



# Northern Water

# 2022 Annual Budget





## TABLE OF CONTENTS

<b>Table of Contents .....</b>	<b>2</b>
<b>General Manager Transmittal Letter.....</b>	<b>5</b>
<b>Distinguished Budget Presentation Award .....</b>	<b>7</b>
<b>About Northern Water .....</b>	<b>8</b>
<b>History .....</b>	<b>9</b>
The Idea Behind the Colorado-Big Thompson Project .....	9
Northern Colorado Water Users Association .....	9
Northern Water Created.....	9
Construction of the Colorado-Big Thompson Project.....	10
Colorado-Big Thompson West Slope Collections System .....	11
Colorado-Big Thompson East Slope Distribution System.....	12
Southern Water Supply Project .....	13
Pleasant Valley Pipeline .....	13
Northern Integrated Supply Project .....	13
Hydropower.....	13
<b>Service Area .....</b>	<b>14</b>
<b>Largest Employers .....</b>	<b>15</b>
<b>Largest Counties in Service Area .....</b>	<b>16</b>
<b>Board of Directors .....</b>	<b>18</b>
<b>Organizational Chart .....</b>	<b>19</b>
<b>Our Business Plan .....</b>	<b>20</b>
Our Mission.....	20
Our Vision.....	20
Our Priorities .....	20
Our Values and Principles .....	20
<b>Budget Process .....</b>	<b>21</b>
Budget Schedule.....	21
Amending the Budget.....	21
<b>Human Capital .....</b>	<b>22</b>
Staffing .....	22
Schedule of Employees by Division .....	22
Labor Expenditures .....	23
Grade and Step .....	24
Employee Turnover.....	24
<b>Fiscal Policies .....</b>	<b>25</b>
Balanced Budget.....	25
Reserve Fund Policy.....	25
Revenues.....	25
Expenditures .....	25
Risk Management.....	25
Investments.....	26
Capital Policy.....	26
Basis Accounting.....	26
Capital Contributions .....	26

- Fund Structure and Budget Appropriations – All Funds ..... 27**
- Northern Water Budget Appropriations by Enterprise Funds..... 27
- Percentage of Appropriation by Fund ..... 27
- District Enterprise Fund ..... 28**
- Budget Summary ..... 29
- Fiscal Year 2022 Budget..... 31
- District Enterprise Fund Overview..... 32
- Revenues..... 32
- District Enterprise Fund Revenues ..... 33
- District Enterprise Fund Overview ..... 34**
- Property and Specific Ownership Tax Revenue (23.8% of Total Sources of Funds) ..... 34
- Breakdown by County ..... 34
- Specific Ownership Tax ..... 34
- Water Assessments Revenue (10.6% of Total Sources of Funds)..... 35
- Water Assessments by Class of Service..... 35
- Charges for Services (7.5% of Total Sources of Funds) ..... 37
- Other Operating Revenue (2.2% of Total Sources of Funds)..... 38
- Total Operating Expenses ..... 39
- Fleet Expenses (0.8% of Total Uses of Funds) ..... 40
- Facilities Expenses (1.6% of Total Uses of Funds)..... 41
- C-BT Operation and Maintenance Expenses (5.4% of Total Uses of Funds)..... 42
- Division: Operations - Collection Systems..... 43
- Division: Operations - Distribution Systems ..... 44
- Division: Operations – Control Center ..... 45
- Division: Operations - Facilities and Equipment ..... 46
- Programs Expenses (21.3% of Total Uses of Funds)..... 47
- General Manager Programs ..... 48
- District Enterprise Fund Overview: Programs ..... 49**
- Division: Senior Management ..... 49
- Division: Senior Management - Human Resources ..... 51
- Administration Division Programs..... 52**
- Division: Administration - Administrative Program ..... 53
- Division: Administration - Communications Program ..... 54
- Division: Administration - Contracts Program ..... 55
- Division: Administration - Cybersecurity and IT Governance Program ..... 56
- Division: Administration - Financial Services Program ..... 57
- Division: Administration - Information Technology Services Program..... 58
- Division: Administration - Records Program ..... 60
- Division: Administration - Water Scheduling Program ..... 61
- Engineering Division Programs ..... 62**
- Division: Engineering - Project Management Program..... 63
- Division: Engineering - Real Estate Services Program ..... 64
- Division: Engineering - Security and Emergency Management Program..... 65
- Division: Engineering - South Platte Special Projects Program ..... 66
- Division: Engineering - Water Resources Program ..... 67
- Division: Engineering - Water Rights Program..... 68
- Environmental Services Division Programs..... 69**
- Division: Environmental Services - Data Management Program..... 70
- Division: Environmental Services - Environmental Planning Program ..... 71
- Division: Environmental Services - Field Services Program ..... 72
- Division: Environmental Services - Forest Health Program ..... 73
- Division: Environmental Services - Water Efficiency Program..... 74

