	\$3,855,712	\$72,486	1.9%
Summary by Category						
Labor	\$1,129,436	\$1,571,276	\$1,571,276	\$1,625,387	\$54,111	3.4%
Non Labor	1,755,840	2,211,950	2,211,950	2,230,325	18,375	0.8%
Total	\$2,885,275	\$3,783,226	\$3,783,226	\$3,855,712	\$72,486	1.9%

Division: Finance and Administration - Records Program

Business Plan Priority: Cultivate operational and organizational excellence

The Records Program is responsible for controlling and maintaining all official Northern Water records. Major functions include organizing, digitizing, storing, preserving, retrieving and disposing all records; assisting staff and legal counsel with records research, coordinating and distributing all mail and packages; and responding to Colorado Open Records Act (CORA) requests.

In 2022, the Records Program:

- Responded to records requests from Northern Water staff and the public.
- Revised the CORA policy document and implemented a new Records request form and updated internal response procedures.
- Continued to track and evaluate transitory material for deposition per records retention schedule using the eDocs DM/RM system.
- Provided general records and eDocs DM/RM system training to new staff.
- Managed the records of multiple long-term personnel upon retirement.
- Coordinated the transfer of vital electronic and paper records related to critical infrastructure and water allotment contracts into the eDocs DM/RM system for long-term preservation.

In 2023, the Records Program 2023 intends to:

- Upgrade the eDocs Document Management/Records Management (DM/RM) systems to enhance integration with other enterprise applications; continue to deploy the eDocs DM/RM system to select departments to import permanent electronic records; and train employees on use.
- Implement a new file taxonomy in the Building A records vault to align with the eDocs DM/RM file plan; continue to track and evaluate transitory material for deposition per records retention schedule using the eDocs DM/RM system.
- Continue to inventory and index maps and large drawings located in Building B and incorporate the material into the eDocs DM/RM system for long-term permanent records preservation.
- Train new employees on general records principles and facilitate the transfer of records from offboarding/retiring personnel.

Records	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Records	\$445,823	\$609,094	\$609,094	\$610,376	\$1,282	0.2%
Travel and Training	9,745	27,208	27,208	41,922	14,714	54.1%
Total	\$455,568	\$636,302	\$636,302	\$652,298	\$15,996	2.5%
Summary by Category						
Labor	\$451,294	\$555,102	\$555,102	\$607,298	\$52,196	9.4%
Non Labor	4,274	81,200	81,200	45,000	-36,200	-44.6%
Total	\$455,568	\$636,302	\$636,302	\$652,298	\$15,996	2.5%

Division: Finance and Administration - Water Scheduling Program

Business Plan Priority: Cultivate operational and organizational excellence

The Water Scheduling Department allocates water in accordance with project policies and allotment contracts, responds to customer and allottee requests for delivery and transfer of water, maintains accounting and provides reporting of water allocation, deliveries and transfers, communicates canal delivery orders to Distribution’s personnel and to state officials, and coordinates various invoicing and payment activities related to water use and transfer. The department is also responsible for quantifying all stored water in project reservoirs, ensuring that all releases and inflows are properly assigned to the various water projects and beneficiaries as described in applicable contracts and agreements. The department coordinates software and database support and prepares various custom reports and analytical products.

In 2022, the Water Scheduling Program:

- Implemented a new workflow where Water Scheduling now places orders with the West Slope Operators on East Slope reservoir releases.
- Importing of one municipal entity with real-time daily data into the Return Flow DB.
- Continued to cross-train each team member to assist in monthly closeout processes.
- Assisted Distribution’s use of a Power BI app for meter-reading collection.
- Implemented the Water Runner Power App to increase the accessibility of flow data.
- Submitted accounting for Carter Lake, which passed the State audit with minimal issues.
- Implemented accounting workbooks that are submitted monthly to the Colorado Division of Water Resources for the following: Boulder Reservoir, Chimney Hollow Reservoir construction, West Slope Intergovernmental Agreement, West Slope Building Augmentation plan and Carter Lake.

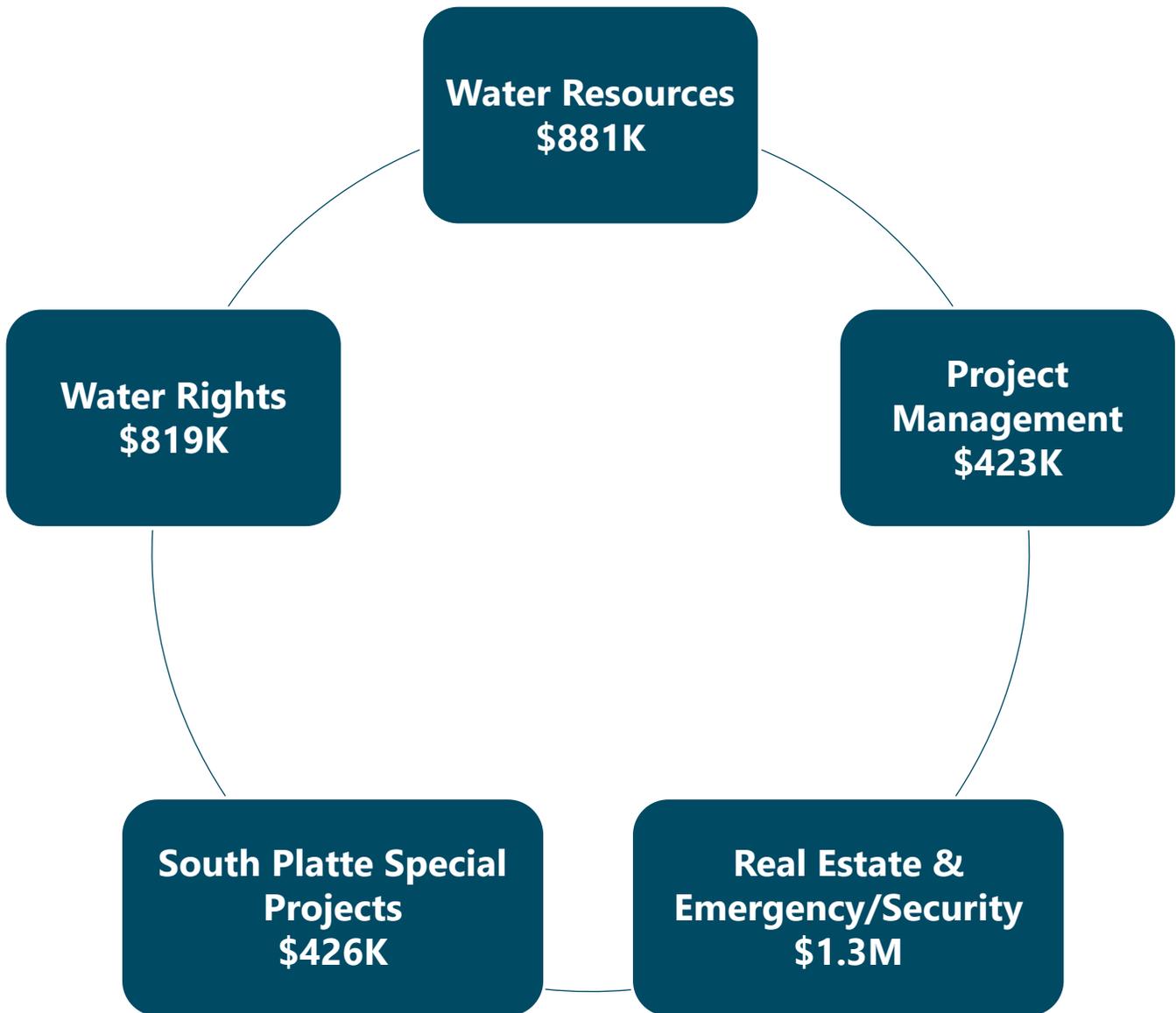
In 2023, the Water Scheduling Program intends to:

- Continue to respond to customer requests in a timely manner and accurately administer requests for delivery and transfer of water.
- Continue to develop and maintain reporting products to support the needs of internal departments, the Board of Directors, and outside agencies, both state and federal.
- Continue to advance the development of water accounting algorithms for the Windy Gap FIRMing Project and the Northern Integrated Supply Project.
- Create, maintain and submit reservoir accounting for Carter Lake, Horsetooth, Flatiron and Boulder reservoirs, and newly added Chimney Hollow to state officials.
- Continue data collection support related to Article 19 protection of C-BT Project return flows.
- Integrate the Op Sheet into a Power App and/or dashboard to ease the stress of the end-of-day tasks.

Water Scheduling	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Water Scheduling						
General	\$447,652	\$469,958	\$469,958	\$584,428	\$114,470	24.4%
Travel and Training	\$3,627	\$13,240	\$13,240	\$22,881	\$9,641	72.8%
Total	\$451,279	\$483,198	\$483,198	\$607,309	\$124,111	25.7%
Summary by Category						
Labor	\$445,489	\$460,698	\$460,698	\$583,309	\$122,611	26.6%
Non Labor	5,790	22,500	22,500	24,000	1,500	6.7%
Total	\$451,279	\$483,198	\$483,198	\$607,309	\$124,111	25.7%

ENGINEERING DIVISION PROGRAMS

The Engineering Division looks at existing facilities and operations to ensure water delivery is successful, while planning for future goals for the organization. Responsibilities include: water supply planning and forecasting to maximize operation of the system; design improvements to the existing system; plan new projects to improve operation and reliability; protect the water supply through water rights and permitting issues; and manage property and real estate.



Division: Engineering - Project Management Program

Business Plan Priority: Plan and implement new water supply projects

The Project Management Program leads the various civil project development efforts at Northern Water. Activities within the program include project planning, budgeting, scheduling, permitting, design, contracting and construction management.

In 2022, the Project Management Program:

- Continued construction on the Chimney Hollow Reservoir Project.
- Completed startup of the Eastern Pump Plant project for the Southern Water Supply Project.
- Completed construction of the Willow Creek Campus on the West Slope.
- Completed construction of Building F on the Berthoud campus.
- Oversaw Kiewit's Geotechnical Design Assessment as the construction manager/general contractor for Glade Reservoir.
- Continued the permitting, planning and design of all aspects of NISP.
- Construction of the Colorado River Connectivity Channel began at Windy Gap Reservoir.

In 2023, the Project Management Program intends to:

- Manage the construction of the Windy Gap Firming Project (Chimney Hollow Reservoir).
- Manage the construction on the Colorado River Connectivity Channel at Windy Gap Reservoir.
- Perform ongoing permitting, design, pre-construction and financial planning activities for the Northern Integrated Supply Project (NISP).
- Manage the design and construction activities for Berthoud campus facilities.
- Provide ongoing support for activities related to the East Troublesome Fire.
- Provide support to the Distribution and Collection programs related to budgeting, planning, design and construction management of various hydraulic structure improvements and rehabilitation.

Project Management	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Project Management	240,363	327,051	327,051	363,424	36,373	11.1%
Travel and Training	44,609	48,456	48,456	59,425	10,969	22.6%
Total	\$284,972	\$375,507	\$375,507	\$422,849	\$47,342	12.6%
Summary by Category						
Labor	\$232,269	\$297,507	\$297,507	\$362,849	\$65,342	22.0%
Non Labor	52,703	78,000	78,000	60,000	-18,000	-23.1%
Total	\$284,972	\$375,507	\$375,507	\$422,849	\$47,342	12.6%

Division: Engineering - Real Estate Services Program

Business Plan Priority: Cultivate operational and organizational excellence

The Real Estate Program manages, protects, acquires and disposes of real property rights for Northern Water, its Municipal Subdistrict and multiple Water Activity Enterprises (Enterprise) established by Northern Water and the Municipal Subdistrict. Property oversight includes ranch property currently held by Northern Water and property for future water projects. The Real Estate Program also provides utility locates activities with the majority of those services provided to the Southern Water Supply Project and Pleasant Valley Pipeline operations.

In 2022, the Real Estate Program:

- Hired an additional Right-of-Way Agent to assist with the acquisition of easements and fee properties associated with the Northern Integrated Supply Project.
- Hired a Real Estate Assistant to support the Real Estate department in acquisition and property management.
- Worked with the IT Department to develop a right-of-way acquisition and management tool (LYNX) for current and future properties owned by Northern Water and its multiple Enterprises.
- Completed the property acquisition for the proposed Galeton Reservoir.

In 2023, the Real Estate Program intends to:

- Continue to develop relationships with contractors and other community partners along the Enterprises' pipelines.
- Monitor increased development activities adjacent to the Enterprises' pipelines.
- Continue to work with property owners on reclamation needs on the Southern Water Supply Project II pipeline.
- Continue easement acquisition for the Northern Integrated Supply Project conveyance, which is approximately 250 permanent and temporary easements.
- Begin property acquisitions for Colo. Highway 287 relocation for Northern Integrated Supply Project.
- Continue and complete property acquisitions for Glade Reservoir.
- Continue to fine-tune LYNX (GIS/CRM).

Real Estate	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Real Estate General	\$102,083	\$57,189	\$57,189	\$392,158	\$334,969	585.7%
Real Estate Travel/Training	28,397	30,990	30,990	24,021	-6,969	-22.5%
Total	\$130,480	\$88,179	\$88,179	\$416,179	\$328,000	372.0%
Summary by Category						
Labor	\$46,186	\$57,179	\$57,179	\$189,829	\$132,650	232.0%
Non Labor	84,294	31,000	31,000	226,350	195,350	630.2%
Total	\$130,480	\$88,179	\$88,179	\$416,179	\$328,000	372.0%

Division: Engineering - Security and Emergency Management Program

Business Plan Priority: Cultivate operational and organizational excellence

The Security and Emergency Management Program protects and secures Northern Water’s assets including structures, dams and most importantly the staff, Board of Directors and guests. In addition, the program develops, plans and prepares procedures and protocols, training and exercises for emergency preparedness for Northern Water, its Municipal Subdistrict and the multiple Water Activity Enterprises (Enterprise) established by Northern Water and the Municipal Subdistrict.

In 2022, the Security and Emergency Management Program:

- Developed Emergency Action and Continuity of Operations Plans.
- Prepared and conducted an emergency preparedness exercise with Reclamation.
- Developed site security plans for facilities owned or operated by Northern Water.
- Hired access control staff to help with the installation and management of the Lenel Access Control System.
- Completed the installation of Lenel Access Control System for Northern Water and select Enterprise facilities.
- Completed installation of Lenel Access Control System at the new Granby Campus and new facilities at Berthoud Campus.

In 2023, the Security and Emergency Management Program intends to:

- Work with all department managers to prepare an Emergency Action Plan to keep their respective departments operational in the event of a disaster.
- Continue to assist Reclamation on updating security site plans for federally-owned C-BT Project facilities.
- Continue to work with Larimer County and Grand County Sheriff’s Departments for security patrols of Colorado-Big Thompson facilities operated by Northern Water.
- Develop a plan for Lenel Access Control System and integration of the Milestone Camera system.
- Move security camera operations to Security and Emergency Management.
- Complete installation of the Lenel Access Control on Southern Water Supply Project facilities.
- Hire additional camera and access control staff to help with the installation, operations and management of the Lenel Milestone/Access Control System.
- Contract with an outside security consultant for monitoring of video surveillance and access control.

Emergency/Security Management	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Security General	\$203,134	\$458,625	\$458,625	\$866,145	\$407,520	88.9%
Travel and Training	17,097	11,762	11,762	20,000	8,238	70.0%
Total	\$220,231	\$470,387	\$470,387	\$886,145	\$415,758	88.4%
Summary by Category						
Labor	\$184,381	\$184,187	\$184,187	\$502,645	\$318,458	172.9%
Non Labor	35,850	286,200	286,200	383,500	97,300	34.0%
Total	\$220,231	\$470,387	\$470,387	\$886,145	\$415,758	88.4%

Division: Engineering - South Platte Special Projects Program

Business Plan Priority: Protect and conserve water supplies

The South Platte Special Projects Program conducts and manages special and specific projects for the benefit of Northern Water’s constituents where such projects involve irrigation management for deficit practices, groundwater issues and the maintenance and enhancement of groundwater return flows within Northern Water boundaries.

In 2022, the South Platte Special Projects Program:

- Represented Colorado South Platte water users on the 3-States ESA Platte River Recovery and Implementation Program Water Advisory Committee.
- Conducted accounting for 15 Water Court-Decreed Augmentation Plans on the South Platte.
- Reviewed water rights applications.
- Conducted augmented deficit irrigation studies at the USDA/CSU Greeley research/demonstration farm, which includes monitoring (1) reduced/saved CU for meeting future water needs and (2) the augmentation/maintenance of historic return flows.

In 2023, the South Platte Special Projects Program intends to:

- Participate in the South Platte Mapping and Analysis Project through Colorado State University, including AWAS, IDSCU and ReSET, to provide cooperative agency support to various software applications used by South Platte water users.
- Participate with Colorado State University in the USDA Augmented Deficit Study at a local Greeley research farm to monitor reduced evapotranspiration from deficit irrigation for leasing to cities and to monitor augmentation to protect historic return flows.
- Provide support and water accounting to the Tamarack Project of managed groundwater recharge, an essential component of the Platte River Recovery and Implementation Program and provide technical support to the South Platte Water Related Activities Program.
- Manage Northern Water’s Augmentation and Recharge Accounting Program, which performs the monthly water accounting for 15 Water Court-approved well augmentation plans on the lower South Platte River.
- Review requests for the use of C-BT Project water in substitute water supply plans.

South Platte Special Projects	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Mapping and Analysis	\$12,500	\$20,000	\$20,000	\$0	-\$20,000	n/a
USDA Deficit Study	119,955	157,541	157,541	158,650	1,109	0.7%
Tamarack Project	5,834	10,181	10,181	12,654	2,473	24.3%
General Projects	168,136	210,236	210,236	250,023	39,787	18.9%
Travel and Training	3,160	1,000	1,000	5,139	4,139	413.9%
Total	\$309,584	\$398,958	\$398,958	\$426,466	\$27,508	6.9%
Summary by Category						
Labor	\$267,559	\$336,958	\$336,958	\$350,466	\$13,508	4.0%
Non Labor	42,025	62,000	62,000	76,000	14,000	n/a
Total	\$309,584	\$398,958	\$398,958	\$426,466	\$27,508	6.9%

Division: Engineering - Water Resources Program

Business Plan Priority: Protect and conserve water supplies

The Water Resources program performs engineering activities that support Northern Water and the various Water Activity Enterprise (Enterprise) funds. Specific engineering efforts include projects operations planning and modeling, streamflow forecasting, river basin modeling, water availability studies and water supply quantifications.

In 2022, the Water Resources Program:

- Produced water supply and operations forecasts for the C-BT Project and informed the Board, management, staff and participants of water availability for allocation and use.
- Participated in West Slope stakeholder groups including river administration and operations discussions, Green Mountain Historic User Pool discussions, Grand County Learning by Doing and Grand Lake Adaptive Management for clarity.
- Recalibrated streamflow forecasting models implemented in the Flood Early Warning System platform.
- Contracted, performed as fiscal agent and participated in the 2022 Colorado Airborne Snow Measurement program, which included successful flights in the Upper Colorado, Willow Creek, Fraser, Blue, Gunnison, Conejos, Dolores, South Platte, Arkansas, Roaring Fork, Yampa and Front Range basins. Project also included scientific support for incorporating ASO data into streamflow forecasts and improving decision support, as well as program facilitation and planning.
- Completed second year of a collaborative project with Reclamation and U.S. Geological Survey to implement a state-of-the-art snow modeling system.
- Updated operations and demands models for C-BT Project.
- Analyzed the effects of precipitation and sedimentation on operations in basins affected by the East Troublesome Fire.
- Supported data needs and project field verification for the East Troublesome Fire recovery program.
- Launched a Colorado State University study of mulch efficacy in the East Troublesome Fire burn scar with financial assistance from the Colorado Water Conservation Board.
- Provided engineering analyses and support to legal counsel on NISP Protected Mitigation Release water rights application. This water right received a final decree in 2022.
- Provided water resources support in the development of the Windy Gap Firing Project Nutrient Mitigation Plan.
- Created materials to streamline the C-BT Project Ownership Limitation calculation process.

In 2023, the Water Resources Program intends to:

- Inform leadership concerning the availability of C-BT Project supplies and make recommendations for allocation and use.
- Roll out the usage of a new streamflow forecasting system including recalibrated models.
- Participate in the funding and planning of the 2023 Colorado Airborne Snow Measurement program project including Airborne Snow Observatory (ASO) flights.
- Complete a collaborative project with Reclamation and U.S. Geological Survey to implement a state-of-the-art snow modeling system.
- Develop new ways to access, manage and visualize water resources data and create regular informational reports for the Board, management and staff.
- Lead Northern Integrated Supply Project participant operations committee to discuss details of future project operations.
- Provide water resources analysis for Windy Gap Firing Project participant operations committees to discuss details of future project operations.
- Analyze future operations of Boulder Reservoir.
- Investigate impacts to water supplies due to climate change and other water supply pressures.
- Provide water resources expertise for other Northern Water programs including Management, the Operations Division, Water Quality, Project Management, Water Scheduling, Water Rights, Contracts, Communications and Finance.
- Participate in Northern Water's Water Stewardship program.

- Protect C-BT Project return flows within Northern Water boundaries as per the Repayment Contract.
- Analyze the East Troublesome Fire’s effects on local hydrology and sedimentation. Quantify how restoration work is improving conditions.
- Continue to refine new demand prediction model.

Water Resources	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Water Resources General	\$80,063	\$116,533	\$116,533	\$37,612	-\$78,921	-67.7%
Return Flow Study	105,233	4,734	4,734	259,220	254,486	5375.7%
Stream Flow Forecast	277,759	480,578	480,578	246,067	-234,511	-48.8%
Climate Change	1,687	62,459	62,459	2,705	-59,754	-95.7%
South Platte WRAP	33,669	8,633	8,633	43,413	34,780	402.9%
Riverware System Model	5,088	18,418	18,418	4,964	-13,454	-73.0%
Water Rights	157,700	371,974	371,974	134,083	-237,891	-64.0%
Water Diligence and Opposition	160,595	25,340	25,340	134,463	109,123	430.6%
Travel and Training	6,405	23,559	23,559	18,000	-5,559	-23.6%
Total	\$828,200	\$1,112,228	\$1,112,228	\$880,527	-\$231,701	-20.8%
Summary by Category						
Labor	\$400,211	\$661,228	\$661,228	\$511,007	-\$150,221	-22.7%
Non Labor	427,990	451,000	451,000	369,520	-81,480	-18.1%
Total	\$828,200	\$1,112,228	\$1,112,228	\$880,527	-\$231,701	-20.8%

Division: Engineering - Water Rights Program

Business Plan Priority: Protect and conserve water supplies

The Water Rights Department is responsible for managing the water right assets owned by Northern Water and its enterprises, oversees the protection of those assets as needed in Water Court in cooperation with Northern Water’s legal counsel, and serves as a voice for Northern Water and Colorado water users to ensure water resources are protected on a district, state, regional and federal level. Overall, this department helps provide oversight and guidance on a variety of recovery, alternative management and water protection programs.

In 2022, the Water Resources Program:

- Represented Colorado South Platte water users on the 3-States ESA Platte River Recovery Program.
- Represented water users of Colorado River supplies on the Upper Colorado River Commission.
- Filed statements of opposition to protect C-BT Project, Northern Integrated Supply Project and Windy Gap water rights and completed due diligence on C-BT Project water rights.
- Participated in the initial implementation of the Wild and Scenic Alternative Management Plan for the upper Colorado River for the reach from Kremmling to Glenwood Springs.