Division: Environmental Services - Water Quality Program.....	75
<b>Operations Division Programs.....</b>	<b>76</b>
Division: Operations - Instrumentation Controls and Electrical Engineering Program.....	77
Division: Operations - Safety Program .....	78
<b>Capital Projects.....</b>	<b>79</b>
Capital Projects and Initiatives .....	80
Pump Plants.....	81
Canals .....	81
Reservoirs and Dams.....	82
Facilities .....	82
General Projects .....	83
Northern Water Initiatives.....	83
Capital Asset Purchases .....	85
Impacts to Operating Costs .....	85
Debt Service (0.41% of Total Uses of Funds).....	86
Net Pension Liability (0.17% of Total Uses of Funds).....	86
<b>Southern Water Supply Project Water Activity Enterprise Fund.....</b>	<b>87</b>
Budget Summary.....	88
Southern Water Supply Project Water Activity Enterprise Fund Overview .....	89
Revenues.....	89
Expenses.....	91
Southern Water Supply Project Pipelines and Stations Map.....	92
Capital Outlay .....	93
<b>Pleasant Valley Pipeline Water Activity Enterprise Fund .....</b>	<b>94</b>
Budget Summary.....	95
Pleasant Valley Pipeline Project Water Activity Enterprise Fund Overview .....	96
Revenues.....	96
Expenses.....	97
Pleasant Valley Pipeline Project Pipeline Route.....	98
<b>Northern Integrated Supply Project Water Activity Enterprise Fund .....</b>	<b>99</b>
Budget Summary.....	100
Northern Integrated Supply Project Water Activity Enterprise Fund Overview .....	102
Contributions .....	102
Capital Outlay .....	102
<b>Hydropower Water Activity Enterprise Fund .....</b>	<b>103</b>
Budget Summary.....	104
Hydropower Water Activity Enterprise Fund Overview.....	105
Revenues.....	105
Expenses.....	107
Robert V. Trout Hydropower Facility Operating Expenses .....	107
Granby Hydropower Facility Operating Expenses.....	108
Debt Service.....	109
<b>Acronyms .....</b>	<b>110</b>
<b>Glossary .....</b>	<b>112</b>
<b>Ad Valorem Mill Levy .....</b>	<b>118</b>
<b>Collection of Class D Special Assessments .....</b>	<b>120</b>
<b>Collection of All Sources of Revenue.....</b>	<b>121</b>
<b>Appropriation .....</b>	<b>122</b>

# GENERAL MANAGER TRANSMITTAL LETTER

To the President and Northern Water Board of Directors,

We are pleased to present the fiscal year 2022 budget which allows Northern Water to maintain its strong financial position while continuing to make appropriate investments toward our ongoing commitment to a reliable and high-quality wholesale water supply in Northeastern Colorado. Northern Water's sound fiscal health was noted on July 9, 2021, when Moody's Investor Service assigned an issuer rating of Aaa to the District, specifically noting a stable outlook.

The budget utilizes available resources to maintain and improve aging infrastructure and support programs that encourage enhancing a reliable water supply throughout the region. 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 2022 budget. This budget continues to place an emphasis on additional staffing resources needed to effectively manage new capital projects and programs. Programs to protect and conserve water supplies are part of planned activities along with the continuation of permitting tasks for new water supply projects. Maintaining one of the core priorities "collect and deliver water" is also included.