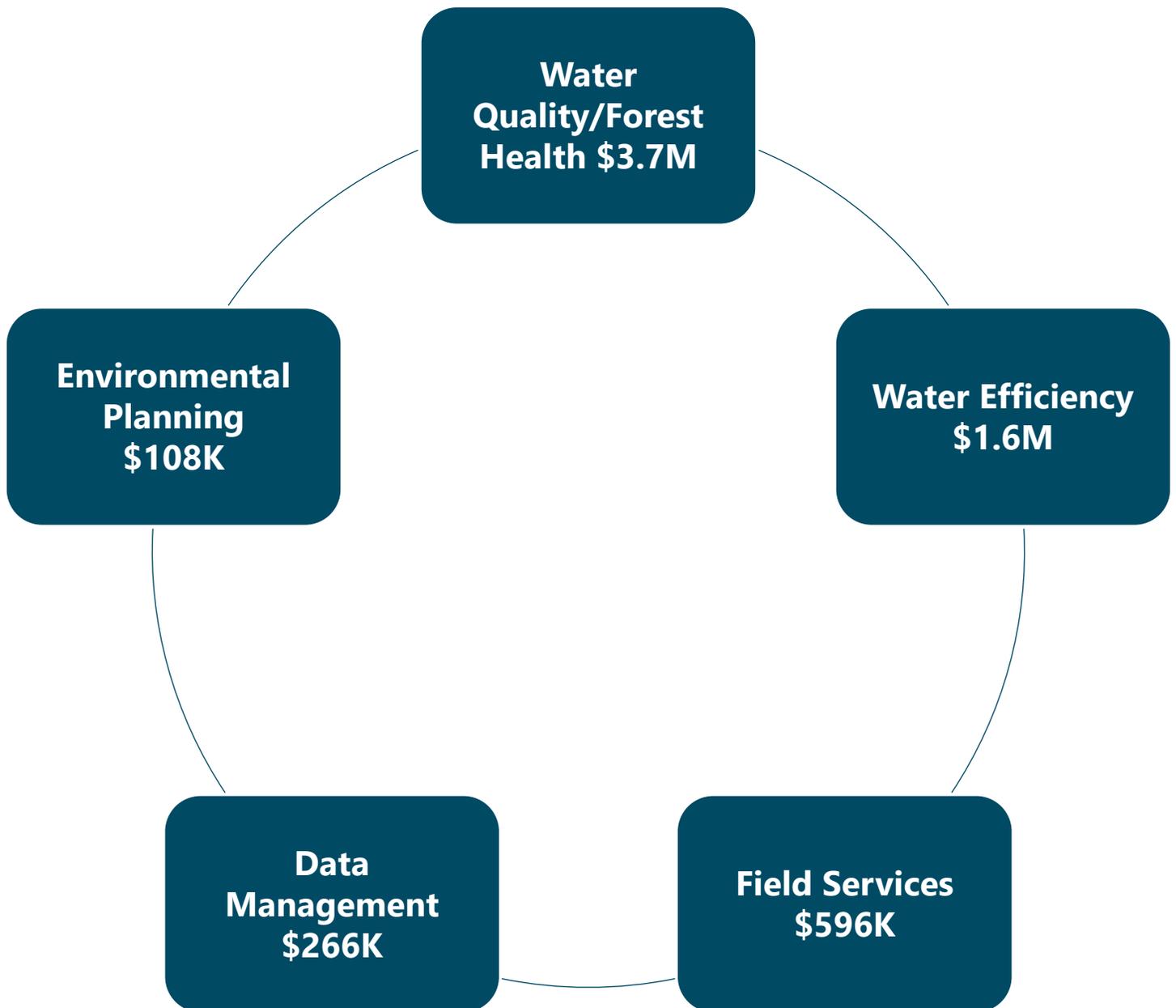
In 2023, the Water Rights Program intends to:

- Participate in various local, statewide, regional and interstate cooperative programs including recovery programs, stream management and river basin studies.
- Protect C-BT Project return flows within district boundaries as per the Repayment Contract and continue to engage in statements of opposition on water rights applications.
- File statements of opposition and continue due diligence to protect C-BT Project water rights, Northern Integrated Supply Project water rights and Windy Gap water rights.
- Provide water rights and water resources expertise for other Northern Water programs.

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Water Rights						
Expenditures:						
Program Summary						
Water Rights Return Flow Study	\$0	\$150,000	\$150,000	\$186,316	\$36,316	n/a
Water Opposition United, EC, ACW	0	150,000	150,000	149,489	-511	n/a
Water Opposition Other	26,833	175,000	175,000	334,335	159,335	n/a
Water Rights General	49,279	65,080	65,080	126,000	60,920	93.6%
Travel and Training	3,821	39,000	39,000	23,000	-16,000	-41.0%
Total	\$79,933	\$579,080	\$579,080	\$819,140	\$240,060	41.5%
Summary by Category						
Labor	\$72,885	\$57,080	\$57,080	\$345,140	\$288,060	n/a
Non Labor	7,048	522,000	522,000	474,000	-48,000	-9.2%
Total	\$79,933	\$579,080	\$579,080	\$819,140	\$240,060	41.5%

ENVIRONMENTAL SERVICES DIVISION PROGRAMS

The Environmental Services Division supports the development of future water supplies and the operation of existing water projects. Responsibilities include: ensuring compliance with environmental regulations and commitments; protecting existing and future water supplies; managing and protecting watershed and forest health; restoring and maintaining stream and aquatic habitat; collecting water flow, water quality and weather data; developing and supporting data management systems; and providing water efficiency education and technical support.



Division: Environmental Services - Data Management Program

Business Plan Priority: Protect and conserve water supplies

The Environmental Data Program aims to improve the quality, usability and accessibility of data assets and assists in data compilation and analysis. This is achieved by aligning departmental data management efforts and implementing a data governance framework to ensure adoption of best practices, while developing and supporting organizational data infrastructure, analytical tools and techniques in an integrated fashion. Environmental Data Program seeks to provide a common data foundation and data-driven framework from which all departments can build and operate upon. The Water Information System KISTERS (WISKI) product forms the backbone of Northern Water’s environmental data warehouse.

In 2022, the Environmental Data Program:

- Implemented new tools and dashboards for data visualization for staff and partner groups.
- Collaborated with staff to develop quality assurance and quality control processes for data review within the WISKI system.
- Implemented a new data partnership with the Colorado Climate Center for quality assurance and quality control of our weather data assets.
- Migrated our partner agencies and collaborative groups to our new data access systems/application programming interface.
- Developed new data visualization and access tools for staff.
- Recruited and trained a data intern for assistance on specialty data projects.
- Refined the WISKI system operation and documented the major sub-systems and troubleshooting procedures.
- Accounted for and cleaned up various water quality databases for the build-out of new a new WISKI module as part of the final data migration.

In 2023, the Environmental Data Program intends to:

- Conclude the WISKI data migration project for all environmental data.
- Build and develop new data analysis, visualization and internal application programming interface access tools.
- Complete the elimination of relic data systems and multi-system reliance through the integration of our new centralized tools with departmental workflows.
- Continue development and implementation of a data governance framework to ensure proper data management, documentation, ownership and retention.
- Continue to collaborate with various departmental staff to develop, implement and document standard quality assurance and quality control processes for data.
- Develop new systems for data acquisition and departmental requests.

Environmental Data Management	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Environmental						
Data Management	\$192,567	\$176,466	\$176,466	\$256,860	\$80,394	45.6%
Travel and Training	441	7,000	7,000	9,577	2,577	36.8%
Total	\$193,008	\$183,466	\$183,466	\$266,437	\$82,971	45.2%
Summary by Category						
Labor	\$192,776	\$173,466	\$173,466	\$252,437	\$182,190	105.0%
Non Labor	232	10,000	10,000	14,000	-99,219	-992.2%
Total	\$193,008	\$183,466	\$183,466	\$266,437	\$82,971	45.2%

Division: Environmental Services - Environmental Planning Program

Business Plan Priority: Protect and conserve water supplies

The Environmental Compliance Program provides environmental permitting, strategic planning, recommendations for proposed/changing environmental regulations, and environmental stewardship guidance for Northern Water and Municipal Subdistrict operations and new capital projects. The program specializes in compliance with the National Environmental Policy Act (NEPA), Clean Water Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, Endangered Species Act, National Historic Preservation Act, Colorado Water Quality Control Act and others.

In 2022, the Environmental Planning Program:

- Managed successful completion of the NEPA process (Environmental Assessment) for the Colorado River Connectivity Channel. A Finding of No Significant Impact was issued in spring of 2022.
- Collaborated with the U.S. Forest Service and completed a Participating Agreement for East Troublesome Fire recovery projects on Forest Service lands. The Forest Service provided over \$10 million dollars to Northern Water for fire recovery projects in 2022.
- Collaborated with the Bureau of Land Management and completed a cooperating agreement for East Troublesome Fire recovery projects on Bureau of Land Management lands. Bureau of Land Management provided approximately \$3.0 million dollars to Northern Water for fire recovery projects.
- Completed successful environmental permitting and compliance for East Troublesome Fire aerial mulching on Forest Service and Bureau of Land Management lands.
- Managed successful environmental permitting of multiple Emergency Watershed Protection Projects on private lands.
- Completed successful environmental permitting and compliance for multiple operations and maintenance projects, including but not limited to canal maintenance and improvements, pipeline blowoff valve replacement, fiber optic installations and Boulder Reservoir shoreline stabilization.
- Represented the interests of Northern Water, with the support of legal counsel, with comments on the President Biden's administration's efforts to redefine Waters of the United States (WOTUS Rulemaking).

In 2023, the Environmental Planning Program intends to:

- Provide environmental support for the Northern Integrated Supply Project, primarily on the Poudre River Adaptive Management front.
- Provide environmental compliance support for East Troublesome Fire Recovery, including creative and/or pragmatic methods for environmental compliance streamlining, and act as the primary environmental planning contact for other stakeholders and regulatory agencies.
- Support NEPA process for evaluation of alternatives to meet the Grand Lake clarity standard.
- Provide environmental compliance support for a variety of operations and maintenance projects. Anticipated activities include, but are not limited to, permitting, emergency guidance and strategic planning. Act as primary environmental contact for other stakeholders and regulatory agencies.
- Track proposed legislation and regulatory changes. Work with legal counsel on strategy. Participate in stakeholder meetings. Provide feedback to stakeholders and regulatory agencies. Provide internal guidance.
- Support the establishment of an organizational environmental stewardship charter.

Environmental Planning	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Environmental Planning	\$76,277	\$69,643	\$69,643	\$98,550	\$28,907	41.5%
Travel and Training	1,725	9,000	9,000	9,000	0	0.0%
Total	\$78,002	\$78,643	\$78,643	\$107,550	\$28,907	36.8%
Summary by Category						
Labor	\$67,564	\$65,643	\$65,643	\$88,550	\$22,907	34.9%
Non Labor	10,438	13,000	13,000	19,000	6,000	46.2%
Total	\$78,002	\$78,643	\$78,643	\$107,550	\$28,907	36.8%

Division: Environmental Services - Field Services Program

Business Plan Priority: Protect and conserve water supplies

The Field Services Department provides resources to accomplish fieldwork for other Northern Water departments. Services include flow measurements, GPS applications, agricultural conservation, agricultural irrigation practices, soil sampling, automated measurement stations, water quality monitoring, water quality sampling and other field related duties. Staff collects water samples from canals, ditches, creeks, rivers, and reservoirs to help support programs and findings within the Water Quality Department. Another large project is the South Platte flow monitoring network. Field Services works with the Colorado Division of Water Resources and others to collect automated flow data from several diversion structures throughout Northeastern Colorado.

In 2022, the Field Services Program 2022:

- Successfully completed another year of collecting accurate and reliable water quality data from rivers, streams, canals, reservoirs and lakes.
- Installed new automated flow monitoring stations on the C-BT and South Plate River networks.
- Conducted additional water quality sampling to assess post-fire impacts.
- Installed additional automated electrical conductivity monitoring stations on the Lower South Plate River.
- Completed sensor calibrations on the Northern Water's weather station network.
- Implemented in-house chlorophyll A analysis.

In 2023, the Field Services Program 2023 intends to:

- Continue collecting water quality samples from flowing rivers, streams and canal locations throughout Northern Water's boundaries and from the C-BT Project reservoirs and lakes.
- Continue collecting water quality samples to support the ongoing permitting processes for the Northern Integrated Supply Project and the South Platte Water Conservation Project and the permitting and construction of the Windy Gap Firming Project.
- Provide operational support and maintenance for the automated electrical conductivity stations located on the South Platte and Cache la Poudre River, the automated stream flow temperature monitoring stations throughout Northern Water's boundaries, the real-time weather stations, and the sondes, cameras, instruments and equipment to monitor water quality parameters throughout the C-BT Project.
- Measure flow discharge and maintain automated flow monitoring stations throughout Northern Water's boundaries. Many of these projects and activities are in cooperation with other local, state and federal agencies, while others are in direct support to Northern Water's Municipal Subdistrict, and the water activity enterprises.
- Continue operation and maintenance of Northern Water's weather station network. The weather station network provides vital information to farmers, turf managers and augmentation plans throughout Northeastern Colorado.

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Field Services						
Expenditures:						
Program Summary						
Flow Monitoring Stations	\$268,541	\$297,736	\$297,736	\$319,992	\$22,256	7.5%
Weather Stations	171,749	225,942	225,942	244,589	18,647	8.3%
Field Services Programs	17,820	16,857	16,857	12,500	-4,357	-25.8%
Travel and Training	263	36,000	36,000	19,262	-16,738	-46.5%
Total	\$458,373	\$576,535	\$576,535	\$596,343	\$19,808	3.4%
Summary by Category						
Labor	\$321,361	\$390,535	\$390,535	\$421,843	\$31,308	8.0%
Non Labor	137,012	186,000	186,000	174,500	-11,500	-6.2%
Total	\$458,373	\$576,535	\$576,535	\$596,343	\$19,808	3.4%

Division: Environmental Services - Water Quality and Forest Health Program

Business Plan Priority: Protect and conserve water supplies

The Water Quality Program at Northern Water serves to monitor, evaluate and manage water quality associated with Northern Water and Municipal Subdistrict projects in order to best serve and protect the organization and its allottees and constituents.

Forest Health management is an important initiative for Northern Water to protect and maintain the long-term water quality of the C-BT and Windy Gap projects. Northern Water's water supplies are almost entirely dependent upon snowmelt from high-elevation watersheds, and as major wildfires such as the 2020 East Troublesome Fire have shown, wildfires within these watersheds can have dramatic effects on the quality of watershed runoff and the ability to meet water supply needs. Northern Water is currently involved in several partnerships to proactively address forest and watershed health including the C-BT Headwaters Partnership, the Northern Colorado Fireshed Collaborative, the Wildfire Watershed Protection Group and the Watershed Health Investment Partnership. In addition, Northern Water takes an active role in supporting local, state, and federal entities' efforts to promote and implement projects that improve forest health and protect infrastructure from wildfire risks.

In 2022, the Water Quality and Forest Health Program:

- Pursued planning of pollutant (nutrient, E. coli) reduction strategies and projects associated with permit requirements for the Northern Integrated Supply Project.
- Monitored water quality in support of multiple Northern Water planning and permit requirements.
- Developed outreach materials associated with the collaborative monitoring of emerging contaminants in water supply.
- Participated in the Colorado River Learning by Doing Program.
- Supported fire recovery by leading aerial mulch operations and U.S. Forest Service point treatment scoping.
- Participated in the Colorado-Big Thompson Headwaters Partnership with U.S. Forest Service, National Park Service, Reclamation, WAPA and Colorado State Forest Service.
- On-boarded two new water quality engineer staff members.
- Continued participation in the Colorado-Big Thompson Headwaters Partnership, a collaboration between Northern Water, U.S. Bureau of Reclamation, U.S. Forest Service, National Park Service, Western Area Power Administration and the Colorado State Forest Service.
- Participated as a stakeholder in the Northern Colorado Fireshed Collaborative, Wildfire Watershed Protection Group and the Watershed Health Investment Partnership.
- Provided capacity support for the Estes Valley and Big Thompson Watershed Coalitions.
- Partnered with the Colorado State Forest Service to help fund a 35-acre forest health project in Lory State Park.
- Provided funding to the Colorado State Forest Service and Estes Valley Watershed Coalition for a 50-acre forest health project west of Mary's Lake.
- Partnered with Larimer County Department of Natural Resources to help fund 30-acres fuels reduction project at Hermit Park Open Space.
- Participated in and provided funding support for the development of the Estes Valley Community Wildfire Protection Plan.
- Provided cash match for grants obtained by the Estes Valley Watershed Coalition to implement a restoration project at Fish Creek at Cheley Camp.
- Partnered with the Estes Valley Watershed Coalition to help fund the planning of a forest health project at Thunder Mountain.
- Provided match to the Big Thompson Watershed Coalition to support the purchase of an Air Curtain Burner and outreach to private landowners
- Sponsored the Big Thompson Watershed Coalition's annual Trek the Thompson, a public outreach event to inform the public about the importance of the Big Thompson River.
- Provided funding to the Boulder Valley and Longmont Conservation Districts to implement their forest health program. Provided support to the Grand County Wildfire Council's 2022 community chipping days and fuels reduction cost-share programs.

In 2023, the Water Quality and Forest Health Program intends to:

- Support East Troublesome Fire recovery efforts through data collection and analysis, stakeholder engagement, mitigation project management and other efforts.
- Develop Northern Integrated Supply Project Adaptive Management and Poudre River Collaborative frameworks.
- Participate in Grand Lake National Environmental Policy Act (NEPA) process to evaluate alternatives to improve clarity in Grand Lake.
- Participate in Grand Lake Adaptive Management to develop operational approaches to improve clarity in Grand Lake while NEPA options are evaluated.
- Participate in the new collaborative South Platte Salinity Initiative to scope salinity issues in the basin and potential best management practices.
- Coordinate a collaborative effort for stakeholders to develop a site-specific temperature standard proposal for the Cache la Poudre River.
- Implement Northern Integrated Supply Project mitigation and enhancement commitments in accordance with permits and plans upon the expected issuance of the 404 permit and Record of Decision.
- Continue the development of source water protection plans and partnerships.
- Scope ecosystem restoration opportunities in the North Fork of the Colorado River through the Kawuneeche Valley Ecosystem Restoration Collaborative.
- Develop Willow Creek restoration project in partnership with Learning by Doing partners.
- Renew the Colorado-Big Thompson Headwaters Partnership Memorandum of Understanding.
- Continue partnerships with the Colorado State Forest Service, Larimer County, Larimer Conservation District, Big Thompson Watershed Coalition and Estes Valley Watershed Coalition to implement forest and watershed health projects in C-BT and Windy Gap Projects' watersheds.
- Participate in Grand County Wildfire Council's efforts to develop a Community Wildfire Protection Plan.
- Support the Grand County Wildfire Council's outreach programs and fuels mitigation efforts.
- Continue participation as a stakeholder in the Northern Colorado Fireshed Collaborative, Wildfire Watershed Protection Group and the Watershed Health Investment Partnership.

Water Quality & Forest Health	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year	Fiscal Year 2023 Budget	Dollar	Percentage
			2022		Change From	Change From
			Estimated		Fiscal Year	Fiscal Year
			Actual		2022 Budget	2022 Budget
Expenditures:						
Program Summary						
Water Quality Programs	\$620,334	\$959,388	\$959,388	\$1,247,497	\$288,109	30.0%
Baseline Monitoring	662,324	566,985	566,985	810,010	243,025	42.9%
Water Quality Studies	371,779	872,473	872,473	1,039,497	167,024	19.1%
Watershed Groups	80,647	138,662	138,662	160,000	21,338	15.4%
Regulations	37,604	34,525	34,525	56,501	21,976	63.6%
Source Water Protection	12,735	133,858	133,858	268,247	134,389	100.4%
Travel and Training	7,529	63,979	63,979	142,921	78,942	123.4%
Total	\$1,792,953	\$2,769,870	\$2,769,870	\$3,724,673	\$954,803	34.5%
Summary by Category						
Labor	\$883,985	\$1,218,321	\$1,218,321	\$1,429,823	\$211,502	17.4%
Non Labor	908,968	1,551,549	1,551,549	2,294,850	743,301	47.9%
Total	\$1,792,953	\$2,769,870	\$2,769,870	\$3,724,673	\$954,803	34.5%

Division: Environmental Services - Water Efficiency Program

Business Plan Priority: Protect and conserve water supplies

The Water Efficiency Program develops, promotes, supports and assesses water efficiency as an integral component of water planning, management and supply for the benefit of its allottees, stakeholders and the citizens of Colorado. The department seeks to minimize agricultural dry-up, meet a portion of future water needs as intended in the Colorado Water Plan, increase Colorado-Big Thompson system resilience to drought and increased climate uncertainty, minimize structural and non-structural water development costs and support environmental conservation.

In 2022, the Water Efficiency Program:

- Completed 11 Water-Efficient Landscape Grant projects in three counties for six homeowner associations, two cities, two churches and one district.
- Established a partnership with Colorado State University's Colorado Agricultural Meteorological Network to perform quality assurance and quality control for weather data and propagating it to national data sets via MADIS.
- Continued creating water-efficient landscape designs with Denver Botanic Gardens for grant projects.
- Initiated Water Stewardship engagement with allottees to determine regional messaging interest and opportunities.
- Retrofitted 431 faucet aerators, 166 showerheads and 194 toilets to high-efficiency WaterSense models in Loveland, Fort Collins and Evans through a partnership with Larimer County Conservation Corps.
- Initiated program impact analysis for water savings metrics on all projects and services, which reached 2,999 people in 2022.
- Received a record 60 landscape consultation requests, of which 47 site visits were completed and a waitlist was created for more.
- Completed 33 Basic Irrigation Audits and six Advanced Irrigation Audits for Louisville, Superior and Longmont.
- Piloted Low Impact Development designs and installations for rain gardens with CSU's Colorado Stormwater Center.
- Supported campus development that incorporates energy, water and resource efficiency in an educational format.