## Fiscal Year 2022 Budget Summary and Highlights by Fund

### District Enterprise Fund

Total Sources of Funds are estimated to be \$113 million, or approximately 9 percent higher than the fiscal year 2021 budget. Key components included within the Fiscal Year 2022 budgeted sources are:

- Property and Specific Ownership Tax revenues totaling \$26.8 million.
  - \$1.6 million increase (or approximately 6 percent) due to increased property tax revenues and reappraisals of property which occurred in 2021 making taxes to be collected in 2022 higher than in the previous two years.
- Water assessments totaling \$12 million.
  - Open-rate assessment increase of \$1.30 and \$0.80 per acre-foot unit for municipal/industrial and agricultural users, respectively.
- Charges for Services totaling \$8.5 million reflects an increase of \$736.5 thousand (or 9 percent) due to anticipated increased labor charges for new capital projects.
- Other operating revenues totaling \$2.5 million.
- Other non-operating revenues totaling \$21 million reflects an increase of \$20.9 million due to an increase in grant revenues.

Total Uses of Funds are estimated to be \$128.9 million (or approximately 66 percent) higher than fiscal year 2021. Key components included within the Fiscal Year 2022 budgeted uses are:

- Operating expenses of \$37.5 million reflect an increase of \$2 million (or approximately 6 percent) compared to fiscal year 2021.
- Staffing to increase by fourteen full-time positions primarily due to new capital projects and filling open positions.
- Increased labor and benefits expense of approximately \$2.7 million.
- Targeted reserves of \$1.8 million, reflecting 5 percent of budgeted operating expenses.
- Capital investments of \$83.9 million, approximately 113 percent higher than fiscal year 2021, due to West Slope and East Slope capital campus expansion projects as well as other significant operating capital projects and initiatives.
  - East Troublesome Fire Recovery - \$19.9 million
  - Airborne Snow Observatory Flights - \$2.5 million
  - Contribution to Municipal Subdistrict for Flatiron Bypass through Chimney Hollow - \$2 million
  - Contribution to Municipal Subdistrict for Colorado River Connectivity Channel - \$1 million
  - Fiber connectivity - \$500 thousand

- Debt service totaling \$5.3 million, \$5 million higher than in fiscal year 2021 due to the issuance of Series 2021 Certificates of Participation in July 2021.
- No unfunded pension liability was identified.

### **Southern Water Supply Project Water Activity Enterprise Fund**

Total Sources of Funds are estimated to be \$2.5 million, \$607 thousand lower than fiscal year 2021.

- \$2.5 million in assessments

Total Uses of Funds are estimated to be \$3.1 million, \$19.6 million lower than fiscal year 2021.

- \$2.4 million in operating expenses
- Capital projects of \$634 thousand, \$1.6 million lower than fiscal year 2021
  - \$175 thousand for Carter Lake Flow Meter
  - \$150 thousand for SWSP II Boulder Isolation Valve
  - \$100 thousand for Carter Lake Outlet Works PLC Replacement

### **Pleasant Valley Pipeline Project Water Activity Enterprise Fund**

Total Sources of Funds are estimated to be \$155 thousand, \$52 thousand higher than fiscal year 2021.

- \$155 thousand in assessments

Total Uses of Funds are estimated to be \$155 thousand, \$52 thousand lower than fiscal year 2021.

- \$155 thousand in operating expenses

### **Northern Integrated Supply Project Water Activity Enterprise Fund**

Total Sources of Funds are estimated to be \$33.4 million, \$18.8 million higher than fiscal year 2021 with the full amount expected in proceeds from participant contributions.

Total Uses of Funds of \$43.2 million for the NISP capital project for permit, design and land purchases for Glade Reservoir, South Platte Water Conservation Project and Highway 287 relocation.

### **Northern Water Hydropower Water Activity Enterprise Fund**

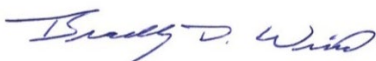
Total Sources of Funds are estimated to be \$1.39 million, in line with the fiscal year 2021 budget.

- \$1.36 million in energy revenue

Total Uses of Funds are estimated to be \$1.1 million, approximately the same as in fiscal year 2021.

- \$388 thousand in operating expenses
- \$639 thousand for debt service

We believe the budget for Northern Water’s eighty-fifth year of operation meets the Board’s conservative fiscal philosophies and directives and leadership’s commitment to accountability and strong fiscal management.



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, 2020**

*Christopher P. Morill*

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 more than 210,000 acre-feet of untreated water each year to the South Platte River Basin. In 2018, agricultural and municipal/industrial deliveries were 112,785 and 116,984 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 over 88 percent of Northern Water's annual revenue. Northern Water's fiscal year end is 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 and criteria 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 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, years-long 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

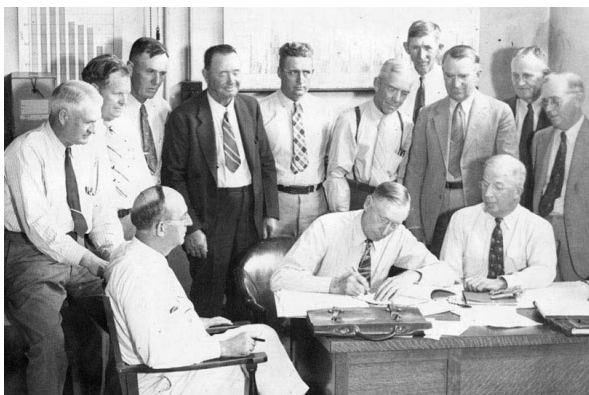
Then came plans for the C-BT Project. The idea was to divert water from the headwaters of the Colorado River on the west side of the Continental Divide. That water would travel through a lengthy tunnel underneath Rocky Mountain National Park to Northeastern Colorado where farmers desperately needed water 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.



*This empty valley is where Horsetooth Reservoir now sits.*

### 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.



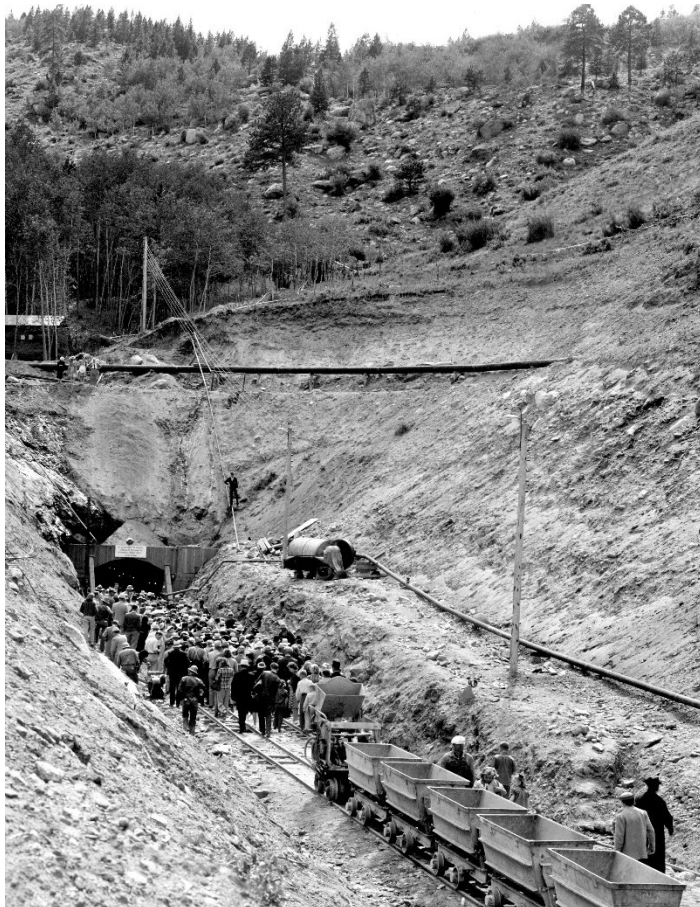
*Charles Hansen and J.M. Dille signing the 1937 repayment contract with the U.S. Bureau of Reclamation.*

### 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.



Crews construct the inlet structure to the Granby Pump Plant, which is now Farr Pump Plant.