In 2023, the Water Efficiency Program intends to:

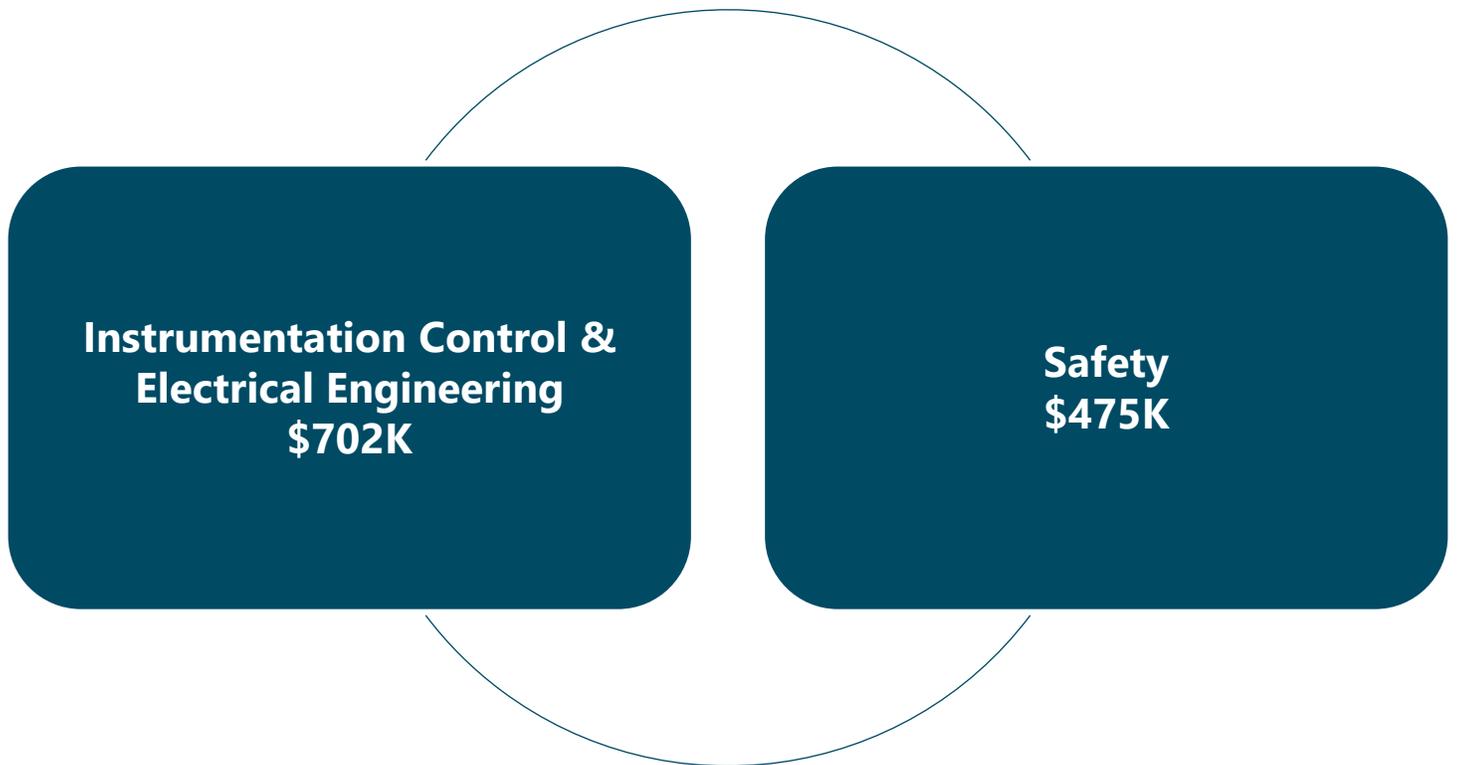
- Implement new water-efficient landscape demonstrations in campus development and conservation garden renovations.
- Continue water efficiency technical support through landscape consultations, water audits and facilitating collaborative water-efficient landscape grants.
- Partner with Colorado Water Conservation Board (CWCB) to offer allottees training in the management of non-revenue water through distribution water loss management.
- Develop water stewardship, drought and efficiency messaging options through allottee engagement and guidance.
- Build landscape water efficiency capacity through training and certifications for municipal and private sector partners.
- Partner with Sonoran Institute and CWCB to continue supporting Growing Water Smart workshops for municipal and district allottees in support of the Colorado Water Plan to integrate water efficiency and land use planning.
- Collaborate on water-efficient residential landscape plans for use in new and existing development.
- Create guides and plans for native grass for installation, management, removal and renovations.
- Support South Platte Basin Implementation Plan projects on climate adaptive plants, plans and savings capacity analysis.
- Support campus development that incorporates energy, water and resource efficiency in an educational format.

Water Efficiency	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Water Efficiency						
Programs	\$241,838	\$456,960	\$456,960	\$645,351	\$188,391	41.2%
Workgroups	345,723	471,647	471,647	452,430	-19,217	-4.1%
Landscape Grants	138,211	200,000	200,000	219,730	19,730	n/a
Conservation Gardens	85,244	240,265	240,265	274,288	34,023	14.2%
Travel and Training	39,261	30,326	30,326	40,500	10,174	33.6%
Total	\$850,278	\$1,399,198	\$1,399,198	\$1,632,299	\$233,101	16.7%
Summary by Category						
Labor	\$554,645	\$778,198	\$778,198	\$726,549	-\$51,649	-6.6%
Non Labor	295,633	621,000	621,000	905,750	284,750	45.9%
Total	\$850,278	\$1,399,198	\$1,399,198	\$1,632,299	\$233,101	16.7%

OPERATIONS DIVISION PROGRAMS

The Operations Division's largest responsibilities include operating and maintaining the transferred works and joint works portions of the CB-T and the Windy Gap projects, as well as Northern Water's pipelines and two hydropower plants. The division is also responsible for maintaining Northern Water's facilities and the organization's vehicle and equipment fleet. Operational responsibilities include: around-the-clock monitoring and controlling pump plants, canals, pipelines, reservoirs, hydropower facilities, buildings and grounds using a comprehensive SCADA (supervisory control and data acquisition) system and manual operations by field staff. Maintenance activities include: constructing civil, electrical, mechanical and SCADA systems; and repairing and modernizing equipment, infrastructure and facilities via an enterprise-wide asset management system.

The Collection Systems, Distribution Systems, Facilities and Fleet and Control Center departments are also in the Operations Division, but described in previous portions of this document.



Division: Operations - Instrumentation Controls and Electrical Engineering Program

Business Plan Priority: Cultivate Operational and Organizational Excellence

The Instrumentation Controls and Electrical Engineering Program analyzes, optimizes, controls and designs complex systems that are used throughout Northern Water’s water storage and supply systems. These systems include pump plants, hydropower plants, canal controls and flow control vaults. Labor charges for work on specific projects are charged directly to those activities. Other responsibilities include design and implementation of the core Northern Water communication system and developing strategies for fiber connectivity.

In 2022, the Instrumentation Controls and Electrical Engineering Program:

- Maintained system reliability and resiliency and availability and uptime of control systems throughout Northern Water.
- Replaced Longmont flood control structure, Broomfield Pump Plant and Farr Pump Plant programmable logic control systems.
- Upgraded unit remote start for all Farr Pump Plant units.
- Successfully tested Eastern Pump Plant.
- Installed new flow meter for Carter Lake.
- Developed and tested logics for the automation of Boulder outlet.
- Installed new fiber for Willow Creek Pump Plant, Willow Creek Campus and Willow Creek Reservoir.

In 2023, the Instrumentation Controls and Electrical Engineering Program intends to:

- Replace legacy control systems for the Carter Lake Outlet and Berthoud campus main programmable logic controls.
- Continue development of a redundant fiber network connecting East Slope and West Slope operations and install new cameras to support the campus development on both East and West Slopes.
- Complete Carter to Pole Hill substation to Chimney Hollow Reservoir fiber projects.
- Tie Berthoud campus to Platte River Power Authority to Long Haul East Fiber.
- Install fiber on Horsetooth Supply Canal.
- Install new flow meter for Horsetooth.
- Replace Munroe Canal programmable logic controller.
- Conduct Windy Gap Electrical Study, which includes transformer yard, breaker replacements and possible VFDs.
- Move into new control rooms.

Instrumentation Control & Electrical Engineering	Fiscal Year		Fiscal Year 2022	Fiscal Year	Dollar	Percentage
	2021 Actual	2022 Budget	Estimated Actual	2023 Budget	Change From Fiscal Year 2022 Budget	Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Instrumentation Control & Electrical Engineering	\$253,748	\$230,212	\$230,212	\$638,772	\$408,560	177.5%
Travel and Training	77,906	41,290	41,290	62,748	21,458	52.0%
Total	\$331,654	\$271,502	\$271,502	\$701,520	\$430,018	158.4%
Summary by Category						
Labor	\$217,209	\$231,502	\$231,502	\$610,020	\$378,518	163.5%
Non Labor	114,445	40,000	40,000	91,500	51,500	128.8%
Total	\$331,654	\$271,502	\$271,502	\$701,520	\$430,018	158.4%

Division: Operations - Safety Program

Business Plan Priority: Cultivate Operational and Organizational Excellence

The Safety Program builds and strengthens a safety culture such that employees accept and understand the importance of safe work practices. Health and safety audits are performed to determine health and safety risks so that solutions can be developed and implemented to reduce health and safety risks. The program develops and delivers employee training to promote risk awareness and education about the proper use of protective equipment.

In 2022, the Safety Program:

- Stocked enough personal protective equipment and other supplies to ensure employees were safe and felt comfortable while navigating the COVID-19 pandemic and the threat of additional outbreaks.
- Switched from Grainger to Airgas for our personal protective equipment supplier, who provided better products at the same cost.
- Added a vertical lifeline to Willow Creek shaft house and re-evaluated the space to determine if this would be a non-permit confined space.
- Completed the respiratory protection program and annual fit testing in-house.
- Set up medical monitoring on the West Slope for respiratory evaluation.
- Installed various fall protection systems in places where risks have been identified including railing at Chimney Hollow, Loveland Turnout and Hertha.
- Removed material containing Asbestos at Carter Outlet works.
- Applied bridging encapsulants to asbestos containing tar joints in various locations.
- Purchased equipment to perform industrial hygiene monitoring events for various testing that include, but not limited to Silica and Hexavalent Chromium.
- Annual health and safety training was completed by 77 percent of employees.
- Received Honorable Mention in the Canal Safety Challenge.

In 2023, the Safety Program intends to:

- Set up medical monitoring on site for both East and West Slopes.
- Develop a personal protective equipment inventory system for the West Slope.
- Create an in-stock inventory for new safety equipment storage rooms in Building F.
- Hydrostatic test all the East Slope fire extinguishers and have fire extinguisher training.
- Host the first Safety Day in June to celebrate safety.
- Obtain a Construction Health and Safety Technician designation.
- Add new employee safety orientation.
- Switch training package provider in learning management system to clean up the annual refreshers.
- Install more ladders onto the canal system.
- Hold a manager's training of safety for the non-safety professional.
- Contract with a company to develop a learning management system training on Hazardous Energy Control Procedure for Northern Water employees who need to work in a protected system.

Safety	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change From Fiscal Year 2022 Budget	Percentage Change From Fiscal Year 2022 Budget
Expenditures:						
Program Summary						
Safety Programs	\$58,158	\$55,698	\$55,698	\$69,267	\$13,569	24.4%
Safety Contractors	1,226	1,000	1,000	6,250	5,250	525.0%
Environmental Health	11,982	15,249	15,249	25,048	9,799	64.3%
Safety Medical	7,923	10,688	10,688	3,500	-7,188	-67.3%
Safety Staff Training	57,009	89,172	89,172	199,369	110,197	123.6%
Safety General	117,453	149,814	149,814	145,750	-4,064	-2.7%
Safety Travel and Training	22,990	13,871	13,871	25,995	12,124	87.4%
Total	\$276,742	\$335,492	\$335,492	\$475,179	\$139,687	41.6%
Summary by Category						
Labor	\$178,546	\$184,992	\$184,992	\$257,679	\$72,687	39.3%
Non Labor	98,195	150,500	150,500	217,500	67,000	44.5%
Total	\$276,742	\$335,492	\$335,492	\$475,179	\$139,687	41.6%

CAPITAL PROJECTS

Northern Water has the benefit of many long-term employees in its Engineering, Environmental Services, Finance and Administration, and Operations Divisions. Their intimate knowledge of our vast Collection and Distribution Systems is invaluable throughout our capital budget planning process. In addition to this, Northern Water maintains a three- to five-year capital plan. The annual process relies on multiple levels of review and evolves with the entire budget process. Starting the process early in the budget cycle ensures projects are properly vetted in context of the organization's priorities and budget constraints. Northern Water does not currently have a specific revenue source dedicated to capital projects.



Step One

In January, department managers begin submitting their capital budget requests to the Financial Services Department. This process includes a project summary form for each request made and includes information such as the budget, project description and justification.

Step Two

Financial Services compiles the requests and distributes reports to division directors and department managers for review. Many requests are made, and this allows them to see the total for their respective area of responsibility. In addition to department reports, there are also reports for each enterprise fund. This is another lens to review projects through as the enterprises have their own budget.

Step Three

Each budget request is assigned an organizational priority (listed at the beginning of this document) and a capital strategy. This ensures the projects are in line with the organization and the most critical needs are given priority.

Step Four

Financial Services meets individually with division directors and department managers to review each project on its merits and budgetary requirements.

Step Five

Senior Management and Financial Services meet to review the projects in the context of the entire organization's budget. Again, priorities and budget constraints are considered, and discussion leads to the final proposal to be taken to the Board of Directors. Enterprise participants are presented with their capital budget.

Step Six

Along with the entire budget, Financial Services presents the capital budget to the Board of Directors for review and discussion at the annual Budget Work Session. Various projects are highlighted and context is given related to the organization's total budget. As required by statute, the Board approves the budget at the August Board Planning Session.

Throughout each step in the process, discussions take place on the merit of each project. In addition, the projects that are determined to be delayed are tracked and brought up in the subsequent year as part of the capital outyear plan.

CAPITAL PROJECTS, OTHER INITIATIVES AND STUDY PRIORITIES

Northern Water uses a two-pronged approach to the capital and initiative budget. First, each project must relate to one of the five priorities outlined earlier in this document and shown below:

Priorities

- Collect and deliver water
- Protect and conserve water supplies
- Plan and implement new water supply projects
- Cultivate operational and organizational excellence
- Maintain and strengthen relationships

In addition, each project is assigned a strategy with a value from one to three and shown below:

Strategies

- 1 – Essential
 - A – Health and Safety
 - B – Legal Obligation
 - C – Core Operations / End of Life
- 2 – Priority
 - A – Upgrade, Rehabilitate or Obsolete Item or Facility
 - B – Efficiency – Reduce Future Operating and Maintenance Costs
 - C – Maintain Like-New Condition
- 3 – Value Added
 - A – New or Expanded Level of Service / Redundancy / Backup
 - B – Promote Regional Cooperation
 - C – Enhance Natural Resources

The table below shows how much Northern Water is spending within each combination of priority and strategy. This tool is used by staff and Senior Management to ensure projects, studies and initiatives are in alignment with their priorities.

Strategy	Collect & Deliver Water	Protect / Conserve Water	Organizational Excellence	Maintain & Strengthen Relationships	Total
Essential - Health and Safety	\$ 106,112	\$ 19,738,000	\$ 21,428	\$ -	\$ 20,165,540
Essential - Legal Obligation	\$ -	\$ -	\$ -	\$ 1,470,000	\$ 1,470,000
Essential - Core Operations / End of Life	\$ 925,935	\$ 45,000	\$ 33,726,726	\$ -	\$ 34,697,661
Priority - Upgrade, Rehabilitate, or Obsolete	\$ 1,875,059	\$ 70,000	\$ 1,044,921	\$ -	\$ 2,989,977
Priority - Efficiency	\$ 153,217	\$ -	\$ 1,998,404	\$ -	\$ 2,151,618
Priority - Maintain Like-New	\$ 649,183	\$ -	\$ 1,243,740	\$ -	\$ 1,892,923
Value Added - New or Expanded Level of Service	\$ 230,935	\$ 82,748	\$ 134,776	\$ -	\$ 48,459
Value Added - Promote Regional Cooperation	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000
Total	\$ 3,940,438	\$ 19,935,748	\$ 38,469,992	\$ 1,570,000	\$ 63,916,178

- Highest
- Second highest
- Middle
- Lowest

Capital Projects, Other Initiatives and Studies

A capital project is defined as the purchase, replacement, maintenance or repair of infrastructure and fixed assets. The fiscal year 2023 capital projects and initiatives budget totals \$63,916,177. A listing of the capital projects and other initiatives and studies is provided below.

	Fiscal Year 2023 Budget	Total Cost Estimate
Pump Plants		
Auto Greasers for Farr Pump Plant (3)	\$25,000	
Elevator Upgrade at Farr Pump Plant	\$265,000	
Farr Crane Remote	\$25,000	
Farr Pump Plant Cameras	\$35,000	
Farr Pump Plant Remote Racking Unit	\$16,000	
Farr Pump Plant Valve Upgrades	\$16,594	
Farr Water Treatment System	\$85,000	
Willow Creek Circulating Fan	\$16,275	
Willow Creek Forebay Concrete Work	\$28,275	
Willow Creek Sump Pump Replace / Rebuild	\$88,275	\$600,418
Canals		
Boulder Creek Supply Canal Check Structure	\$11,594	
Boulder Reservoir Winter Deliveries Improvements	\$71,374	
Boulder White Rock / Lefthand Pool Gate Upgrades	\$62,748	
City of Loveland Overshot Gate	\$45,000	
Dixon Canal Fencing Project	\$28,187	
Hansen Feeder Canal 550 Section Capacity Rehabilitation	\$91,374	
Hansen Supply Canal Double Gate Actuators	\$26,374	
Hansen Supply Canal Polyurea	\$56,374	
Little Thompson Automation Upgrades	\$62,748	
Longmont Turnout Auto Gate	\$13,187	
Lower Boulder Canal Box Culvert Design	\$297,748	
Lower Boulder Canal Culvert Replacement	\$63,687	
Lower Boulder Pool Rehab	\$69,122	
Siphon Breaker Design	\$60,000	
Smith Siphon Blowoff Rebuild	\$39,561	
Spence Siphon Blowoff Rebuild	\$39,561	
St. Vrain Supply Canal Culvert Repair (Parrish Property)	\$160,000	
Willow Creek Lined Section Concrete	\$51,637	
Willow Creek Pump Canal Rehabilitation	\$541,374	\$1,791,650
Reservoirs and Dams		
Boulder Reservoir North Shore Armoring	\$110,496	
Boulder Reservoir Road (Seep Repair)	\$28,187	
Flip Buckets – Access Road to Spillway	\$18,874	
Granby Dam Bridge Gap Seal	\$7,865	
Granby Dam Rock Scaling	\$51,550	
Horsetooth Auxiliary Outlet Project	\$230,935	
Horsetooth Flow Meter	\$302,748	
Horsetooth Penstock Tap Wrap	\$65,935	
Horsetooth Valve House Sump Pump Replacement	\$33,874	\$850,464

Facilities

Berthoud Campus Expansion – Phase 2	\$33,359,633	
Berthoud Headquarters Long Haul East Fiber	\$525,496	
Carter Lake Catwalk	\$45,000	
Kramer Ranch Rehabilitation	\$90,000	
Lyons Shop Renovation	\$69,122	
McNeal / Yelek Ranch Rehabilitation	\$90,000	
Miller-Herford Ranch Rehabilitation	\$9,000	
Pressure Vacuum Equalizer Door	\$12,865	
West Portal Vent Shaft Upgrades	\$9,365	
Willow Creek Auto Gate	65,000	
Access Control – Canal 550 Hansen Feeder Turnout	\$7,954	
Access Control – Granby Pump Plant	\$7,954	
Access Control – Lyons Shop	\$10,454	
Access Control – Willow Creek Pump Structures	\$8,454	
AHU – VFD (Building A)	\$20,000	
Building A Roof Repair	\$30,000	
Garage Door Operators	\$18,000	
Tie in DDC to Trane DDC System	\$20,000	\$34,398,296

General Projects

Boulder Reservoir Power Upgrade	\$33,187	
Concrete Precast Buildings	\$11,000	
Cyber Security Monitoring	\$150,000	
Document Management Software Upgrade	\$46,374	
ERP Software Module Upgrades	\$400,130	
Firewall Upgrade	\$104,094	
ICS and Security System Recovery	\$150,000	
Meter Rehabilitation Project	\$280,610	
St. Vrain Supply Canal Cattle Guard (4)	\$59,561	
UCS Upgrade	\$65,000	
WAPA OPGW Valley to Estes Power Line Replacement	\$73,750	\$1,373,706

Studies

Adams Tunnel Needs Assessment	\$184,561	
Lyons Chute Rehabilitation Study	\$188,687	
Long-Term Master Capital Plan	\$263,740	\$566,988

Initiatives

Aerial Snowpack Observations	\$1,470,000	
Children’s Museum Donation / Sponsorship	\$100,000	
East Troublesome Fire Recovery	\$19,738,000	
Opportunities for Dual Use Water Systems	\$82,748	\$21,390,748

The following provides more description of larger and/or less routine capital projects.

Pump Plants

Auto Greasers for Farr Pump Plant (3) (\$25,000) – This is for the replacement of four auto greasers, which are needed for plant functionality and to reduce down time.

Farr Pump Plant Elevator Upgrade (\$265,000) – Upgrade of elevator will ensure reliability at the Farr Pump Plant.

Farr Crane Remote (\$25,000) – The remote will provide remote capabilities for the 50-ton cranes and safety to crews and staff while operating it from different floors of the Farr Pump Plant.

Farr Pump Plant Cameras (\$35,000) – Additional cameras at the Farr Pump Plant will allow for safety, security and operating when the Collection Systems Department transitions to the remote facility.

Farr Pump Plant Remote Racking Unit (\$16,000) – The remote racking unit will provide safety to crews and staff while maintaining breakers at the plant.

Farr Pump Plant Valve Upgrades (\$16,594) – The replacement of unwatering valves will ensure the reliability of water deliveries to constituents.

Farr Pump Plant Water Treatment System (\$85,000) – Phase one will include engineering and design to upgrade the outdated water treatment system and provide potable water for the plant. Completion will take place in future years.

Willow Creek Circulating Fan (\$16,275) – The installation of a circulating fan will help disperse the heat that the motors generate and help reduce overheating of the facility.

Willow Creek Forebay Concrete Work (\$28,275) – The repair of concrete in the forebay is needed to keep the pump plant operational.

Willow Creek Sump Pump Replacement / Rebuild (\$88,275) – Existing pumps will be rebuilt or replaced. This is needed to keep the plant operational. When both pumps are used at once, there is no spare available. For this reason, both pumps need to be in good operational condition.

Canals

Boulder Creek Supply Canal Check Structure (\$11,594) – The new check structure at the Country Club turnout will allow Country Club to pull water at lower flows without having to build a pool. This will save time and make water running on the south end more efficient.

Boulder Reservoir Winter Deliveries Improvements (\$71,374) – The recently concluded Erie Winter Deliveries Pilot project highlighted the need to prepare for winter operations in the future out of Boulder Reservoir. This is for design purposes.

Boulder White Rock / Lefthand Pool Gate Actuator Upgrades (\$62,748) – The upgrade will replace the actuators and will give the pool gates the option to run through SCADA. Previously, crews had to run the gates manually.



Farr Pump Plant



Hansen Feeder Canal

City of Loveland Overshot Gate (\$45,000) – Improving this section of canal will allow Northern Waters distribution system to run more efficiently. A leaf gate will allow the City of Loveland to take larger orders at lower flows without running the turnout fully open.

Dixon Canal Fencing Project (\$28,187) – The area around the canal is heavily used and the fencing will provide safety and security for the public.

Hansen Feeder Canal 550 Section Capacity Rehabilitation (\$91,374) – Capacity modeling and alternatives analysis for capacity restoration due to overtopping of the canal.

Hansen Supply Canal Double Gate Actuators (\$26,374) – The addition of an automatic gate from the County Road to Northern Water’s easement will provide safety and security to the property.

Hansen Supply Canal Polyurea (\$56,374) – This will provide the canal with a watertight surface for the conveyance of water. This will reduce seepage and conserve water.

Little Thompson Automation Upgrades (\$62,748) – The upgrade project will replace outdated automation and catwalk, which allow more accurate water deliveries and provide a safe working environment for the Distribution Systems Department to conduct operations and maintenance activities.

Longmont Turnout Auto Gate (\$13,187) – The upgrade of the existing gate will provide security of the Northern Water structures and canal system.

Lower Boulder Canal Box Culvert Design (\$297,748) – Design for this project to replace a culvert under the Lower Boulder Canal. This culvert is needed for drainage problems due to the undersized existing culvert and funneled drainages from developing land in the area. Construction will be in subsequent years.

Lower Boulder Pool Rehabilitation (\$69,122) – This rehabilitation will include new actuator, gate stem, gate, concrete construction and electrical work.