Crews construct the Horsetooth Reservoir outlet structure in the late 1940s.

### **Construction of the Colorado-Big Thompson Project**

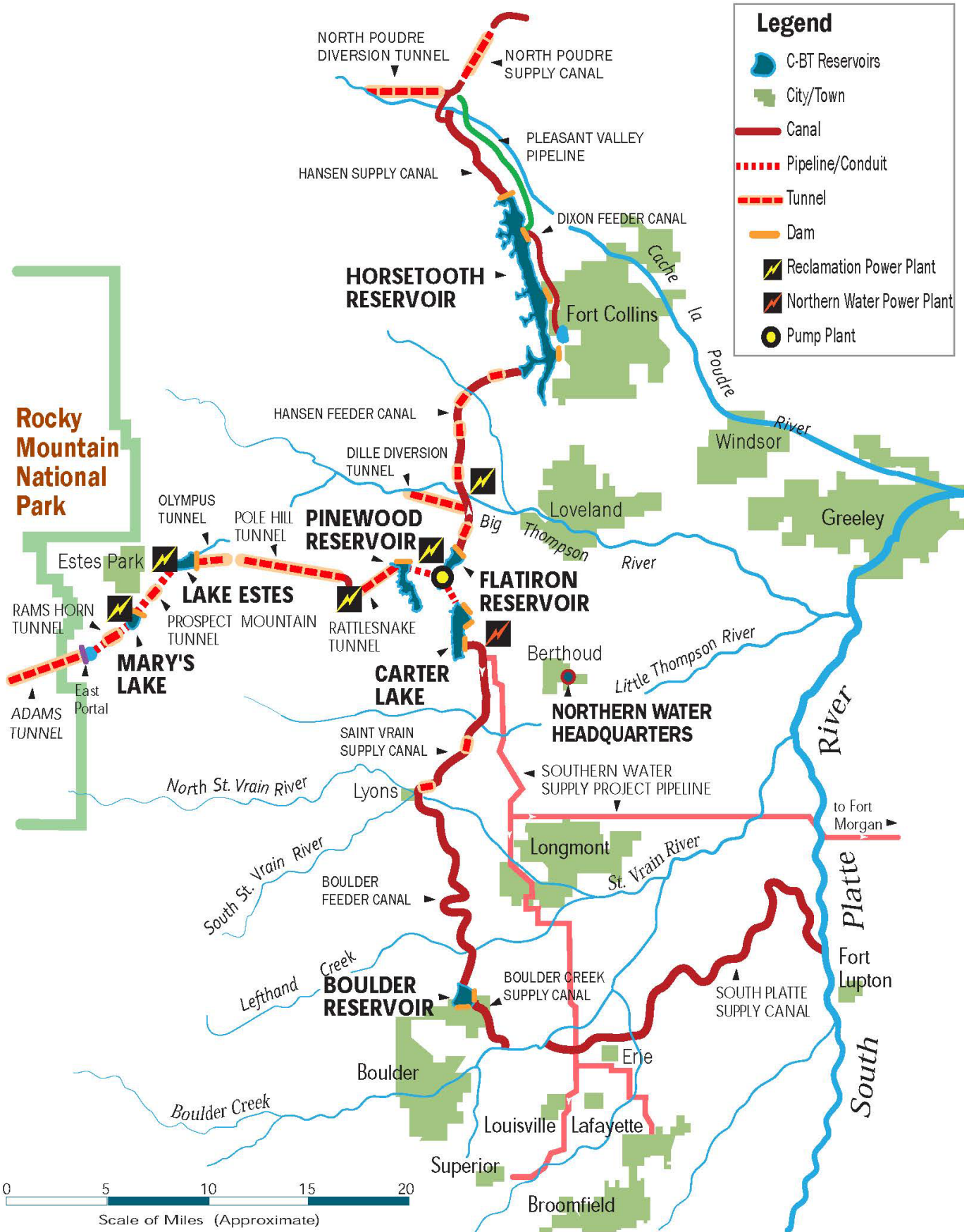
Reclamation oversaw construction on the more than 100 features of the C-BT Project. Work began in 1938 and would take nearly 20 years to complete. On July 5, 1938, Northern Water signed a repayment contract with the United States, agreeing to pay up to \$25 million during a 40-year repayment period. 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 Collections 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 (SWSP) 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 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 (SWSP 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 new pipeline will provide 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 million. All costs were borne by the four project participants.

The SWSP 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 SWSP 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.

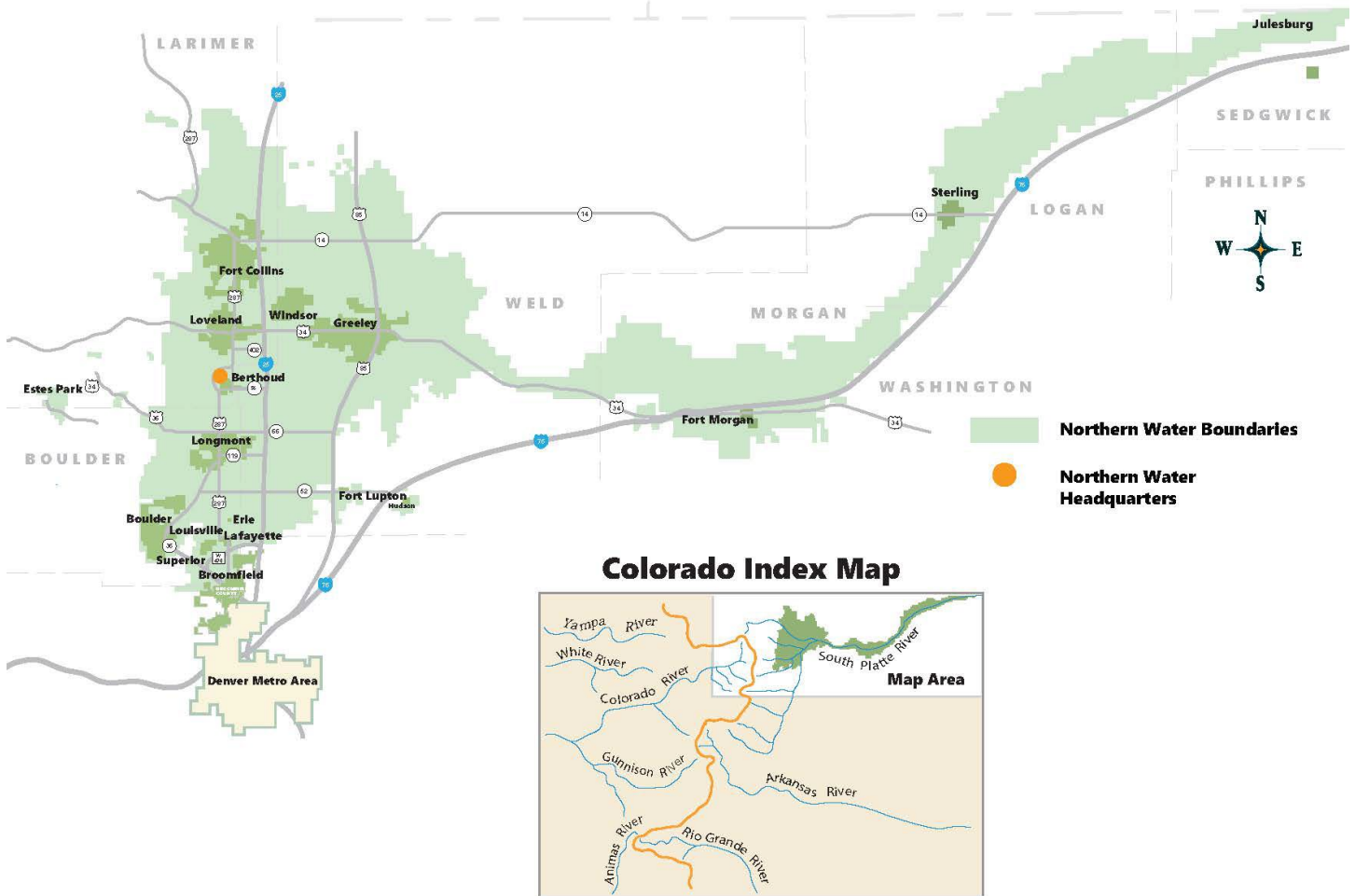
## **Northern Integrated Supply Project**