Granby Pump Canal Siphon Breaker Design (\$60,000) – Design alternatives will determine if there is more efficient design for the outdated equipment. This will ensure the conveyance of water across collection boundaries.

Smith Siphon Blowoff Vault Rebuild (\$39,561) – The upgrade of existing valves and pipe within the structure will ensure the reliability and functionality of the vault on the Hansen Feeder Canal 550 section and ensure the delivery of water to Horsetooth Reservoir.

Spence Siphon Vault Rebuild (\$39,561) – The upgrade of existing valves and pipe within the structure will ensure the reliability and functionality of the vault on the Hansen Feeder Canal 550 section and ensure the delivery of water to Horsetooth Reservoir.

St. Vrain Supply Canal Culvert Repair (\$160,000) – The underdrain has a drain plug with failing concrete. This will be a permanent fix to failing concrete and will ensure that a failure of the canal does not occur in the near future and will provide reliable water supply without disruption along the St. Vrain Supply Canal system.

Willow Creek Lines Section Concrete (\$51,637) – Concrete replacement needed to keep the canal operational.

Willow Creek Pump Canal Rehabilitation (\$541,374) – Repair of safety spillway on Willow Creek Canal and long-term solution design in fiscal year 2023. Construction of long-term solution to canal problem such as possibly closed conduit in fiscal year 2024.

Reservoirs and Dams

Boulder Reservoir North Shore Armoring (\$110,496) – The shore has eroded away and prevented proper implementation of wetland mitigation for the Fisherman’s Point project in 2020. This needs to be complete to prevent erosion and will reduce operations and maintenance costs in the future.



Boulder Reservoir

Boulder Reservoir Road / Seep Repair (\$28,187) – Improvement of the access road below the dam will provide staff with a safe alternative to access Boulder Reservoir. This road will also provide access to the seep flume coming from dam number one. Seep improvement will provide accurate seep measurements coming out of Boulder Reservoir Dam.

Flip Buckets – Access Road to Spillway (\$18,874) – This access road will allow for safe inspection of the spillway shoot, as well as routine operations and maintenance.

Granby Dam Bridge Gap Seal (\$7,865) – Staff will clean and apply new seal, which will allow for expansion and contraction.

Granby Dam Rock Scaling (\$51,550) – Freeze and thaw from winter precipitation causes large rock to gall into the spillway at Lake Granby. To prevent damage to the concrete structure, rock needs to be scaled to smaller pieces.

Horsetooth Auxiliary Outlet Project (\$230,935) – The Soldier Canyon Outlet serves two water filter plants. There is currently no permanent means of taking this outlet down for maintenance without cutting off their water supply. The threat of water supply cut off was observed in 2020 during the Soldier Canyon Outlet Valve Rehabilitation Project. During the project the Cameron Peak Fire threatened the Poudre River water source which serves as the only available alternative water source to the two water filter plants served by Soldier Canyon Outlet. This would provide redundancy to the Soldier Canyon Outlet and allow the outlet to be operated with selective withdrawal from various water column elevations to optimize the water quality of releases. For 2023, the scope of work will initiate alternative design studies and environmental studies to build upon the previous alternative studies completed in previous years.

Horsetooth Flow Meter (\$302,748) – Moving existing control system to newer processor, which add remote input/output to take advantage of the existing processor.

Horsetooth Penstock Tape Wrap (\$65,935) – Staff will continue to the tape wrap project. This is to prevent corrosion of the coal tar coated penstocks.

Horsetooth Valve House Sump Pump Replacement (\$33,874) – This will add an additional sump pump in Horsetooth Reservoir for redundancy. The new pump installation will provide operations without interruption in case of failure of the existing pump.

Facilities

Berthoud Campus Expansion – Phase 2 (\$33,359,633) – The East Slope Campus Development Project is a three-phase construction project to remodel and add new office, shop, storage and site improvements to Northern Water’s Berthoud campus. Phase I, which began construction in April 2021 and was completed in September 2022, consist of a new

operations building (Building F), a new multi-purpose facility and fleet garage (Building H), new storage building (Building K), site improvements and right-of-way work, new staff parking lot and fleet fueling island. Phase II and III construction began in the spring of 2022 and consist of remodels and an addition to the existing main office complex on the Berthoud Campus and other shop and storage facilities.

Berthoud Headquarters Long Haul East Fiber (\$525,496) – This moves the existing control system to a newer existing processor, which adds remote input/output to take advantage of existing processor.

Carter Lake Catwalk (\$45,000) – The Distribution Systems Department plans on having a contractor attach a catwalk under the bridge so that the inspection work on the bridge bolts can be conducted on an annual basis. This project will provide a safe working area to northern water staff not only to conduct work, but to ensure the reliability of the bridge used for access to Carter Lake Tower.



Northern Water Berthoud Campus October 2022

Kramer Ranch Rehabilitation (\$90,000) – Staff has determined that it would be more financially beneficial to remove the remaining structures instead of putting money in to update the houses and barns. In addition, staff will remove all unnecessary fencing, irrigation canals, and irrigation systems that are no longer needed.

Lyons Shop Renovation (\$69,122) – Upgrading this structure will allow the Distribution Systems Department to have a remote work site on the south end of the C-BT Project system where staff can place a water running vehicle, welding equipment and storage for equipment needed to maintain and operate the distributions system. This shop will provide for more efficiency for distributions crews, like the shop at Horsetooth.

McNeal / Yelek Ranch Rehabilitation (\$90,000) – Staff has determined that it would be more financially beneficial to remove the remaining structures instead of putting money in to update the houses and barns. In addition, staff will remove all unnecessary fencing, irrigation canals, and irrigation systems that are no longer needed.

Miller-Herford Ranch Rehabilitation (\$9,000) – Staff has determined that it would be more financially beneficial to remove the remaining structures instead of putting money in to update the houses and barns. In addition, staff will remove all unnecessary fencing, irrigation canals, and irrigation systems that are no longer needed.

West Portal Pressure Vacuum Equalizer Door (\$12,865) – In winter there is a vacuum situation where it is difficult to open the door. The new door will be separate from the vent shaft, but will work in conjunction with the vent shaft.

West Portal Vent Shaft Upgrades (\$9,365) – In winter there is a vacuum situation where it is difficult to open the door. This upgrade will alleviate this issue and make it safer to enter the West Portal.

Willow Creek Auto Gate (\$65,000) – With increased traffic on the West Slope, more security is needed at the Willow Creek Pump Plant access road.

Access Control – Hansen Feeder Canal 550 Turnout (\$7,954) – Details not disclosed due to security reasons.

Access Control – Granby Pump Plant (\$7,954) – Details not disclosed due to security reasons.

Access Control – Lyons Shop (\$10,454) – Details not disclosed due to security reasons.

Access Control – Willow Creek Pump Structures (\$8,454) – Details not disclosed due to security reasons.

Building A AHU – Variable-Frequency Drive (\$20,000) – This is for the replacement of the variable-frequency drive due to the display not working.

Building A Roof Repair (\$30,000) – For safety reasons, gutter repairs and additional snow guards will be installed.

Building B Garage Door Operators (\$18,000) – Garage door operators have reached their end of life and will be replaced. The garage doors will be kept.

Tie in DDC to BAS System (\$20,000) – This will give Northern Water staff the ability to see the system and make any temperature changes via computer.

General Projects

Boulder Reservoir Power Upgrade (\$33,187) – This will upgrade the existing service to Boulder Reservoir Outlet to provide safe and reliable power to Northern Waters' operations.

Concrete Pre-Cast Buildings (\$11,000) – This will provide buildings on hand to utilize for turnout structures for new restrooms.

Cybersecurity Monitoring (\$150,000) – Cyber monitoring allows Northern Water to detect and respond to threats faster, as well as learn from them to improve our security posture in the future. Continuous monitoring can help Northern Water keep track of everything happening on the network and respond to threats in real-time. The cybersecurity monitoring project provides Northern Water the tools and time to analyze, record and respond to potential threats immediately.

Document Management Software Upgrade (\$46,374) – Consulting services and training needed to upgrade our document management system to the latest version. This is required as the current system is running on servers that are no longer supported.

Enterprise Resource Planning (ERP) Software Modules (\$400,130) – This is for module add-on for the recently upgraded ERP software. It will result increased efficiency, capacity, and reporting.

Firewall Upgrade (\$104,094) – These appliances are critical to cyber security and communications functions across the entire organization. Additional firewall pair on the West Slope will give Northern Water the ability to operate securely from both campuses.

Instrument Control System and Security System Recovery (\$150,000) – Currently, Northern Water would need to rebuild operating systems connect to network and install software before restoration can happen. This would allow for much faster restoration using bare metal restoration. Removable bootable media can be used to boot workstation or server and could be used to convert to a virtual machine in a disaster scenario.

Meter Rehabilitation Project (\$280,610) – The replacement and/or repair of water meters along the canal system will ensure accurate water deliveries to water users and account for that water with the assurance of accuracy.

St. Vrain Supply Canal Cattle Guards (\$59,561) – The existing cattle guards will be replaced due to end of life. This will provide crews safe travel along the easements of the canal system.

Unified Computing System Upgrade (\$65,000) – Adding this on the West Slope will give Northern Water redundancy and the ability to operate west slope independently of the East Slope facility.

WAPA OPGW Valley to Estes Lake Power Line Replacement (\$73,750) – Replacing existing power line will allow Farr Pump Plant to have an additional source of power through the Adams Tunnel.

Studies

Adams Tunnel Needs Assessment (\$184,561) – As a vital piece of Northern Water’s operations, staff will hire a firm to do an assessment of the tunnel to determine any maintenance or structural improvements.

Lyons Chute Rehabilitation Study (\$188,687) – Design for project to rehab or replace chute with known seepage issues. Project is needed for continued operation of St. Vrain Supply Canal and to protect downstream properties. By completing this project, it protects the canal and surrounding properties while allowing continued delivery of water.

Long-Term Master Capital Plan (\$263,740) – Northern Water will seek consulting services to facilitate creation of a 10-year master capital plan.

Initiatives

Aerial Snowpack Observations (\$1,470,000) – Snow data is essential to the work we do at Northern Water because our basins of interest, like the rest of Colorado’s water supply, are snowmelt dominated. Having accurate, high-resolution snow observations or estimates throughout the snow and runoff seasons is essential to understanding the hydrology of our basins, improving our forecasting efforts and making important operational decisions. Airborne Snow Observatory uses airborne lidar to measure snow depth at high resolution and estimates snow water equivalent. This snow data is the most accurate high-resolution data that is currently available and fills in many gaps that exist in our current snow data networks, but it is not used widely in Colorado. To fund this effort Northern Water applied for and received funding from the Colorado Water Conservation Board’s Water Supply Reserve Funds. Northern Water is acting as the fiscal agent and applicant, assisting Denver Water with project planning and providing workgroup contributions. The workgroup now includes at least 100 members from a variety of different sectors.



Aerial Snowpack Observations

Children’s Museum Donation / Sponsorship (\$100,000) – Northern Water is in discussion to help sponsor the new Children’s Museum of Northern Colorado. There is a planned water exhibit and Senior Management would like to be a part of it to help educate future generations about the Colorado Big Thompson project and water conservation.

East Troublesome Fire Recovery (\$19,738,000) – Fire recovery efforts from the East Troublesome Fire in fall of 2020 continue in 2023. The work of applying mulch to burned areas of federal land, as well as the Willow Creek Berm project.

Opportunities for Dual Use Water Systems (\$82,748) – This will allow Northern Water to research the costs and benefits for municipalities and developers to install dual use water systems allowing for the use of native water on property.

Capital Asset Purchases

A capital purchase is defined as a major purchase which has an estimated total expenditure of \$5,000 or more and generally has an expected life of at least one year. The capital asset budget totals \$2,943,907. A summary is provided in the table below.

Fleet Vehicles and Equipment	Fiscal Year 2023 Budget	Total Cost Estimate
Large Trucks	\$772,526	
Medium Trucks	\$278,000	
Small Trucks	\$241,000	
SUV / Sedans	\$347,973	
Stand Alone Generators (4)	\$121,286	
Aluminum Trench Box	\$15,000	
Cat Loader LD-13 (Replace Lift Arms)	\$33,000	
Crane Rigging	\$10,000	
Forklift Telehandler	\$58,000	
Heavy / Medium Equipment (fiscal year 2022 carryover)	\$351,009	
Lawn Mower	\$25,000	
Mini Excavator	\$68,000	
Post Driver Attachment	\$10,000	
ROV FIFISH Underwater Drone Camera	\$35,000	
Rubber Tire Loader	\$250,000	
Skid Snow Blower	\$15,000	
Small Equipment	\$17,113	
SonTek Rs5 Doppler Current Profiler	\$33,500	
Tractor – 6M Series John Deere (Lower Boulder)	\$160,000	
Wacker HI 300 Diesel Heater	\$7,500	
Walker Deck Snowblower	\$25,000	
Sampling Boat	\$70,000	\$2,943,907

Impacts to Operating Costs

Fleet purchases (including diesel generator replacement) will alleviate future repair and replacement on aged vehicles and equipment currently in Northern Water's fleet. Operating costs will include properly equipping and marking new vehicles, fueling, routine maintenance performed by in-house staff, Department of Transportation inspections and unforeseen repairs outside of the warranty period.

Capital Outyears

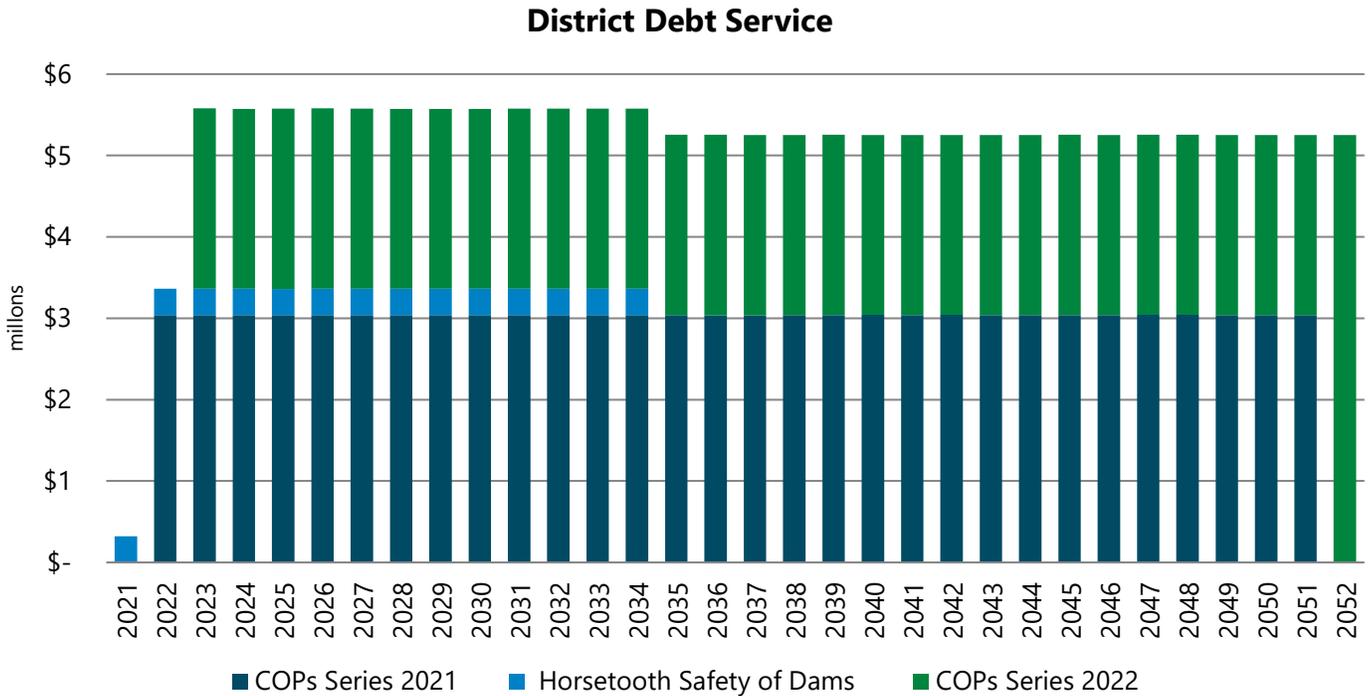
Northern Water has the advantage of many long-time staff to assess capital needs on an annual basis. However, there is also a need to plan out projects. Staff and Senior Management continue to evaluate and prioritize projects based on budget and alignment with stated priorities. In addition, in fiscal year 2023 staff will partner with a consulting firm to assess the current capital project plan and make recommendations for future projects.

Project Name	Total Cost	2024	2025	2026	2027	2028	2029
Chimney Hollow Reservoir Construction	\$ 245,500,000						
Northern Integrated Supply Project	\$ 2,000,000,000						
Berthoud Campus Expansion - Phase 2 (Completion)	\$ 10,249,040						
Colorado River Connectivity Channel	\$ 2,632,000						
Boulder Feeder Canal Flume Project	\$ 530,000						
Willow Creek Pumping Canal: Safety Spillway	\$ 500,000						
Fleet - Heavy / Medium Vehicles	\$ 3,000,000						
Hyperconvergence Software	\$ 360,000						
Light Duty / Passenger Vehicles	\$ 1,800,000						
Heavy / Medium Equipment	\$ 1,800,000						
City of Loveland Overshot Gate (Completion)	\$ 250,000						
Cyber Security Monitoring	\$ 150,000						
Firewall Upgrade	\$ 100,000						
Horsetooth Reservoir: Outlet Redundant Hydraulic Piping	\$ 100,000						
Granby Pump Canal: Discharge Tube Flow Measurement	\$ 100,000						
Small Equipment	\$ 600,000						
Broomfield Anode Well County Line Road - B7	\$ 80,000						
Boulder Reservoir Winter Delivery Improvements	\$ 55,000						
VM6 Replacement	\$ 54,000						
Carter Lake PLC Replacement	\$ 50,000						
Blow Off Valve Replacement (Broomfield Pipeline 989+60)	\$ 45,000						
Main Line / Ft. Lupton PLC	\$ 44,748						
MCQWD FCS PLC Replacement	\$ 34,000						
Ft. Lupton/Ft. Morgan PRV PLC Replacement	\$ 30,000						
Willow Creek Auto Gates	\$ 25,000						
Wiggins FCS PLC Replacement	\$ 22,000						
Superior 150 HP Spare Motor	\$ 18,000						
Louisville 100 HP Spare Motor	\$ 15,000						
MCQWD FCS PLC	\$ 10,000						
Access Control - Morgan Flow Control Ft. Morgan Pipeline M1	\$ 7,954						
Access Control - Erie Flow Control Broomfield Pipeline B7	\$ 7,454						
Access Control - MCQWD Ft. Morgan Pipeline M1	\$ 7,454						
Access Control - Longs Peak Flow Control Ft. Lupton / Hudson Pipeline F1	\$ 7,454						
Access Control - Berthoud Vault Broomfield Pipeline B1	\$ 7,454						
Access Control - Tri State Fort Lupton / Hudson Pipeline 2	\$ 7,454						
OPGW Valley to Estes Power Line Replacement (Completion)	\$ 6,250						
Carter Lake PLC Replacement	\$ 40,000						
WLPP VFD Replacement	\$ 300,000						
Broomfield VFD Replacement	\$ 100,000						
Windy Gap Crane Bridge Design	\$ 585,000						
(2) Rectifiers on Ft. Lupton Segment	\$ 180,000						
(2) Rectifiers on Ft. Morgan Segment	\$ 200,000						

Blow Off Valve Replacement (Broomfield Pipeline 1081+50)	\$ 45,000						
Blow Off Valve Replacement (Broomfield Pipeline 1081+80)	\$ 55,000						
SWSP II Isolation Valve (Lefthand)	\$ 150,000						
Louisville Pipeline Rehabilitation	\$ 300,000						

Debt Service (4.92% of Total Uses of Funds)

The fiscal year 2023 Debt Service is scheduled at \$5,254,813 to fund the principal and interest due related to Northern Water’s outstanding contract payable with Reclamation for the Horsetooth Safety of Dams project (of which \$2,408,817 will remain due as of September 30, 2023), as well as to fund the principal and interest due related to Northern Water’s outstanding Series 2021 and Series 2022 Certificates of Participation (COPs). A total of \$52,050,000 in certificates of participations were closed on August 11, 2021, and have been amortized through 2051. Finally, \$33,940,000 in certificates of participations were closed on June 7, 2022, and have been amortized through 2052. A summary is provided in the chart below.



Net Pension Liability (0.00% of Total Uses of Funds)

This is a use of funds to pay down the unfunded pension plan liability related to the Defined Benefit Plan. A limited number of Northern Water’s current and former employees participate in the plan. As a result of the Governmental Accounting Standards Board (GASB 68) Statements on Financial Reporting for Pensions, a noncurrent asset of \$920,000 is included in the District Fund on Northern Water’s financial statements on September 30, 2021. This was determined by an actuarial valuation as of January 1, 2021, using a long-term expected rate of return, net of investment expense of 5.5 percent. The Pension Plan is on a calendar year end. Northern Water annually funds the actuarially determined contribution as defined by the Pension Plan’s actuarial report. For fiscal year 2023, Northern Water has budgeted contributions to the plan of \$1,163,112 (the actuarially determined contributions) and no supplemental contribution. A summary is provided in the table and chart below.

	<u>Budget</u>
Net Pension Liability	
Unfunded Pension Plan Liability Payment	\$0



**SOUTHERN WATER SUPPLY PROJECT
WATER ACTIVITY ENTERPRISE FUND**

Budget Summary

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change from Fiscal Year 2022 Budget	Percentage Change from Fiscal Year 2022 Budget
Beginning Cash & Reserves						
Unrestricted	2,425,582	7,310,600	2,040,092	6,675,797		
Restricted	6,789,668	-	589,274	-		
Total	9,215,250	7,310,600	2,629,366	6,675,797		
Sources of Funds						
Revenues						
Operating Revenues						
Pipeline Assessments	1,759,742	2,510,639	2,047,724	3,405,916	895,277	35.7%
Total operating revenues	1,759,742	2,510,639	2,047,724	3,405,916	895,277	35.7%
Other revenues						
Other nonoperating revenues	284	-	-	-	-	n/a
Total other revenues	284	-	-	-	-	-
Total Sources	1,760,026	2,510,639	2,047,724	3,405,916	895,277	35.7%
Balance Sheet Source (Use)	(5,076,343)	-	-	-		
Total Funds Available	5,898,933	9,821,239	4,677,090	10,081,713		
Uses of Funds						
Expenses						
Operating						
Operation & Maintenance	1,701,295	1,427,339	1,547,724	1,492,067	64,728	4.5%
Indirect Cost	-	983,300	-	983,300	-	n/a
Total Operating	1,701,295	2,410,639	1,547,724	2,475,367	64,728	2.7%
Capital						
Capital Projects/Assets	1,568,272	634,803	500,000	492,900	(141,903)	-22.4%
SWSP II Isolation Valve (Direct Pay by Boulder)	-	-	-	279,462	279,462	n/a
Louisville Pump Study (Direct Pay by Louisville)	-	-	-	58,187	58,187	n/a
Total Capital Projects	1,568,272	634,803	500,000	830,549	(141,903)	-22.4%
Total Capital	1,568,272	634,803	500,000	830,549	195,746	30.9%
Contingency Appropriation	-	100,000	-	100,000	-	n/a
Total Uses	3,269,567	3,145,442	2,047,724	3,405,916	260,474	8.3%
Ending Cash & Reserves:						
Unrestricted	2,040,092	6,675,797	2,629,366	6,675,797		
Restricted	589,274	-	-	-		
Total	2,629,366	6,675,797	2,629,366	6,675,797		
Total Funds Accounted For	5,898,933	9,821,239	4,677,090	10,081,713		

Southern Water Supply Project Water Activity Enterprise Fund Overview

The Southern Water Supply Project Water Activity Fund, as an enterprise fund, is self-supporting through pipeline and pump plant assessments. The purpose of the Southern Water Supply Water Project (SWSP) is to provide year-round water deliveries to several Northeastern Colorado communities. The SWSP has four raw water transmission pipelines and three pump plants. The fiscal year 2023 Southern Water Supply Project Water Activity Enterprise Fund budget, including operating expenses and capital outlay, totals \$3,405,916. This is higher than last year and reflects the full operational year of the SWSP II pipeline and Eastern Pump Plant. There are no future debt financing plans for the SWSP.

In 2023, the SWSP intends to:

- Continue to work with property owners on reclamation needs on the SWSP II pipeline.
- Replace three aging blowoff valves along the SWSP pipeline.
- Install the additional isolation valve at Boulder flow control vault on SWSP II pipeline.

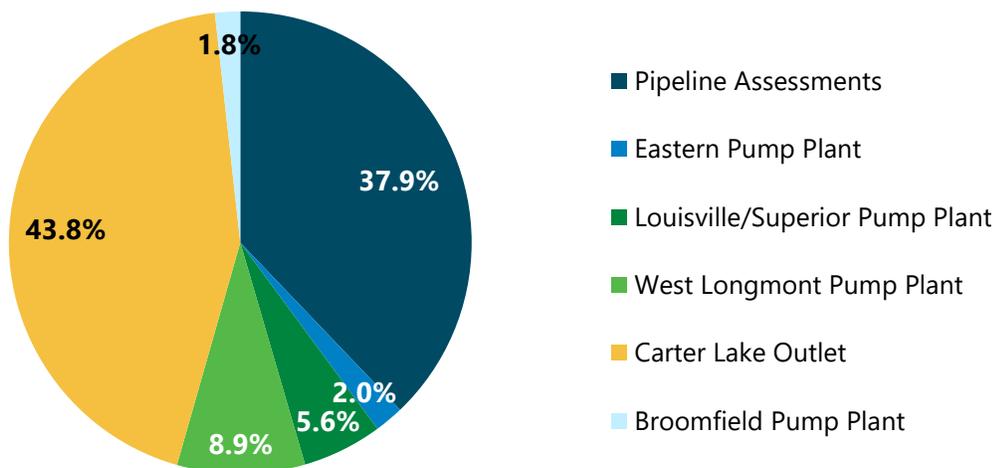
In 2022, the SWSP:

- Tested the pumps and control systems on Eastern Pump Plant on the SWSP Pipeline.
- Reclaimed and revegetated portions of the SWSP II pipeline.
- Replaced legacy control systems for the Broomfield and Longmont Flow Control Structures on SWSP.
- Designed the addition of an isolation valve at Boulder flow control vault on SWSP II pipeline.

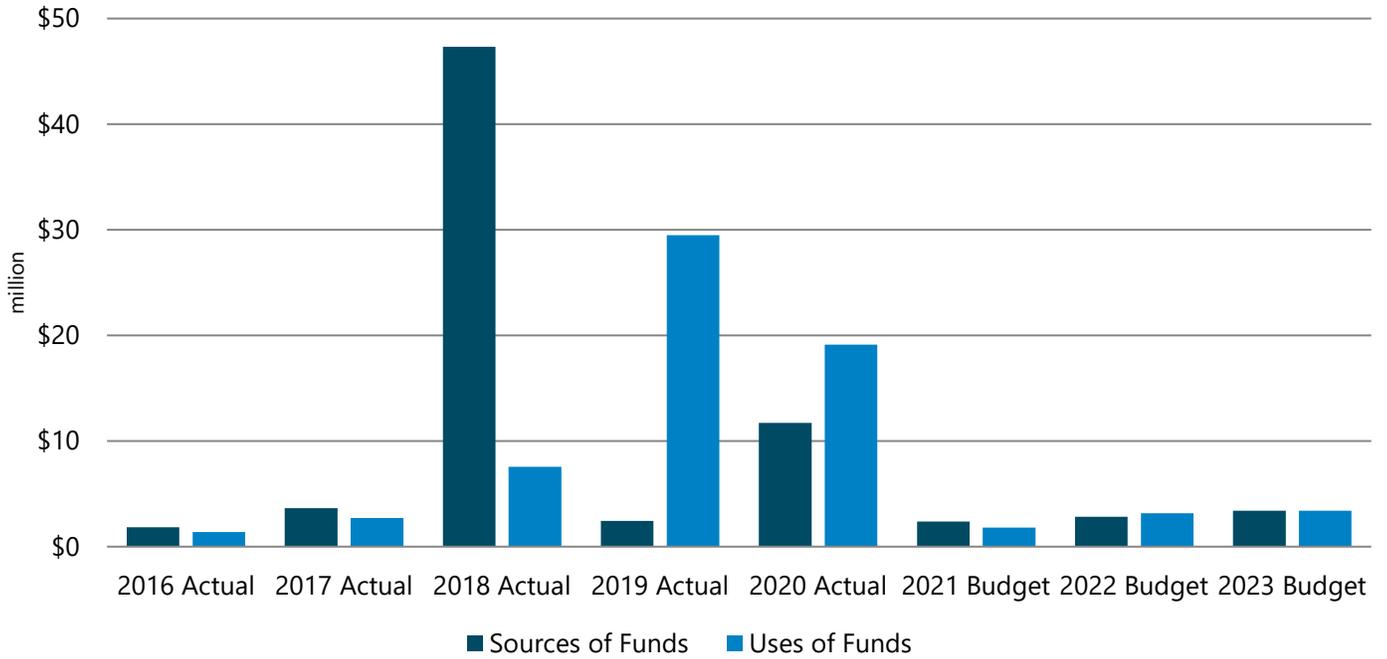
Revenues

The fiscal year 2023 Southern Water Supply Project Water Activity Enterprise Fund revenues and contributions total \$3,405,916. This amount represents an increase of \$895,277 from the fiscal year 2022 budget. A summary is provided in the table and charts below.

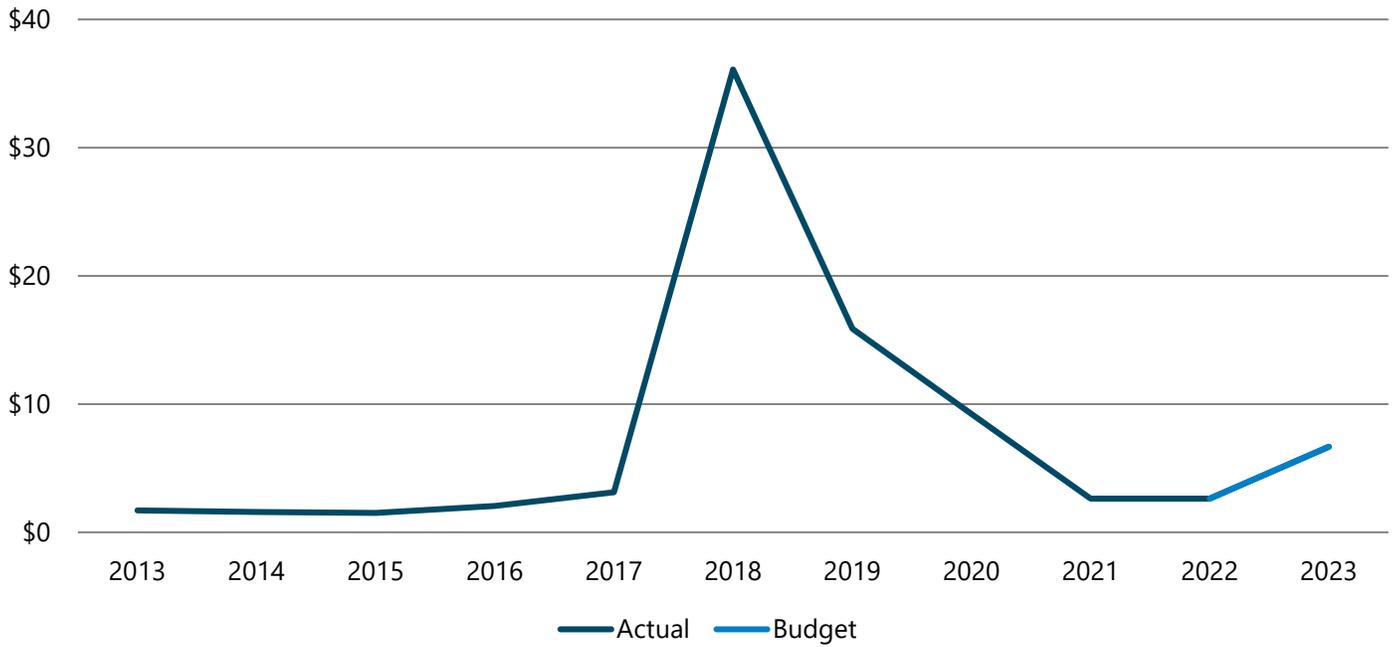
	Budget	Percent
Pipeline Assessments	\$950,654	37.9%
Eastern Pump Plant	\$51,000	2.0%
Louisville/Superior Pump Plant	\$140,213	5.6%
West Longmont Pump Plant	\$224,263	8.9%
Carter Lake Outlet	\$1,100,437	43.8%
Broomfield Pump Plant	\$44,072	1.8%
Total	\$2,510,639	100.0%



SWSP Enterprise Sources and Uses of Funds



SWSP Enterprise Cash and Reserves

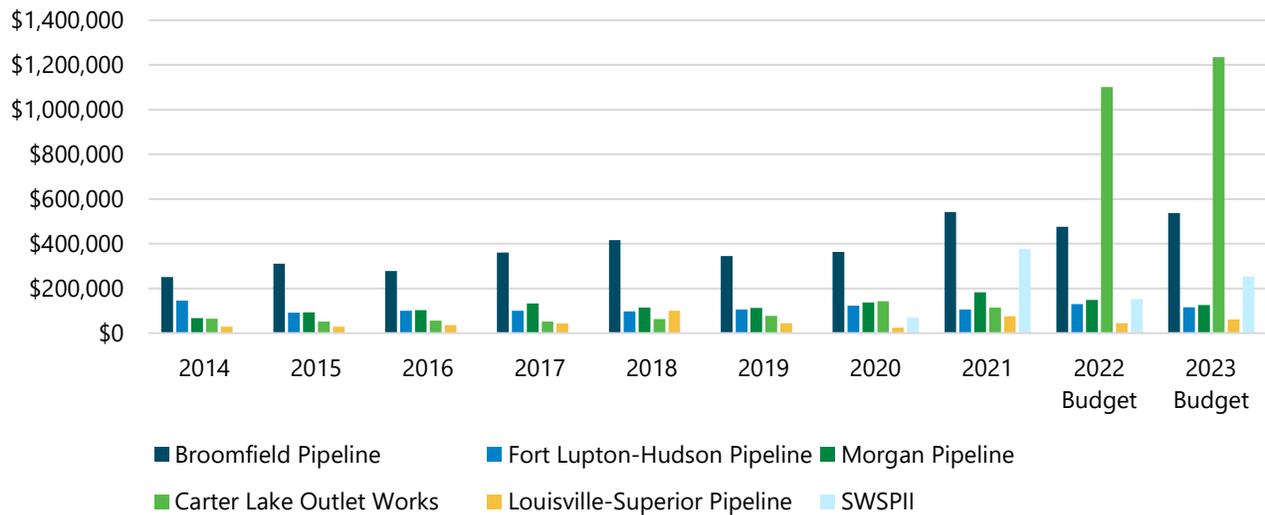


Expenses

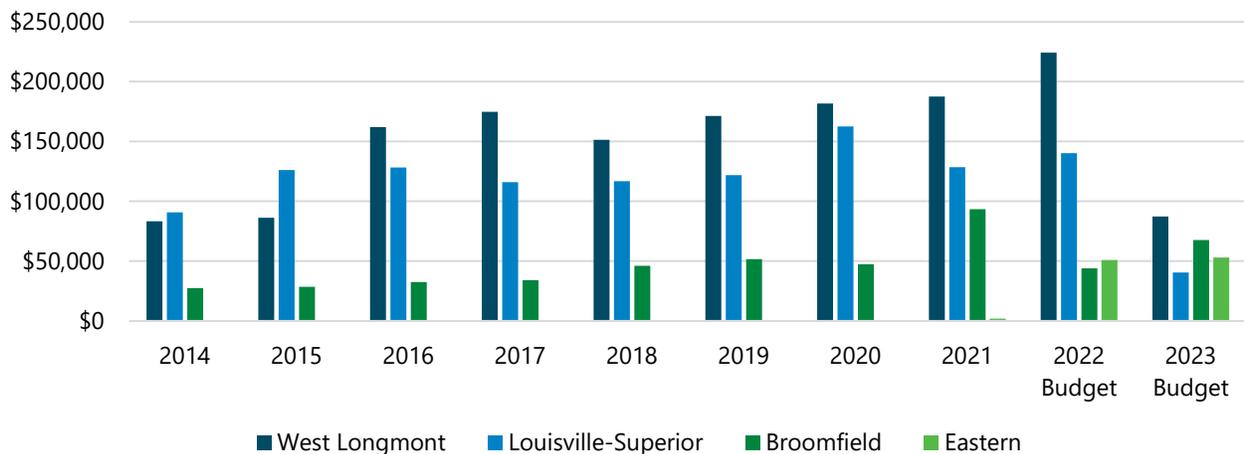
The fiscal year 2023 Southern Water Supply Project Water Activity Enterprise Fund operating expense budget totals \$2,575,367. This represents an increase of \$64,728 more than the fiscal year 2022. A summary of the operating expenses by pump plant, pipeline and outlet is provided in the table and charts below.

	Fiscal Year 2019 Actual	Fiscal Year 2020 Actual	Fiscal Year 2021 YTD Actual	Fiscal Year 2021 Budget	Fiscal Year 2022 Budget	Fiscal Year 2023 Budget
Broomfield Pipeline	344,990	363,869	569,710	482,795	475,246	536,207
Broomfield Pump Plant	51,654	47,397	83,408	72,660	44,072	67,558
Carter Lake Outlet Works	77,375	142,025	107,883	87,368	1,100,437	1,234,879
Eastern Pump Plant	-	-	2,325	150,000	51,000	53,067
Fort Lupton / Hudson Pipeline	105,172	123,218	94,591	127,374	129,947	115,637
Louisville / Superior Pipeline	105,172	24,763	28,219	35,426	44,932	61,141
Louisville / Superior Pump Plant	122,031	162,610	103,079	147,037	140,213	40,445
Morgan Pipeline	113,125	137,120	105,785	127,469	147,987	125,613
SWSP II Pipeline	7,373	68,069	330,026	262,552	152,542	253,442
West Longmont Pump Plant	171,144	181,840	158,433	146,542	224,263	87,378

Pipeline, Outlet and Turnout Expenses



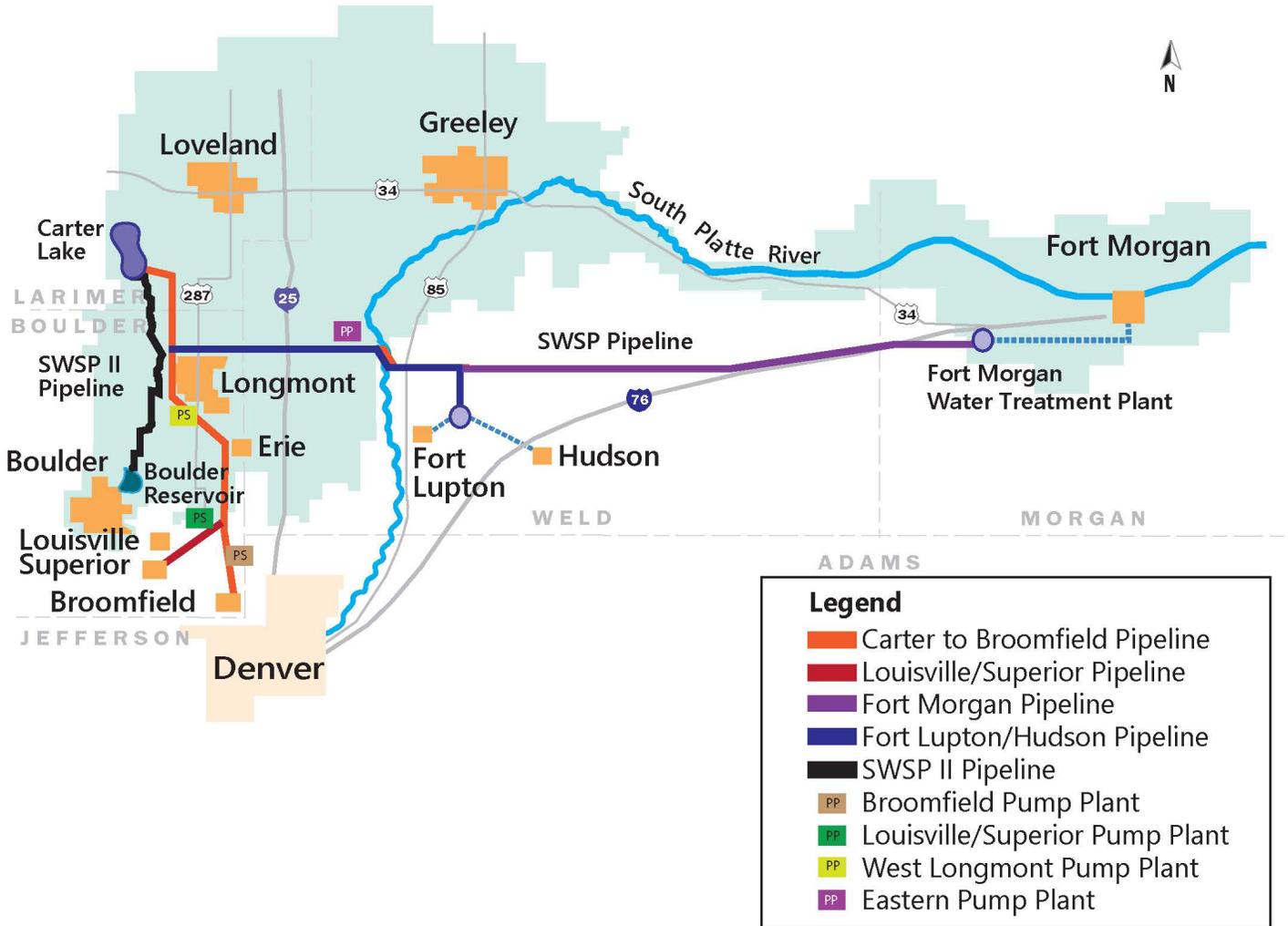
Pump Plant Expenses



Southern Water Supply Project Pipelines and Pump Plants Map

The original Southern Water Supply Project includes four pipelines spanning 180 miles and four related pump plants that convey project water to various Front Range sites and water districts within Northern Water boundaries.

With continued Front Range growth, Boulder, Left Hand Water District, Berthoud and Longs Peak Water District agreed to fund a second phase of the Southern Water Supply Project for secure, year-round water deliveries. Construction on phase two of the pipeline began in 2018 and was completed in early 2020, with construction costs totaling approximately \$38.0 million. Total project costs, including design, permitting, administration, management and right-of-way were approximately \$44.0 million.



Capital Outlay

The fiscal year 2023 Southern Water Supply Project Water Activity Enterprise Fund capital outlay budget totals \$830,549.

Southern Water Supply Project II Isolation Valve – (\$150,000) This carryover project from fiscal year 2022 is for the installation of an isolation valve on Southern Water Supply Project II below Lefthand Treatment Plant. It will be paid directly by the City of Boulder. It will provide a safe working area below the isolation valve.

Broomfield Anode Well Niwot Road B5 – (\$80,000) This is for the replacement of an anode well for cathodic protection on Segment 5 of the Broomfield Pipeline. Most anode wells have a life expectancy of 20 years. The anode well at this location is approximately 25 years old. This will provide protection for Northern Water pipelines to prevent corrosion and damage to the system.

Broomfield Blowoff Replacement 198+95 – (\$60,935) This is for the replacement of the original blow-off valves. The site will be excavated and blowoff valve will be replaced. In addition, site will be upgraded with a vault and manhole. This will ensure the reliability of water deliveries and provide year-round access to the valves.

Broomfield Replacement 122+75 – (\$60,935) This is for the replacement of the original blow-off valves. The site will be excavated and blowoff valve will be replaced. In addition, site will be upgraded with a vault and manhole. This will ensure the reliability of water deliveries and provide year-round access to the valves.

Broomfield Replacement 153+90 – (\$60,935) This is for the replacement of the original blow-off valves. The site will be excavated and blowoff valve will be replaced. In addition, site will be upgraded with a vault and manhole. This will ensure the reliability of water deliveries and provide year-round access to the valves.

Louisville Pump Study – (\$50,000) Louisville is interested in increasing the pumping capacity of the existing pump plant. The purpose of this potential study is to determine the need for new pumping units, variable-frequency drives, wiring, motors, etc. within the Louisville/Superior Pump Plant in order to increase the capacity to Louisville. The actual construction to add these new features would be completed in a future fiscal year. Louisville is looking to add resiliency to their system after the Marshall Fire in late 2021.

Master Meter Programmable Logic Controller – (\$44,748) Moving the existing control system to newer existing processor and adding remote input output to take advantage of existing processor. This will help keep the system up to date and the system will benefit from the new processor capabilities.

Outlet Diversion Programmable Logic Controller – (\$44,748) Moving the existing control system to newer existing processor and adding remote input output to take advantage of existing processor. This will help keep the system up to date and the system will benefit from the new processor capabilities.

Louisville Superior 10-inch Isolation Valve Replacement – (\$31,374) This is for the replacement of 10-inch upstream isolation valves in Louisville/Superior Pump Plant. One valve will be on the Louisville line and on valve on the Superior line. The project will replace leaking valves and allow distributions crews to work on motors by isolating the water coming in from upstream. This will ensure reliability of water to the municipalities of Louisville and Superior with shorter down times on the pipeline.

Broomfield Pipeline Cathodic Assessment – (\$20,000) This in-depth field analysis of three sections of pipeline that is over 20 years old. The assessment will determine upgrade requirements for these sections of pipelines. If further action is needed, staff will propose recommendations for upgrades.

Longmont Vault Structure Paint – (\$13,275) Prepare, spot sand and spot grind the metal piping in the vault as necessary. New paint on piping in Longmont vault structure will prevent corrosion in the Southern Water Supply Project I.

Erie Flow Control Vault Paint – (\$13,275) Prepare, spot sand and spot grind the metal piping in the vault as necessary. New paint on piping in Erie flow control vault structure will prevent corrosion in the Southern Water Supply Project I.

Wiggins Master Meter Programmable Logic Controller – (\$10,000) The original vault programmable logic controller has been in service since it was constructed. The programmable logic controller will be replaced due to its end-of-life cycle for the product. Current processors have more functionalities and provide a higher level of security.

Access Control Enhancements – (\$52,675) Northern Water is continuing to make sure that all facilities are protected with the installation of Lenel Access Control at facilities that are operated and maintained by Northern Water. With access control on all facilities, Northern Water will know 24/7 if the door is open or closed. At this current time, departments do not know if the latches to these structures are closed. With Lenel the organization will know the position of the doors. This is year one of a two-year phased project.