The proposed Northern Integrated Supply Project (NISP) is a collaborative effort among fifteen 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 final EIS was released on July 20, 2018. 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

### Largest Employers by County: 2020 Annual Reports

Rank	Larimer County Employer	Employment
1	UCHealth: Poudre Valley Hospital	7,760
2	Colorado State University	7,676
3	Poudre School District	3,784
4	Thompson School District R2-J	2,113
5	Larimer County	1,799
6	City of Fort Collins	1,637
7	Medical Center of the Rockies	1,621
8	Woodward Inc.	1,590
9	Broadcom Inc.	1,500
10	Banner Health: McKee Medical Center	1,440
	<b>Sum of largest employers</b>	<b>30,920</b>
	Full labor force June 2020	207,120

Rank	Weld County Employer	Employment
1	JBS Swift Beef Company	6,000
2	Banner Health: Northern Colorado Medical Center	3,710
3	Vestas	2,890
4	Greeley/Evans School District 6	2,860
5	Weld County Government	1,783
6	University of Northern Colorado	1,530
7	State Farm Insurance	1,200
8	UCHealth	1,030
9	City of Greeley	905
10	Haliburton Energy Services	900
	<b>Sum of largest employers</b>	<b>22,808</b>
	Full labor force June 2020	170,001

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
	<b>Sum of largest employers</b>	<b>15,210</b>
	Full labor force June 2019	196,991

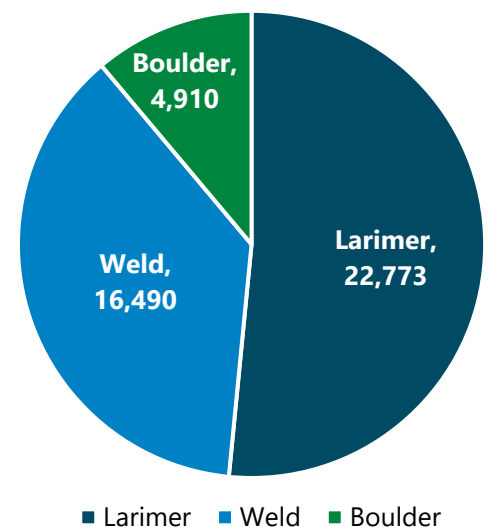
Rank	Broomfield City and County Employer	Employment
1	CenturyLink	1,850
2	Oracle	1,620
3	SCL Health Revenue Service Center	1,530
4	Hunter Douglas Window Fashions	980
5	City and County of Broomfield	795
6	Vail Resorts	740
7	TSYS	580
8	Danone North America	570
9	Broadcom, Inc.	500
10	VMware	465
	<b>Sum of largest employers</b>	<b>9,630</b>
	Full labor force June 2020	38,500

Source of largest employers: Reporting Entity 2020 Annual Financial Report

\* Source of largest Boulder County Employer: 2019 Annual Financial Report

### Top Ten Employers – Combined

Rank	Employer	County	Employment
1	UCHealth: Poudre Valley Hospital	Larimer/Weld	8,790
2	Colorado State University	Larimer	7,676
3	JBS Swift Beef Company	Weld	6,000
4	Banner Health	Larimer/Weld	5,150
5	Poudre School District	Larimer	3,784
6	Vestas	Weld	2,890
7	Greeley/Evans School District 6	Weld	2,860
8	Medtronic PLC	Boulder	2,470
9	Boulder Community Health	Boulder	2,440
10	Thompson School District R2-J	Larimer	2,113
	<b>Sum of largest employers</b>		<b>44,173</b>
	Full labor force 2020		612,612