**PLEASANT VALLEY PIPELINE
WATER ACTIVITY ENTERPRISE FUND**

Budget Summary

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change from Fiscal Year 2022 Budget	Percentage Change from Fiscal Year 2022 Budget
Beginning Cash & Reserves						
Unrestricted	106,774	181,524	115,646	181,524		
Total	106,774	181,524	115,646	181,524		
Sources of Funds						
Operating Revenues						
Pipeline Assessments	171,959	155,530	75,000	228,828	73,298	47.1%
Total Operating Revenues	171,959	155,530	75,000	228,828	73,298	47.1%
Other Revenues						
Earnings on Investments	16	-	16	16	16	n/a
Total Other Revenues	16	-	16	16	16	n/a
Total Sources	171,975	155,530	75,016	228,844	73,314	47.1%
Balance Sheet Source (Use)	(95,774)	-	-	-		
Total Funds Available	182,975	337,054	190,662	410,368		
Uses of Funds						
Expenses						
Operating						
Operating Expenses	67,329	86,630	75,000	87,009	379	0.4%
Indirect Cost	-	43,900	-	43,900	-	0.0%
Total	67,329	130,530	75,000	130,909	379	0.3%
Capital						
Capital Projects	-	-	-	72,935	72,935	n/a
Total Capital Projects	-	-	-	72,935	72,935	n/a
Contingency Appropriation	-	25,000	-	25,000	-	n/a
Total Uses	67,329	155,530	75,000	228,844	73,314	47.1%
Ending Cash & Reserves:						
Unrestricted	115,646	181,524	115,662	181,524		
Total	115,646	181,524	115,662	181,524		
Total Funds Accounted For	182,975	337,054	190,662	410,368		

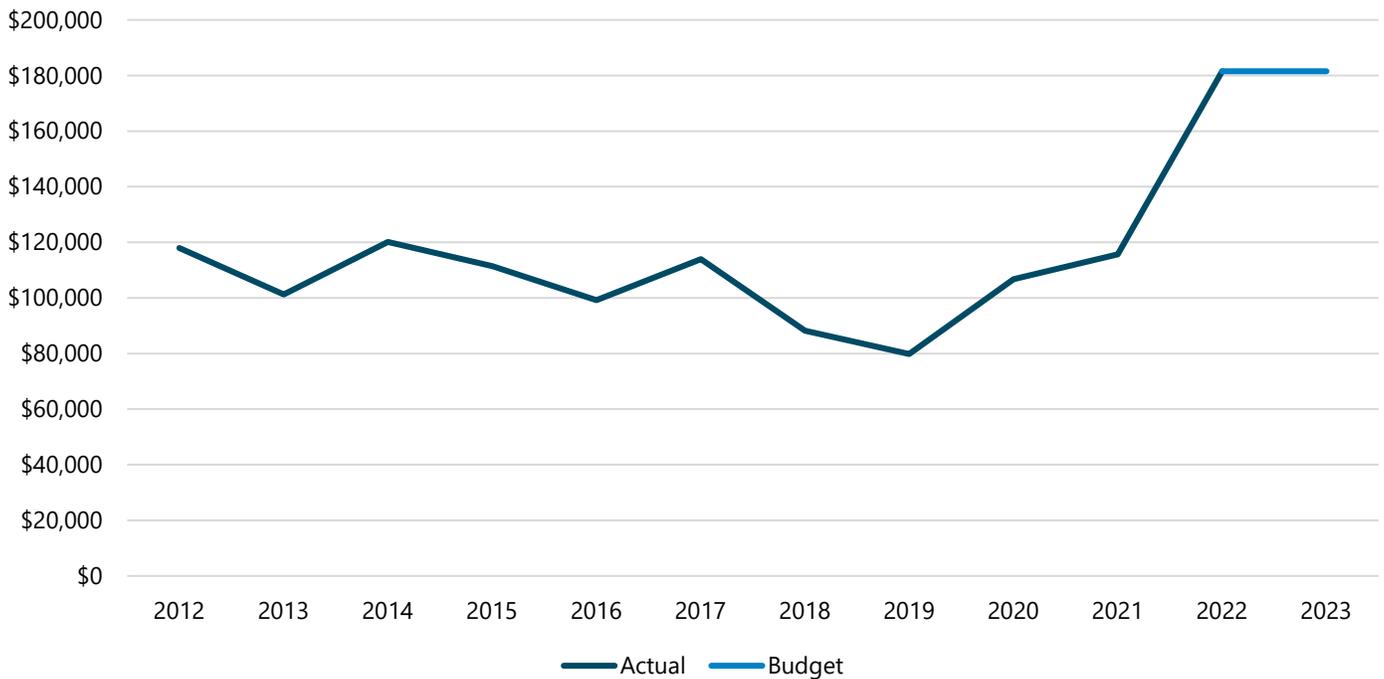
Pleasant Valley Pipeline Project Water Activity Enterprise Fund Overview

The Pleasant Valley Pipeline Project Water Activity Enterprise Fund is self-supporting through pipeline assessments. The purpose of the Pleasant Valley Pipeline Project is to increase the flexibility and reliability of water deliveries for project participants. Construction of the 8.5-mile pipeline was completed in 2004. The pipeline is divided into a number of segments to account for costs. Individual segment charges are based upon each participant's share of the capacity allocated to them. There are no future debt financing plans for Pleasant Valley Pipeline.

Revenues

Revenue from pipeline assessments is estimated at \$228,844, an increase of \$73,314 or 47 percent compared to the fiscal year 2022 budget. This increase is mostly due to two capital projects planned in fiscal year 2023. Pipeline assessments are expected to be the same as budgeted expenses. A summary is provided in the graph below.

Pleasant Valley Pipeline Enterprise Cash and Reserves



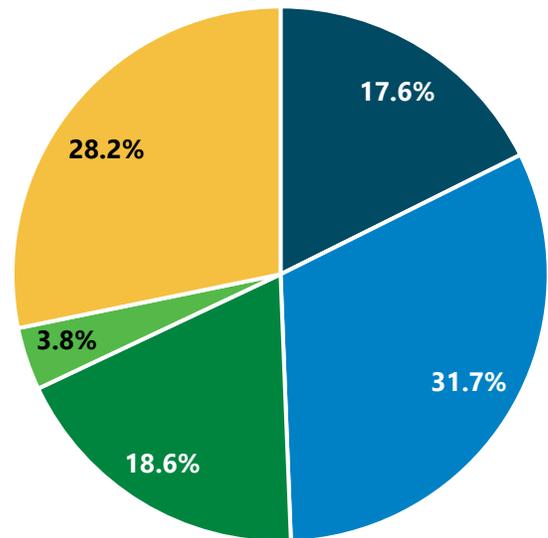
Expenses

The fiscal year 2023 Pleasant Valley Pipeline Enterprise budgeted operating expenses are \$228,844. This represents an increase of \$73,314. The increase is due mostly to the capital projects planned. A summary of operating expenses is provided in the table and graphs below.

	Budget	Percent
Pleasant Valley Non-Segment	\$27,438	17.6%
Pleasant Valley Segment PV1	\$49,366	31.7%
Pleasant Valley Segment PV2	\$28,928	18.6%
Pleasant Valley Segment PV4	\$5,898	3.8%
Indirect Costs	\$43,900	28.2%
Total	\$155,530	100.0%

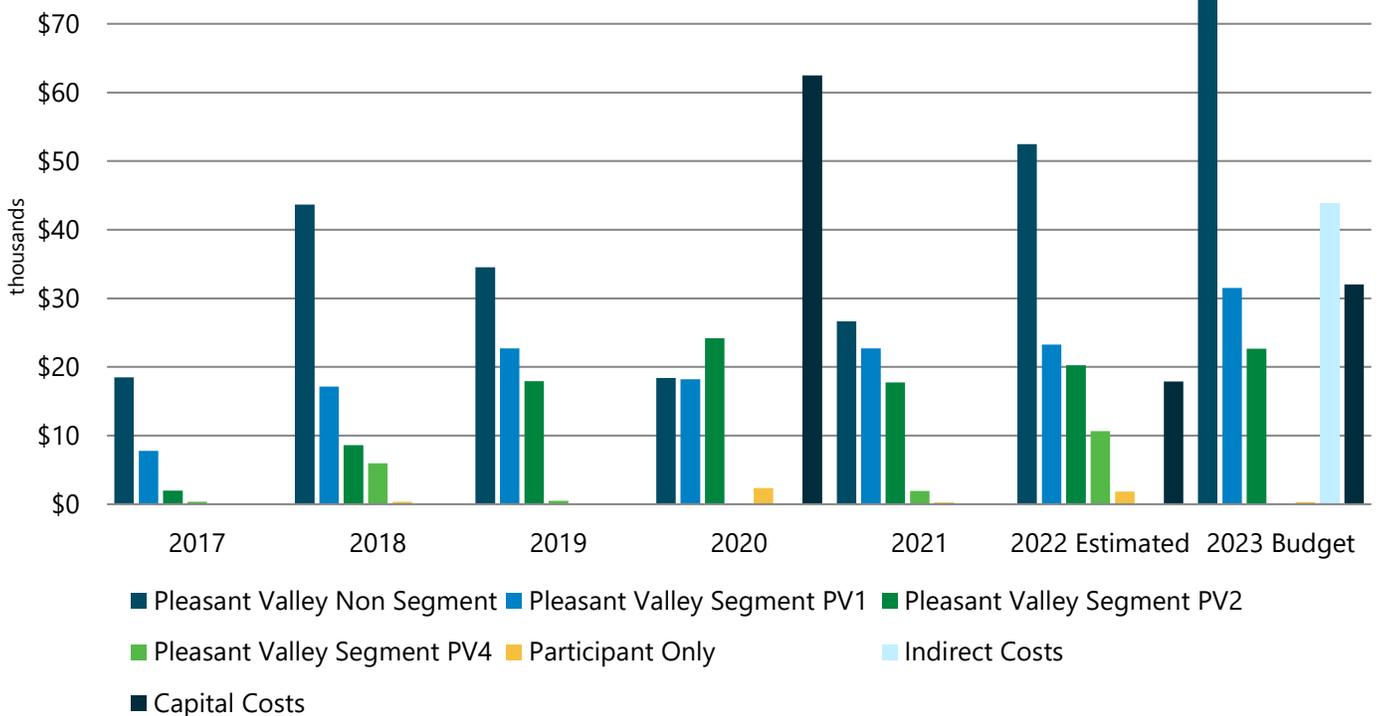
Expenses by Category

Non-Labor	\$120,850
Labor	\$107,994
Total	\$228,844



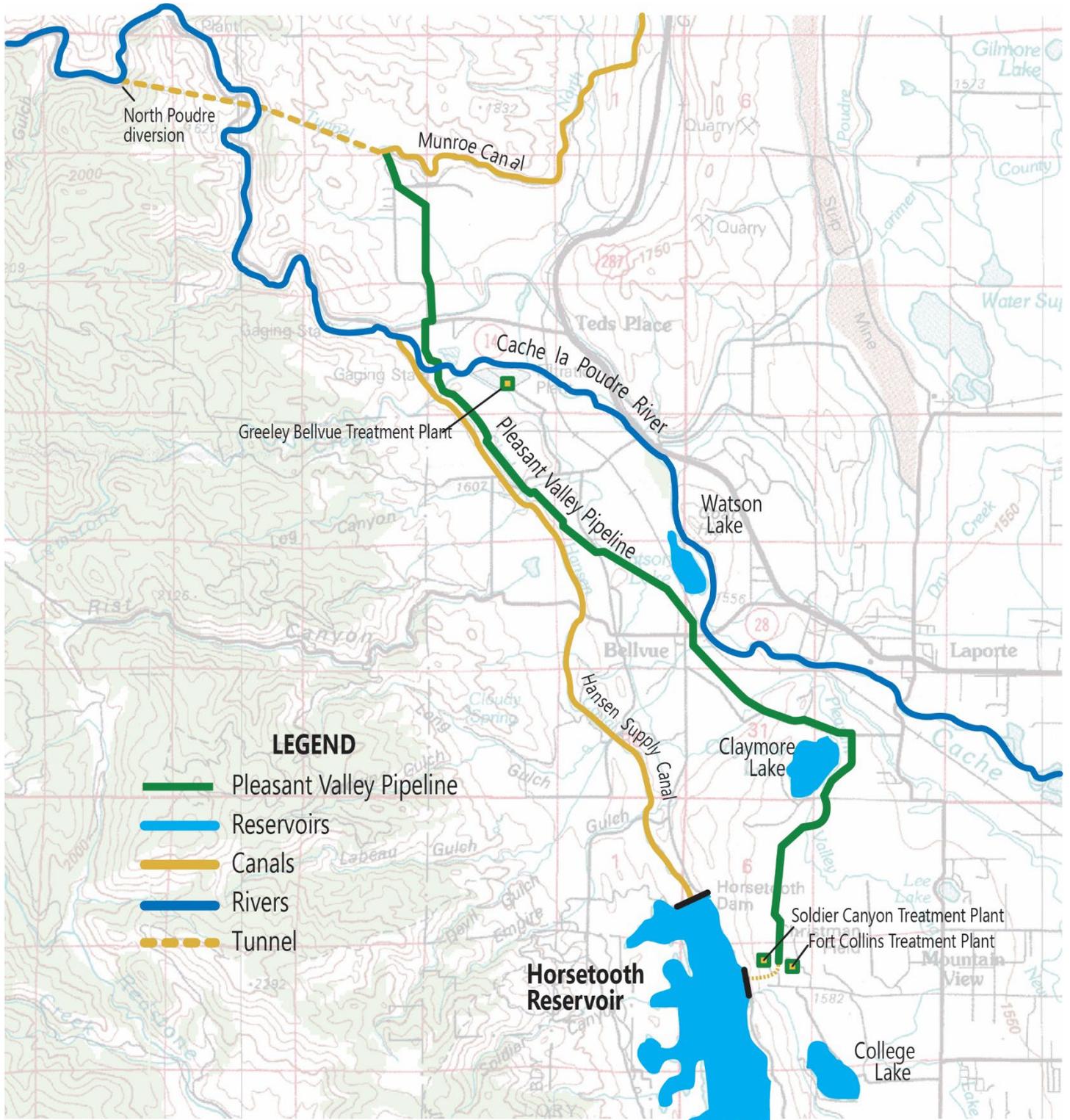
- Pleasant Valley Non-Segment
- Pleasant Valley Segment PV1
- Pleasant Valley Segment PV2
- Pleasant Valley Segment PV4
- Indirect Costs

Pleasant Valley Pipeline Enterprise Expense by Pipeline Segment



Pleasant Valley Pipeline Project Pipeline Map

The 8.5-mile buried pipeline carries Poudre River water from the Munroe Gravity Canal to the Fort Collins and Soldier Canyon water treatment plants during the summer. In the winter, flows are reversed sending water from the Soldier Canyon outlet at Horsetooth Reservoir to Greeley's Bellvue treatment plant near the Poudre River.



Capital Outlay

The fiscal year 2023 Pleasant Valley Pipeline Water Activity Enterprise Fund capital outlay budget totals \$72,935.

Munroe PLC Replacement – (\$44,748) Move existing control system to newer existing processor and add remote input output to take advantage of existing processor. This will keep the system up to date and will benefit from the new processor capabilities.

Munroe / PVP Actuator and Gear Box – (\$28,187) Add an automatic gate opener to the entrance to Longmont Turnout and trash rack structures. This will upgrade the existing gate and provide security of structures and the canal system.



NORTHERN INTEGRATED SUPPLY PROJECT WATER ACTIVITY ENTERPRISE FUND

NISP will add 40,000 acre-feet of new water supply annually and more than 200,000 acre-feet of storage capacity with the construction of Glade and Galeton reservoirs, pump plant and related conveyance pipelines.

Budget Summary

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change from Fiscal Year 2022 Budget	Percentage Change from Fiscal Year 2022 Budget
Beginning Cash & Reserves						
Unrestricted	6,448,808	11,329,702	11,329,702	7,514,402		
Restricted	18,637,811	9,546,317	9,546,317	3,546,317		
Beginning Cash Balance	25,086,619	20,876,019	20,876,019	11,060,719		
Sources of Funds						
Participant Contributions	14,600,000	24,470,000	19,000,000	24,215,300	(254,700)	-1.0%
Transfer from Restricted Cash	-	9,000,000	-	4,000,000	(5,000,000)	-55.6%
Earnings on investments	14,091	-	-	10,000	10,000	n/a
Other nonoperative revenue	94,073	-	80,000	80,000	80,000	n/a
Total Sources	14,708,164	33,470,000	19,080,000	28,305,300	(5,164,700)	-15.4%
Balance Sheet Source (Use)	(2,055,526)	-	-	-		
Total Funds Available	37,739,257	54,346,019	39,956,019	39,366,019		
Uses of Funds						
Capital Land Purchase	6,046,407	6,000,000	5,405,073	4,000,000	(2,000,000)	-33.3%
Project Development	3,224,528	9,300,000	1,787,002	8,800,000	(500,000)	-5.4%
Legal Costs	400,000	400,000	-	500,000	100,000	n/a
Glade Reservoir	6,695,609	9,900,000	8,023,192	8,800,000	(1,100,000)	-11.1%
Highway 287 Relocation	370,998	1,000,000	737,642	1,500,000	500,000	50.0%
Water Secure	125,696	2,000,000	50,000	-	(2,000,000)	-100.0%
Pipeline Easements	-	1,000,000	-	1,200,000	200,000	20.0%
Early Pipeline Installation	-	10,570,000	-	-	(10,570,000)	-100.0%
South Platte Water Cons. Project	-	200,000	10,000	200,000	-	n/a
Galeton Advancement	-	-	-	400,000	400,000	n/a
Indirect Cost	-	815,300	-	815,300	-	n/a
Contingency Appropriation	-	2,100,000	-	2,000,000	(100,000)	-5%
Total Uses	16,863,238	43,285,300	16,012,908	28,215,300	28,215,300	65.2%
Unrestricted	11,329,702	7,514,402	19,801,867	11,150,719		
Restricted	9,546,317	3,546,317	4,141,244	-		
Ending Cash	20,876,019	11,060,719	23,943,111	11,150,719		
Total Funds Accounted For	37,739,257	54,346,019	39,956,019	39,366,019		

Northern Integrated Supply Project Water Activity Enterprise Fund Overview

The Northern Integrated Supply Project (NISP) Water Activity Fund, as an enterprise fund, is self-supporting through participants' contributions. The purpose of the NISP Enterprise is to pursue federal and other permits in connection with a proposed water storage and distribution project that will supply 15 northern Front Range water partners with 40,000 acre-feet of new, reliable water supplies.

In June 2015, the Army Corps of Engineers (Corps) released a supplemental draft Environmental Impact Statement (EIS). The Corps released the Final EIS on July 20, 2018, with a Record of Decision scheduled for winter 2022. In January 2020 NISP received a 401 Water Quality certification from the Water Quality Control Division of the Colorado Department of Public Health and Environment. In September 2020 the Larimer County Board of County Commissioners approved the 1041 Land Use Permit, which allows the construction of Glade Reservoir, its recreation components and the pipelines to convey water from the reservoir to participants throughout Northern Colorado.

The current estimate of total project costs is \$2.0 billion. The financing structure is currently being reviewed to identify potential financing options. Following completion of construction, the projected operation and maintenance costs are currently forecasted to be approximately \$9.0 million annually.

In 2023, NISP intends to:

- Perform ongoing permitting, design and pre-construction activities.
- Continue advance development of water accounting algorithms.
- Continue easement acquisition for conveyance, which is approximately 250 permanent and temporary easements.
- Purchase additional land for Glade Reservoir and Highway 287 relocation areas.
- Continue leading participant operations committee to discuss details of future project operations.
- Finalize participant allotment contracts.
- Provide support to legal counsel on Protected Mitigation Release application and other issues as needed.
- File statements of opposition and continue due diligence to protect NISP water rights.
- Provide environmental compliance support.
- Continue collection of water quality samples to support the ongoing permitting processes.
- Continue Adaptive Management and Poudre River Collaborative frameworks.
- Continue public outreach.

In 2022, NISP:

- Performed Geotechnical Design Assessment work at Glade Reservoir site.
- Performed ongoing permitting, planning, design and pre-construction activities.
- Began acquiring easements for the conveyance.
- Began NISP Allotment Contract development with participants.
- Provided support to legal counsel on Protected Mitigation Release application and other issues as needed.
- Filed statements of opposition and continue due diligence to protect NISP water rights.
- Provided environmental compliance support.
- Continued collection of water quality samples to support the ongoing permitting processes.
- Developed Adaptive Management and Poudre River Collaborative frameworks.
- Continued public outreach associated with the NISP and the WaterSecure program.

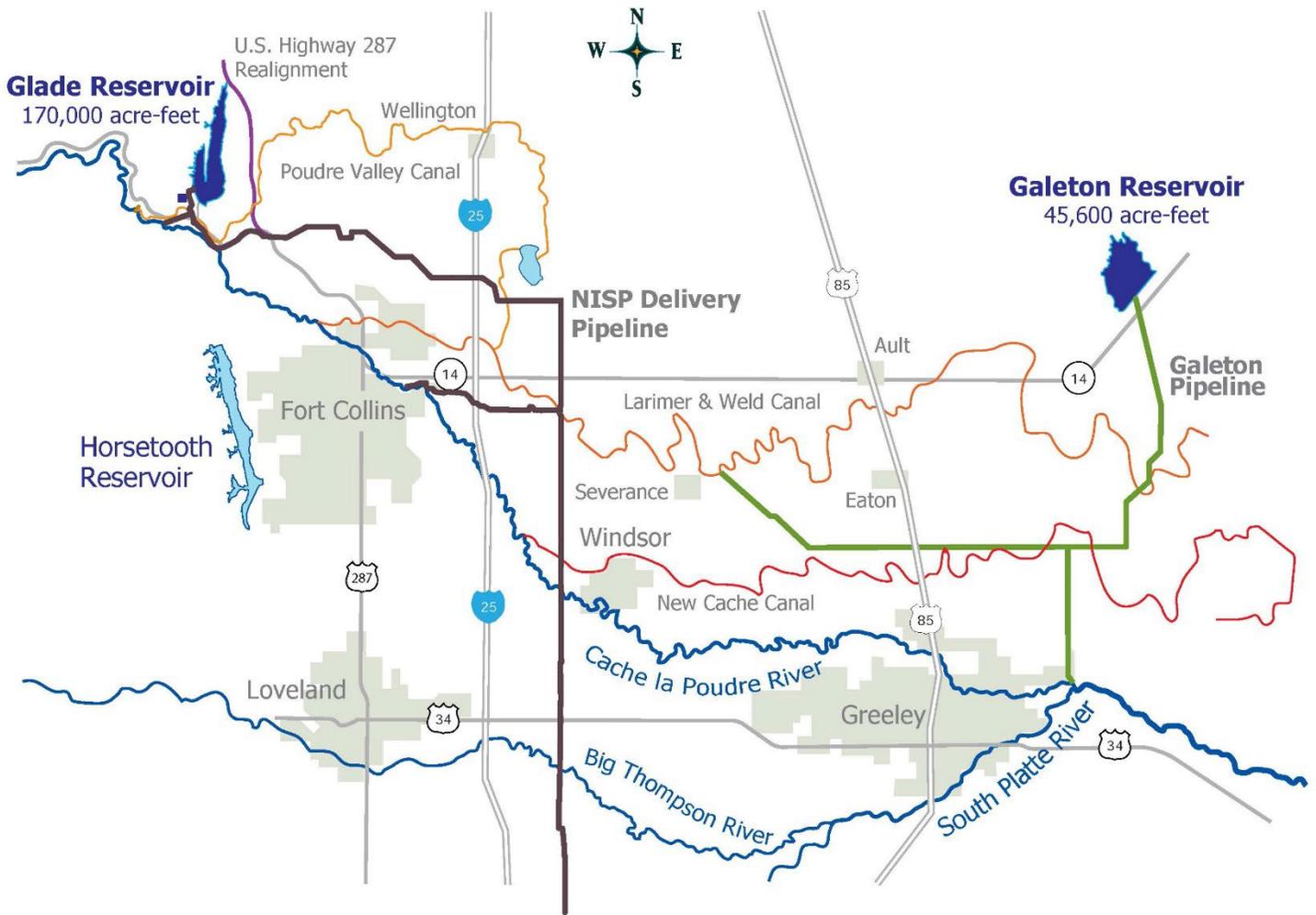
Contributions

Contributions from the fifteen project participants and line of credit proceeds are projected to be \$28,215,300 in fiscal year 2023.

Capital Outlay

The fiscal year 2023 Northern Integrated Supply Project Water Activity Enterprise Fund capital outlay budget totals \$28,215,300. This represents a decrease of \$15,070,000 from the fiscal year 2022 budget.

Northern Integrated Supply Project Map





HYDROPOWER WATER ACTIVITY ENTERPRISE FUND

The hydropower fund was established to construct and operate small hydropower facilities. Hydropower currently owns and operates the Robert V. Trout Hydropower Plant at Carter Lake and the Granby Hydropower Plant at Lake Granby.

Budget Summary

	Fiscal Year 2021 Actual	Fiscal Year 2022 Budget	Fiscal Year 2022 Estimated Actual	Fiscal Year 2023 Budget	Dollar Change from Fiscal Year 2022 Budget	Percentage Change from Fiscal Year 2022 Budget
Beginning Cash & Reserves						
Restricted	551,155	574,407	574,407	519,701		
Unrestricted	1,717,182	1,801,598	1,801,598	1,744,243		
Total	2,268,337	2,376,005	2,376,005	2,263,944		
Sources						
Operating Revenues						
Energy	1,349,216	1,344,000	1,300,000	1,300,000	(44,000)	-3.3%
Total Operating Revenues	1,349,216	1,344,000	1,300,000	1,300,000	(44,000)	-3.3%
Other Revenues						
Earnings on Investments	1,465	20,000	-	5,000	(15,000)	-75.0%
Intergovernmental grants	145,403	-	-	-	-	n/a
Total Other Revenues	146,868	20,000	0	5,000	-	0.0%
Total Sources	1,496,084	1,364,000	1,300,000	1,305,000	(59,000)	-4.3%
Balance Sheet Source (Use)	(335,550)	(210,911)	-	54,706		
Total Funds Available	3,428,871	3,529,094	3,676,005	3,623,650		
Uses of Funds						
Operating Expenses						
Operation and Maintenance	416,768	408,232	461,017	393,773	(14,459)	-3.5%
Indirect Cost	-	120,600	-	120,600	-	n/a
Total Operating	416,768	528,832	461,017	514,373	(14,459)	-2.7%
Capital						
Capital Projects	-	47,281	5,219	9,637	(37,644)	-79.6%
Total Capital	-	47,281	5,219	9,637	(37,644)	n/a
Debt Service						
Debt Service-Granby Facility	229,284	229,286	229,286	229,286	-	n/a
Debt Service-R.V. Trout Facility	406,814	409,751	409,750	409,751	-	n/a
Total Debt Service	636,098	639,037	639,036	639,037	-	0.0%
Contingency Appropriation	-	50,000	-	50,000	-	n/a
Total Uses	1,052,866	1,265,150	1,105,272	1,213,047	(52,103)	-4.1%
Ending Cash & Reserves						
Restricted	574,407	519,701	574,407	574,407		
Unrestricted	1,801,598	1,744,243	1,996,326	1,836,196		
Total	2,376,005	2,263,944	2,570,733	2,410,603		
Total Funds Accounted For	3,428,871	3,529,094	3,676,005	3,623,650		

Hydropower Water Activity Enterprise Fund Overview

The Hydropower Water Activity Fund is an enterprise fund established to record all revenues and expenses associated with the operations and maintenance of the Robert V. Trout and Granby Hydropower facilities. The Granby Hydropower facility is located at Lake Granby and began producing hydropower energy in May 2016. The two turbines have the potential to produce energy of 5 million kilowatt hours annually or enough to power about 600 homes. The Robert V. Trout Hydropower facility is located at Carter Lake and started generating power in May 2012. The hydropower facility has an energy capacity of 7 to 10 million kilowatt hours a year or enough to power about 1,000 homes. If both facilities were not built, someone else may have pursued a hydropower project on the federally owned C-BT Project. The two hydropower projects each received a Lease of Power Privilege from Reclamation granting the ability to pursue hydropower on an unpowered federally owned dam or canal. Northern Water sells all of its output from the two small renewable facilities to two consumer-owned electric cooperatives under long-term power purchase agreements. Energy revenues from the two small hydropower facilities provide for operation and maintenance and debt service costs. The fiscal year 2023 budget for expenses and capital outlay totals \$1,213,047.

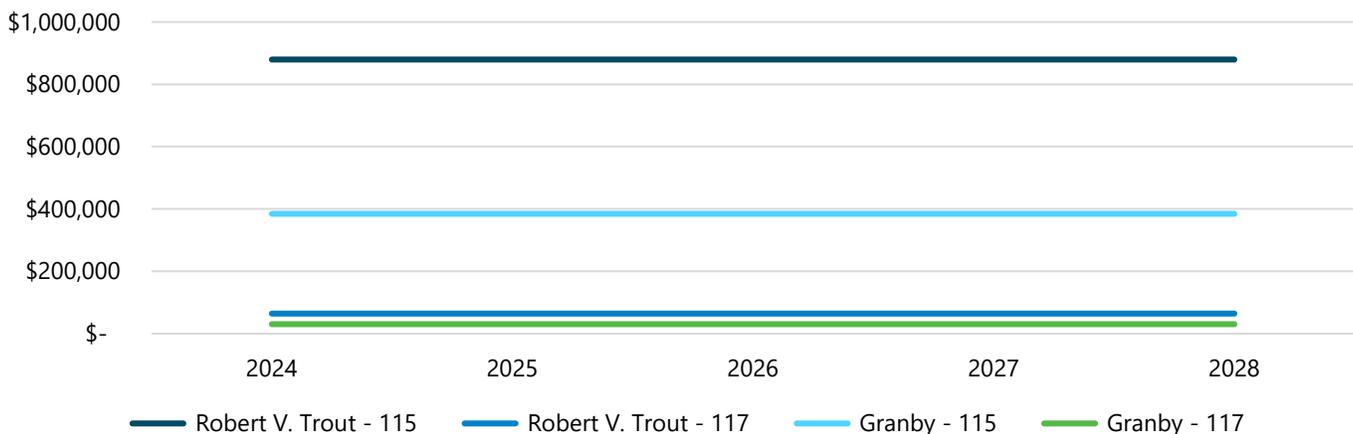
The major initiative for 2023 is the Granby Hydro Pipe Vent / Automation project.

Revenues

Hydropower Water Activity Enterprise Fund available resources are projected at \$1,305,000 or 4.3 percent lower than the fiscal year 2022 budget. Revenue from the sale of energy from the Robert V. Trout Hydropower facility is estimated to be \$910,000. The energy revenues for the Granby Hydropower facility are projected to be \$388,500. Differences in energy revenues from year to year can be affected by the increases or decreases in water flows due to weather conditions, water demands and reservoir levels. One hundred and fifteen energy payment rates will continually increase until 2025 and 2021 for the Granby Hydropower facility and Robert V. Trout facility, respectively, and remain at those higher levels through at least 2031. One hundred and seventeen energy payment rates decreased in 2021 and 2022 for the Granby Hydropower facility and Robert V. Trout Hydropower facility, respectively, and remain at those lowered levels through at least 2026. The 115 and 117 payments are from Tri-State policies that were put in place to reimburse their local REA providers for renewable energy. The Policy 115 represents their estimate of the value of the electricity sold. It was forecast for 10 years and then froze at that level for the remainder of the contract term. The Policy 117 was the additional value of the renewable energy. A summary of the major resources is provided in the table and charts below.

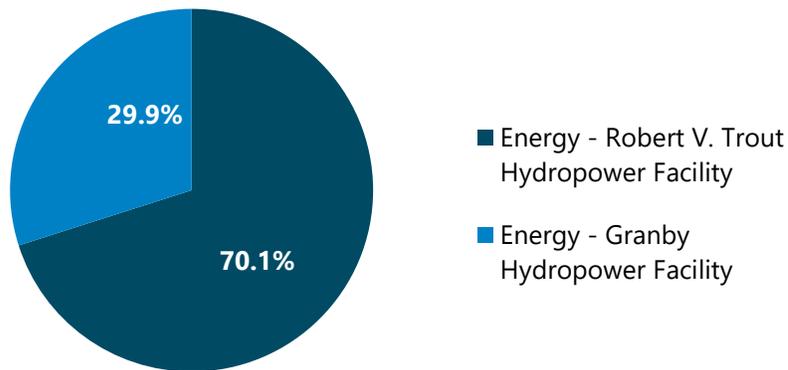
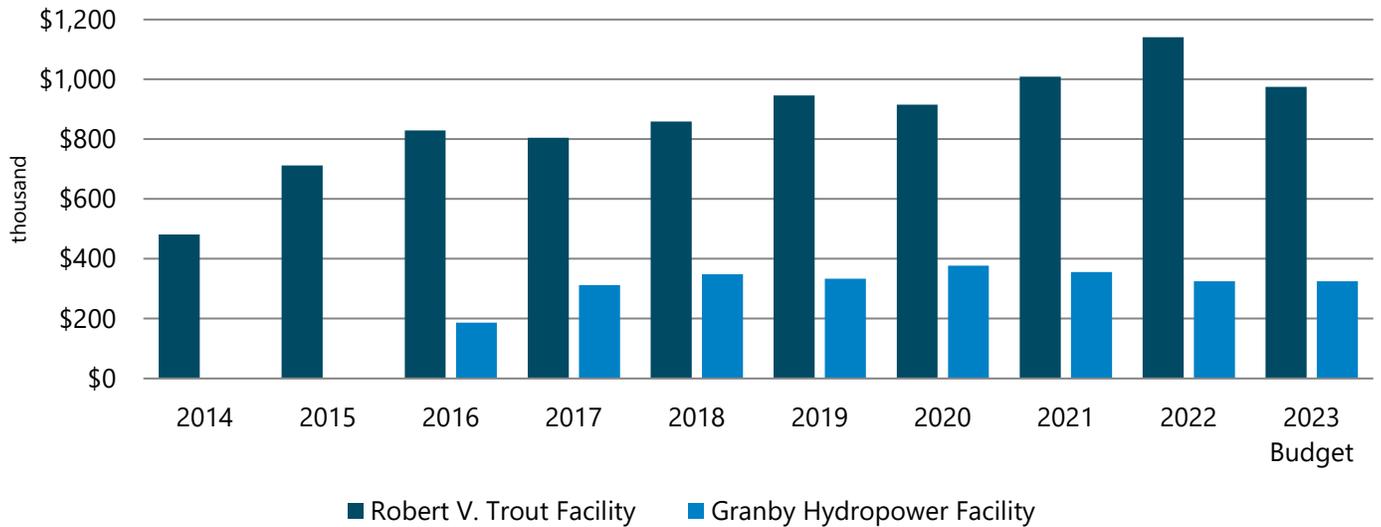
	Budget	Percent
Energy – Robert V. Trout Hydropower Facility	\$910,000	70.1%
Energy – Granby Hydropower Facility	\$388,500	29.9%
Earnings on Investments	\$5,000	0.0%
Total	\$1,364,000	100.0%

Hydropower 5-Year Revenue Forecast



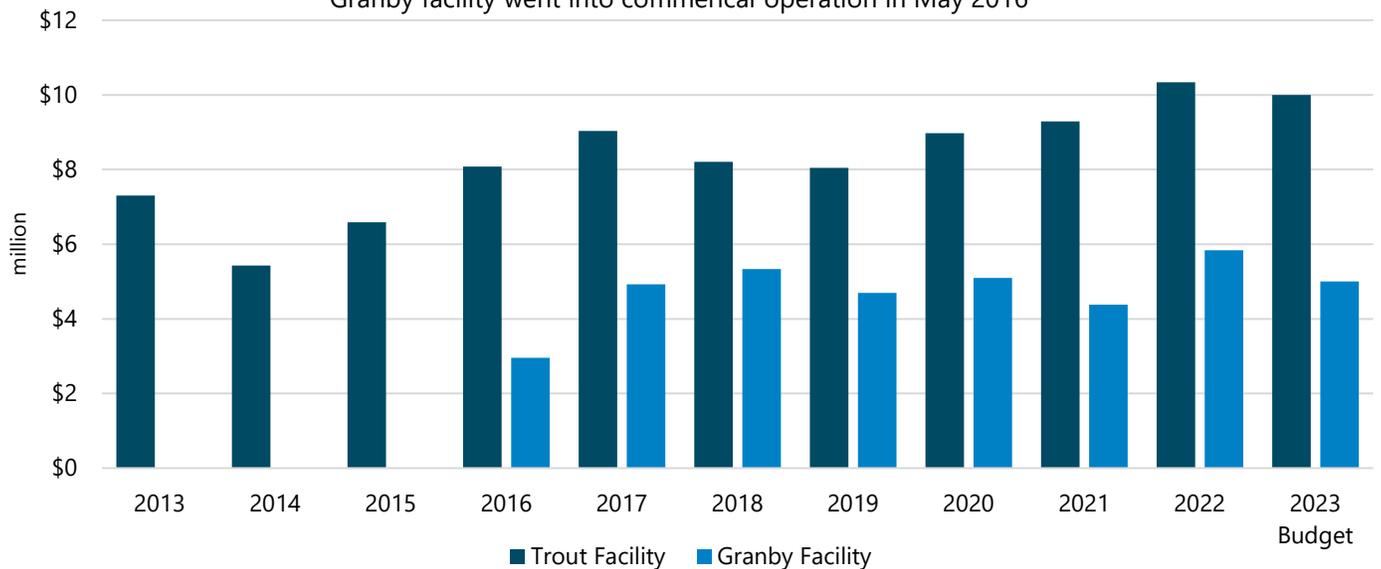
Energy Revenues by Facility

Granby facility went into commercial operation in May 2016



Generation in Kilowatt-Hours by Facility

Granby facility went into commercial operation in May 2016



Expenses

The fiscal year 2023 Hydropower Water Activity Enterprise Fund expenses total 574,010, which includes capital expenses totaling \$9,637. Operating expenses for the Robert V. Trout Hydropower facility are budgeted at \$411,410. Granby Hydropower facility operating costs are projected to be \$162,600. Capacity charge is the system use charge assessed by the electric cooperatives. Lease of Power Privilege are the charges associated with the non-federal development of hydropower at Reclamation facilities.

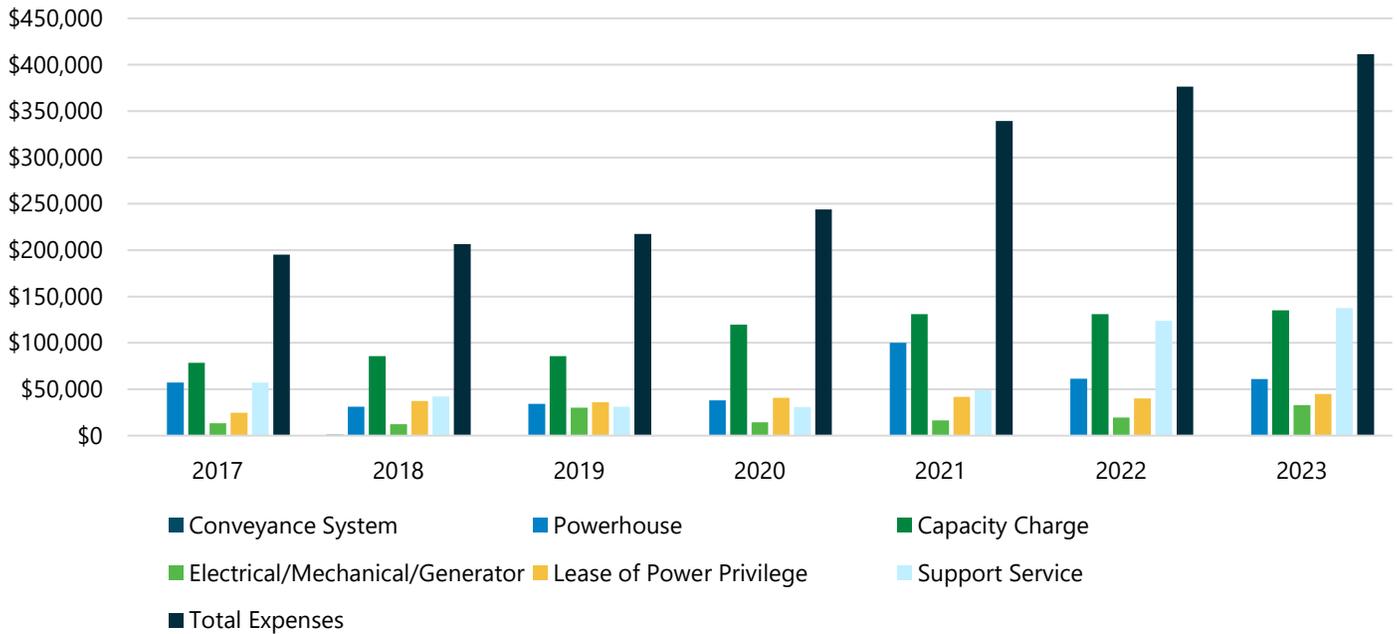
A summary of the Hydropower Water Activity Enterprise Fund major operating expenses by facility are provided in the tables and chart below.

Robert V. Trout Hydropower Facility Operating Expenses

	Budget	Percent	Expenses by Category	
Capacity Charge	\$135,000	34.8%	Non-Labor	\$321,700
Powerhouse	\$60,889	14.8%	Labor	\$89,710
Lease of Power Privilege	\$45,000	10.9%		
Support Services	\$137,698	33.5%	Total	\$411,410
Electrical/Mechanical/Generator	\$32,823	8.0%		
Conveyance System	\$0	0.0%		
Total	\$411,410	100.0%		

Robert V. Trout Hydropower Facility Operating Expenses

Capacity charge leading operating expense





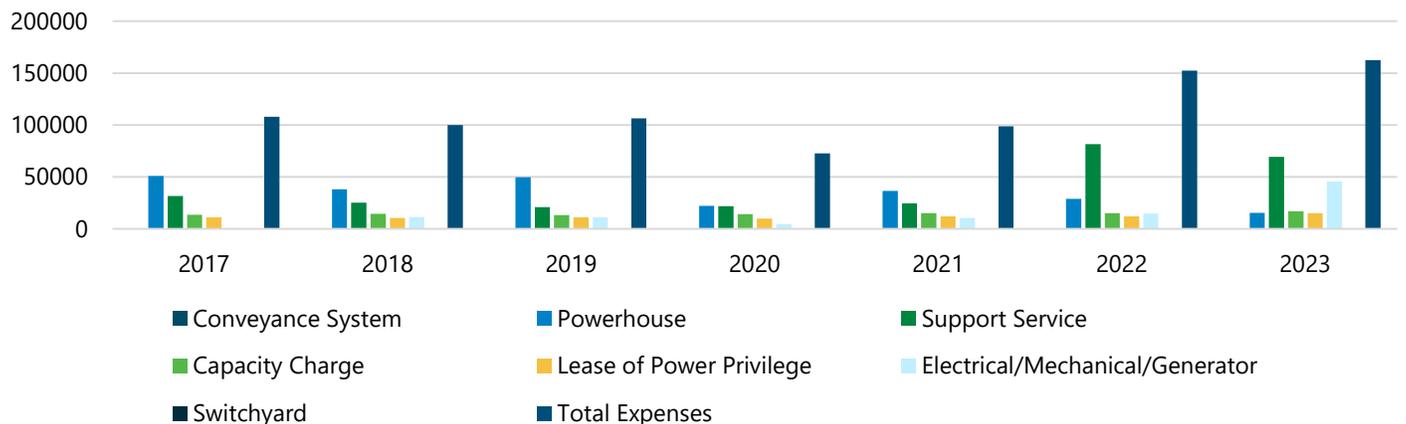
Granby Hydropower

Granby Hydropower Facility Operating Expenses

	Budget	Percent	Expenses by Category	
Powerhouse	\$15,430	9.5%	Non-Labor	\$83,800
Support Services	\$69,400	42.7%	Labor	\$78,800
Capacity Charge	\$17,000	10.5%	Total	\$162,600
Lease of Power Privilege	\$15,000	9.2%		
Electrical/Mechanical/Generator	\$45,770	28.1%		
Switchyard	\$0	0.0%		
Total	\$162,600	100.0%		

Granby Hydropower Facility Operating Expenses

Powerhouse leading operating expense



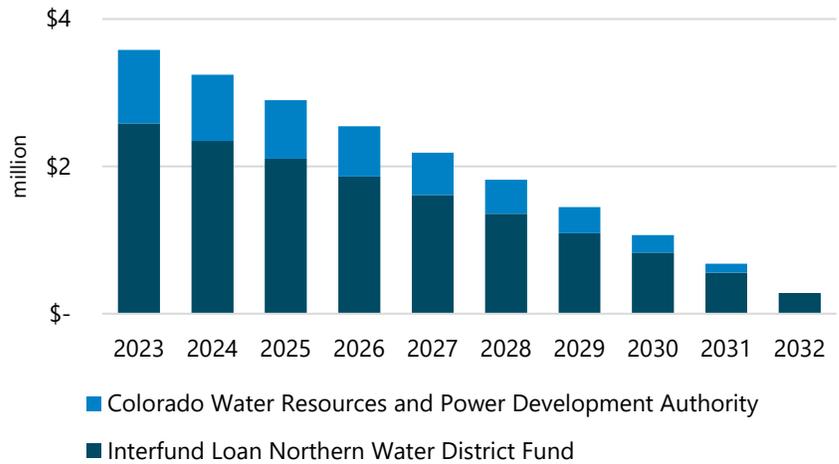
Debt Service

The fiscal year 2023 Debt Service is scheduled at \$639,036 to retire the outstanding principal and interest related to Hydropower’s outstanding debt. No future debt financing is planned. The Debt Service payable and the projected September 30, 2022, outstanding balance by each hydropower facility are provided below.

Robert V. Trout Hydropower Facility

- Colorado Water Resources and Power Development Authority \$2,000,000, September 1, 2013, of which \$1,098,690 is outstanding
- Interfund Loan - Northern Water District Fund \$4,700,000, February 15, 2014, of which \$2,813,098 is outstanding

Robert V. Trout Hydropower Facility Outstanding Debt



Granby Hydropower Facility

- Colorado Water Conservation Board \$5,135,183, July 1, 2017 of which \$4,336,689 is outstanding

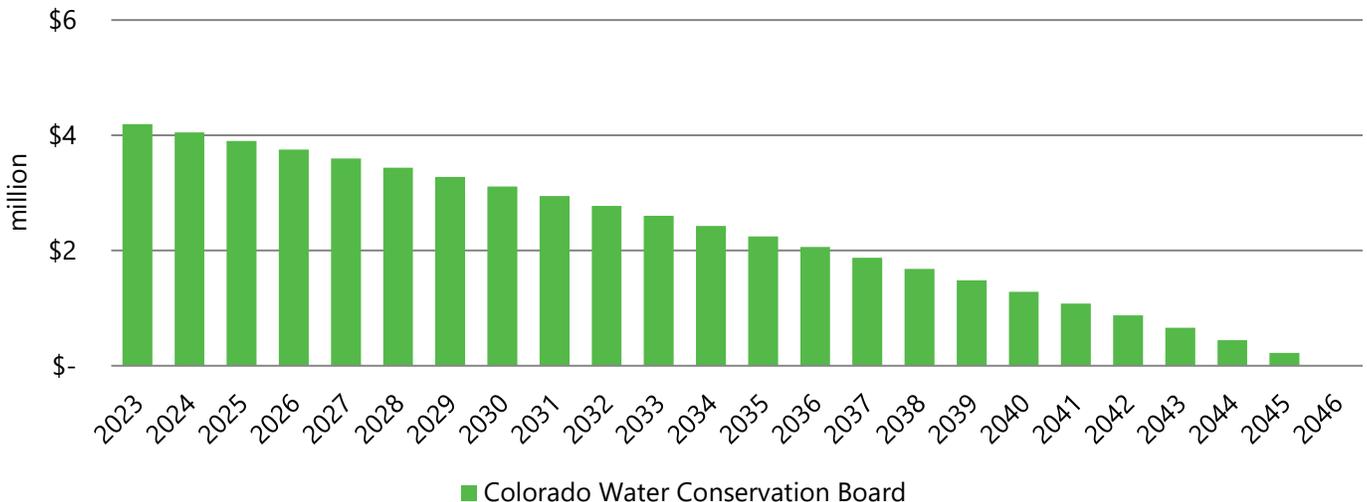
Robert V. Trout Hydropower Facility

	2021 Budget	2022 Budget	2023 Budget
Principal	\$318,641	\$325,014	\$331,514
Interest	\$91,109	\$84,736	\$78,236
Total	\$409,750	\$409,750	\$409,750

Granby Hydropower Facility

Principal	\$137,016	\$137,016	\$142,552
Interest	\$92,269	\$92,269	\$86,734
Total	\$229,285	\$229,286	\$229,286

Granby Hydropower Facility Outstanding Debt



ACRONYMS

ACFR

Annual Comprehensive Financial Report

AF

Acre-foot or Acre-feet

C-BT

Colorado-Big Thompson Project

CIP

Capital Improvement Plan

COPs

Certificates of Participation

CWCB

Colorado Water Conservation Board

CRS

Colorado Revised Statutes

CWA

Clean Water Act

DEIS

Draft Environmental Impact Statement

DOLA

Department of Local Affairs (Colorado)

EAM

Enterprise Asset Management

EIS

Environmental Impact Statement

EPA

Environmental Protection Agency

FEMA

Federal Emergency Management Agency

FTE

Full time equivalent

FONSI

Finding of no significant impact

GAAP

Generally Accepted Accounting Principles

GASB

Governmental Accounting Standards Board

GIS

Geographic Information System

IPS

Investment Policy Statement

NEPA

National Environmental Policy Act

Northern Water

Northern Colorado Water Conservancy District

NRCS

Natural Resource Conservation Service

NWRA

National Water Resource Association

ROD

Record of Decision

ROW

Right of Way

SUBDISTRICT

Municipal Subdistrict, Northern Colorado Water Conservancy District

TABOR

Taxpayers Bill of Rights, revenue and tax limit amendment. See Amendment 1 (glossary).

TIF

Taxing Increment Finance District

GLOSSARY

Accounting Standards

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

Acre-foot or Acre-feet

Volume of water equal to one foot in depth covering an area of one acre, or 43,560 cubic feet; approximately 325,851 gallons. One acre-foot is roughly the amount needed to serve 2.5 families each year.

Adopted Budget

The budget adopted by the Board of Directors at the August Planning and Action meeting. The adopted budget becomes effective annually as of October 1, and appropriations lapse at fiscal year-end (September 30).

Allocations

Distribution of costs.

Amendment 1

Approved by the electorate in the November 1992 election, this amendment is known as the Taxpayers Bill of Rights (TABOR). This is a revenue and expenditure limiting amendment to the Colorado constitution. The limit is determined by whichever is more restrictive to the growth of government.

Appropriation

Legal authorization granted by the Board to make expenditures as specified in the appropriating resolution.

Assessed Valuation

Total valuation established by the County Assessor on real and personal property within Northern Water boundaries which is used as a basis for levying taxes.

Assets

Economic resources owned by Northern Water.

Audit

A systematic collection of sufficient, competent evidential matter needed to attest to the fairness of management's assertions in the financial statements.

Basis of Accounting

Northern Water'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 and are recorded when earned, and expenses are recorded at the time liabilities are incurred. This is different from the basis of budgeting.

Board or Board of Directors

For Northern Water, this is a 13-member group of appointed officials.

Budget

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

Budget Hearing

A publicly held meeting where the public can comment or ask questions about the proposed budget.

Capital Policy

Initial acquisition costs of assets are capitalized if they have a service life of more than one year and a cost of \$5,000 or more. Costs not meeting these criteria are expenses. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective asset classes.

Capital Project

Expenditures which result in the construction of or major improvements to buildings and infrastructure; generally, consist of projects costing more than \$5,000 and lasting more than three years.

Clean Water Act

The federal law that establishes how the United States will restore and maintain the chemical, physical and biological integrity of the country's waters (oceans, lakes, streams and rivers, ground water and wetlands.) The law provides protection for the country's waters from both point and nonpoint sources of pollution.

Colorado Local Government Budget Law

All local governments are required to conform to the budget regulations of Title 29, Article 1, Part 1 of the Colorado Revised Statutes which define the legal requirements for budget format and content. It covers budget hearing and adoption; appropriations resolution; filing the budget; and changing the budget.

Commitments

Obligations in the form of purchase orders, contracts or salary commitments.

Contingency

Appropriation to cover the deficiency that might arise where an expenditure could not be foreseen at the time the budget was prepared.

COPs

Certificates of Participation are a kind of municipal debt which can be contracted by cities/counties without voter approval. Courts have ruled that, because of their structure, COPs do not constitute long-term obligations of the issuing authority and are therefore exempt from state and local laws that require voter approval of long-term debt.

Debt Service

Cash required in a given period, usually one year, for payment of interest and current maturities of principal for outstanding debt.

Depreciation

The expiration in the service life of an asset generally attributable to wear and tear through use, lapse of time or obsolescence. Depreciation is generally not budgeted; however, it is accounted for on the financial statements.

Direct Cost

An expense that can be traced directly to (or identified with) a specific cost center or activity. A direct cost may include labor, materials, services and equipment charges.

Emergency

An emergency is defined as an a) Act of God; b) Public Enemy; and c) something which could not have been reasonably foreseen at the time of the adoption of the budget. For the purpose of TABOR this is further restricted to exclude economic conditions, or revenue shortfalls.

Enterprise

An entity that qualifies under the Taxpayer's Bill of Rights (TABOR) as being a government-owned business authorized to issue its own revenue bonds and receiving fewer than 10 percent of its annual revenue in grants from all Colorado state and local governments combined.

Enterprise Asset Management (EAM)

Software system to manage major infrastructure with a preventative maintenance program.

Expenses

Charges incurred, whether paid or unpaid for operation, maintenance, and interest, and other charges, which are presumed to benefit the current fiscal period.

Fiscal Period

A period usually consisting of twelve months. At the end of the fiscal period a government unit determines its financial position and the results of its operations. Northern Water's fiscal period is October 1 to September 30.

Fixed Cost

Indirect or overhead expense of a business that does not vary with the volume of activity

Full Time Equivalent

An employee position is converted to decimal equivalent value. Numeric equivalent of one person occupying one employment position for one year. Example: 0.50 FTE is equal to half time position.

Fund

Fiscal and accounting entity with self-balancing set of accounts which are segregated usually by financial resources or other special regulations, restrictions, or limitations.

Generally Accepted Accounting Principles

Uniform minimum standards and guidelines for financial accounting and reporting, and encompasses the conventions, rules, and procedures necessary to define accepted accounting practices.

Government Finance Officers Association (GFOA)

An organization whose membership consists of government financial officers throughout the United States and Canada. Information on pertinent legislation, accounting changes, new programs or innovations is shared with members in a regular newsletter. Career seminars and educational classes are provided regularly.

Governmental Accounting Standards Board

The authoritative accounting and financial reporting standard-setting body for government entities.

Hydropower

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

Indirect Cost

An expense that cannot be traced directly to (or identified with) a specific cost center or activity. Indirect costs types may include indirect labor, indirect materials and overhead costs.

Internal Controls

A plan of organization under which employee's duties are so arranged and records and procedures so designed as to make it possible to protect and exercise effective accounting control over assets, liabilities, revenues and expenditures.

Levy

The total amount of taxes, special assessments or service charges imposed by Northern Water.

Long-term debt

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

Mill

One one-thousandth of a dollar (\$1.00 of tax for each \$1,000 of assessed valuation) of assessed valuation of property used to determine property taxes.

Net Revenues

Gross revenue less operating and maintenance expenses.

Nonoperating Revenue

Revenue received from property and specific ownership taxes, investment income, and other nonoperating revenues.

Operating Revenue

Revenue from water assessments, charges for services, energy and other operating revenue.

Operation and Maintenance (O&M) Expenses

All reasonable and necessary current expenses paid or accrued for operating, maintaining, and repairing infrastructure.

Operation and Maintenance Work Plan

A category of master plan items not capital in nature, that are normally ongoing activities and pertain to the general operations of Northern Water.

Political Subdivision

A county, city, town, or other municipal corporation, a public authority, and generally any publicly owned entity that is an instrumentality of a state or of a municipal corporation.

Principal and Interest Requirements

As used in the debt guidelines, interest requirements plus the current portion of long-term debt (includes general obligation bonds, certificates of participation and capital leases).

Professional Services

Consists of consultant payments for consultants to provide services such as facility design, legal work and auditors.

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 Northern 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.

Property Tax

Taxes levied on all real and personal property according to the property's valuation and the tax rate, in compliance with state and local statutes.

Proprietary Funds

Used to account for activities that are similar to businesses in the private sector. These funds are considered self-supporting in that the services rendered by them are generally financed through user charges or on a cost reimbursement basis. There are two types of proprietary funds such as Enterprise Funds and Internal Services Funds.

Pump Plants

A pump plant is a manmade structure that uses a pump to transfer water from one location to another.

Purchase Order

A document which authorizes the delivery of specified services.

Quasi Municipal Corporation

A quasi corporation generally refers to an entity that exercises some of the functions of a corporation but has not been granted separate legal personality by statute, particularly a public corporation with limited authority and powers such as a county or school district.

Rating

The creditworthiness of Northern Water as evaluated by independent agencies.

Raw Water

Untreated water.

Reclamation

United States Bureau of Reclamation

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.

Revenue Bonds

Bonds whose principal and interest are payable exclusively from a dedicated revenue source.

Revenues

Northern Water Enterprise Funds are financed through assessments, tax revenues, charges for services and energy revenues.

Risk Management

Northern Water is exposed to various risks of losses

Statutory Property Tax Revenue Limit

Colorado Revised Statute 29-1-301. Property tax increases are limited to 5.5% from one tax year to the next. An adjustment for growth factor is allowed for new construction. The exemptions to this restriction are payment of bonds, payment of other contractual obligations approved by voters, and capital expenditures allowed by "Truth in Taxation" legislation.

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.

Supplemental Budget Request

Appropriations may be changed to allow for unforeseen circumstances that may occur after the budget has been adopted.

Tax Levy

Unit of measurement is a mill (.001) which is then multiplied times the assessed value of real or personal property to determine the amount of taxes due.

Taxing Increment Finance District

Tax increment financing is a public financing method that is used as a subsidy for redevelopment, infrastructure, and other community improvement projects.

Temporary Employee

An employee hired as an interim replacement or temporary supplement of the workforce. Assignments in this category can be of limited duration or indefinite duration, but generally do not exceed one year.

TIF

Taxing increment financing is a public financing method that is used as a subsidy for redevelopment, infrastructure, and other community-improvement projects.

Type of Expenditure

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

Water Conservancy District

Water Conservancy Districts are formed in conformance with the Water Conservancy Act. They are organized under procedures in state district courts and remain under their jurisdiction and are formed at the request of communities and are local instrumentalities of state government.

Water Efficiency

Obtaining the benefits of water more efficiently, resulting in reduced demand for water. Sometimes called "end-use-efficiency" or "demand management."

Water Revenues

Revenues generated through billing process from the delivery of water.

Works

Dams, storage reservoirs, compensation and replacement reservoirs, canals, conduits, pipelines, tunnels, power plants, and any and all works, facilities, improvements, and property necessary or convenient for the supplying of water for domestic, irrigation, industrial and all other beneficial uses.

Working Capital

Current and restricted assets less current liabilities other than current year principal payments or long-term debt.

AD VALOREM MILL LEVY

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

RESOLUTION D-1382-08-22

AD VALOREM MILL LEVY

WHEREAS, it is the duty of the Board of Directors of Northern Colorado Water Conservancy District, as provided by law, in each year to determine the amount of money necessary to be raised by ad valorem taxation, taking into consideration other sources of revenue of Northern Water, and to fix a rate of levy, which when levied upon every dollar of assessed valuation will raise the amount required for Northern Water to supply funds for paying the costs of all construction obligations; for providing the services required to conserve, allocate, and control the water supplies of Northern Water; for paying the expenses of administration, engineering, operation, maintenance, repair, and replacement of the works, facilities, and properties of Northern Water; and for paying the expenses of such other business functions and activities as found by said Board to be necessary and convenient; and

WHEREAS, the Repayment Contract between Northern Water and the United States, Contract No. 9-07-70-W0020, was submitted to and approved by vote of the qualified electors of Northern Water, which contract states in part "...Northern Water shall levy not less than one mill tax on property within Northern Water as authorized by the Water Conservancy Act of Colorado..." in order to operate and maintain Northern Water functions and facilities; and

WHEREAS, C.R.S. § 37-45-122 limits the rate of levy to one mill on the dollar of assessed valuation of property within Northern Water after delivery of water from the works of Northern Water and Northern Water is not increasing the levy above one mill, which levy was in existence for years prior to November 4, 1992; and

WHEREAS, C.R.S. § 29-1-301 as amended, does not apply to a conservancy district if the property tax revenue increase results from a contractual obligation which has been approved by a majority of the qualified electors of the taxing authority; and

WHEREAS, the Board of Directors found and determined that water has been delivered; is being delivered; and will continue to be delivered from the works of Northern Water;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Water does now estimate the amount of money to be raised by ad valorem taxation for the year of 2022, to be collected in the calendar year of 2023, is approximately \$28,636,965; and said Board of Directors does hereby fix the rate of levy of one mill to be levied upon every dollar of assessed valuation of property, both real and personal, within Northern Colorado Water Conservancy District for the year 2022; and

BE IT FURTHER RESOLVED, that the Board of Directors of Northern Water does now certify to the Board of County Commissioners of Boulder, Larimer, Weld, Morgan, Washington, Logan, and Sedgwick Counties, and the City Council of the City and County of Broomfield, in the State of Colorado, said rate of one mill, so fixed for said purposes of Northern Water to be levied upon every dollar of assessed value on all property within Northern Water in said counties and city and county as aforesaid, and does now direct that at the time and in the manner required by law for levying of taxes for county and city and county purposes, said Boards of County Commissioners and City Council shall levy said tax of one mill upon each dollar of assessed valuation of all property, real or personal, within Northern Water, in their respective counties and city and county, in addition to such other taxes as may be levied by such Boards of County Commissioners and City Council; and

BE IT FURTHER RESOLVED, that all officers having authority to levy and collect such taxes within each said county and city and county, levy and collect such taxes in the form and manner as county and city and county taxes are collected and when collected to pay same to Northern Colorado Water Conservancy District, all as provided by the Water Conservancy Act of Colorado, C.R.S. §§ 37-45-101 et seq.

CERTIFICATE

I, Bradley D. Wind, do hereby certify that the above is a true and correct copy of a Resolution unanimously adopted by the Board of Directors of Northern Colorado Water Conservancy District at a Planning & Action Session meeting of said Board held in Berthoud, Colorado, on August 4, 2022.


Secretary

COLLECTION OF CLASS D SPECIAL ASSESSMENTS

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

RESOLUTION D-1383-08-22

COLLECTION OF CLASS D SPECIAL ASSESSMENTS

WHEREAS, the Board of Directors of Northern Colorado Water Conservancy District has heretofore made Class “D” allotments of water, as provided by law, and such allotments are attached to certain lands within Northern Water; and

WHEREAS, the Northern Water Board has caused to be recorded in the counties in which said lands are located, the petitions of the owners of the land and the attached Orders of the Board for the allotments so made; and

WHEREAS, to levy and collect special assessments upon those lands having Class “D” allotments, the Board of Directors of Northern Water is required, on or before the first day of October of each year, to certify to the County Assessors of the counties within Northern Water in which such lands are located, the amount of the annual installment to be collected on the tax roll as a flat special assessment against the lands for which such water was petitioned and allotted; and

WHEREAS, the Board has certified to the County Assessors in each of the counties in which such allotments have been made, a list of the lands and the amount of such annual installments in dollars to be collected against said lands; and

WHEREAS, the Northern Water Board has computed the aggregate total of such installments to be collected in each of the counties and such totals shall approximate but not exceed the following:

BOULDER	\$ 95,000.00
LARIMER	\$167,000.00
MORGAN	\$ 15,000.00
WELD	\$470,000.00

NOW, THEREFORE, BE IT RESOLVED, that under the provisions of the Water Conservancy Act, C.R.S. §§ 37-45-101 et seq. all officers or bodies having authority to levy and collect special assessments within their jurisdiction shall so levy in the year 2022 and collect such special assessments in the year 2023 as are herein provided, in the time, form, and manner and with like interest and penalties as special assessments are collected, and when collected, shall pay the same to Northern Colorado Water Conservancy District.

CERTIFICATE

I, Bradley D. Wind, do hereby certify that the above is a true and correct copy of a Resolution adopted by the Board of Directors of Northern Colorado Water Conservancy District at a Planning Session meeting of said Board held in Berthoud, Colorado, on August 4, 2022.


Secretary

COLLECTION OF ALL SOURCES OF REVENUE

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

RESOLUTION

D-1384-08-22

COLLECTION OF ALL SOURCES OF REVENUE

WHEREAS, it is the duty of the Board of Directors of Northern Colorado Water Conservancy District, as provided by law and in compliance with the District - United States Contract No. 9-07-70-W0020, formerly Contract 11r-1051, and supplements thereof, to provide such revenues, in addition to those arising from taxation and special assessments, as will fulfill the purposes and obligations of said District; and

WHEREAS, said Board has fixed the rate of tax levy for the calendar year 2022 collectable in 2023 in the estimated amount of \$28,636,965 and has levied the Class "D" special assessments for 2022, also collectable in 2023 in the estimated sum of \$736,500; and

WHEREAS, said Board has adopted its budget for all funds and appropriated the aggregate sum of \$146,268,500 for the Fiscal Year 2023.

NOW, THEREFORE, BE IT RESOLVED, that the General Manager and Treasurer of said District are hereby authorized and directed to collect from all outstanding contracts for District water supplies or services and, further, to collect from all other revenue sources legally available to this Board, a sum which, with revenues from taxation and Class "D" special assessments, will provide the aggregate revenues required to meet the sum appropriated for all District purposes in 2023.

CERTIFICATE

I, Bradley D. Wind, do hereby certify that the above is a true and correct copy of a Resolution adopted by the Board of Directors of Northern Colorado Water Conservancy District at a Planning Session meeting of said Board held in Berthoud, Colorado, on August 4, 2022.


Secretary

APPROPRIATION

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

RESOLUTION D-1385-08-22

APPROPRIATION RESOLUTION

WHEREAS, the Board of Directors of Northern Colorado Water Conservancy District appointed; Bradley D. Wind, Secretary and General Manager; Gerald A. Gibbens, Treasurer and Director of Operations Division; Sander Blackburn, Finance and Administrative Services Division Director; Fahim Ghafoori, Senior Financial Analyst; Myles Baker, Financial Analyst; and Kristyn Unrein, Financial Services Department Manager; of said District to prepare a Budget for Fiscal Year 2023; and they have submitted the same to said Board and caused to be published the requisite Notice of Hearing;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Colorado Water Conservancy District hereby approves and adopts the Budget of the Northern Colorado Water Conservancy District Fund as submitted by the duly appointed Budget Officers and appropriates the aggregate sum of \$113,205,393 for Fiscal Year 2023, for the purpose of paying the costs of all contractual obligations; meeting the expenses required to conserve, allocate, and control the water supplies of the District including the expense of construction, administration, and engineering; costs associated with the design and construction of new office, maintenance and site facilities using proceeds from the issuance of debt through Certificates of Participation; and the expenses for the transaction of all such other business functions and activities as found by said Board to be necessary and convenient; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Colorado Water Conservancy District hereby approves and adopts the Budget as submitted by the duly appointed Budget Officers and appropriates the aggregate sum of \$3,405,916 for the purpose of paying the Fiscal Year 2023 construction, operation and maintenance expenses of the Southern Water Pipeline Project; and the expenses for the transaction of all such other business functions and activities as found by said Board to be necessary and convenient for the Northern Colorado Water Conservancy District - Southern Water Supply Project Water Activity Enterprise; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Colorado Water Conservancy District hereby approves and adopts the Budget as submitted by the duly appointed Budget Officers and appropriates the aggregate sum of \$228,844 for the purpose of paying the Fiscal Year 2023 operation and maintenance expenses of the Pleasant Valley Pipeline Project; and the expenses for the transaction of all such other business functions and activities as found by said Board to be necessary and convenient for the Northern Colorado Water Conservancy District - Pleasant Valley Pipeline Project Water Activity Enterprise; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Colorado Water Conservancy District hereby approves and adopts the Budget as submitted by the duly appointed Budget Officers and appropriates the aggregate sum of \$28,215,300 for the purpose of paying the Fiscal Year 2023 capitalized expenses of the Northern Integrated Supply Project;

and the expenses for the transaction of all such other business functions and activities as found by said Board to be necessary and convenient for the Northern Colorado Water Conservancy District - Northern Integrated Supply Project Water Activity Enterprise; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Colorado Water Conservancy District hereby approves and adopts the Budget as submitted by the duly appointed Budget Officers and appropriates the aggregate sum of \$1,213,047 for the purpose of paying the Fiscal Year 2023 operation and maintenance expenses of the Hydropower Project; and the expenses for the transaction of all such other business functions and activities as found by said board to be necessary and convenient for the Northern Colorado Water Conservancy District – Hydropower Water Activity Enterprise.

BE IT FURTHER RESOLVED, that the funds required for the sums so appropriated shall be provided in the manner and by the means set forth in those certain Resolutions of even date in which the Board of Directors of said District exercises the authority given by C.R.S. §§ 37-45-101 et seq. for the levying of taxes and special assessments and for providing other revenues to the District; and

BE IT FURTHER RESOLVED, that pursuant to Article X Section 20(2) of the Colorado State Constitution, any revenues within the allowable revenue and spending limit which will not be spent during Fiscal Year 2023 shall be set aside and classified as reserve increases; and

BE IT FURTHER RESOLVED, that the funds required to be appropriated shall be provided in the manner and by the means adopted by the Board of Directors of Northern Colorado Water Conservancy District.

CERTIFICATE

I, Bradley D. Wind, do hereby certify that the above is a true and correct copy of a Resolution adopted by the Board of Directors of Northern Colorado Water Conservancy District at a Planning Session meeting of said Board held in Berthoud, Colorado, on August 4, 2022.


Secretary