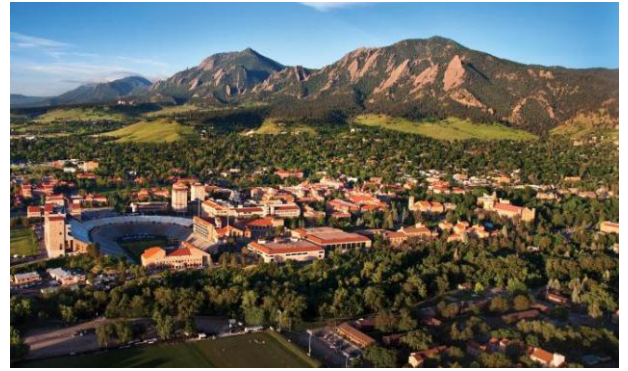


## LARGEST COUNTIES IN SERVICE AREA



### Larimer County

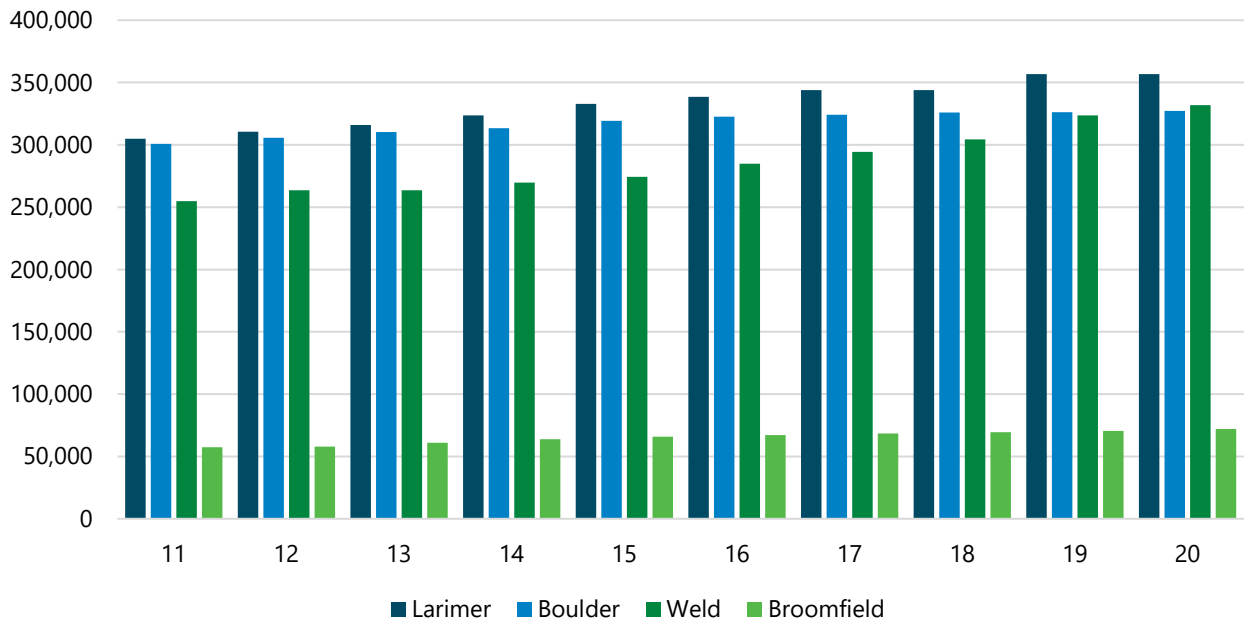
Established	1861
Estimated Populations for 2020	356,899
Unemployment Rate	6.3%
Per Capita Income	\$55,884
Land Area (square miles)	2,640
Most Populous County in Colorado	6th



### 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	8th

## Population Trend By County



Boulder, Weld and Larimer counties are the most populous, accounting for roughly 90 percent of Northern Water’s total population. Northern Water’s current boundary population is approximately 1,015,958 and has increased by cumulative 19.6% since 2010.

- From 2012 to 2021, the population of the four largest counties in the District have grown by approximately 189,000 or 20%
- Larimer County is the largest county in the district with a population of 362,533. Broomfield County increased by 6 percent, the greatest among the largest counties. Weld County has increased by 85,000 from 2012 to 2021.

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





### Weld County

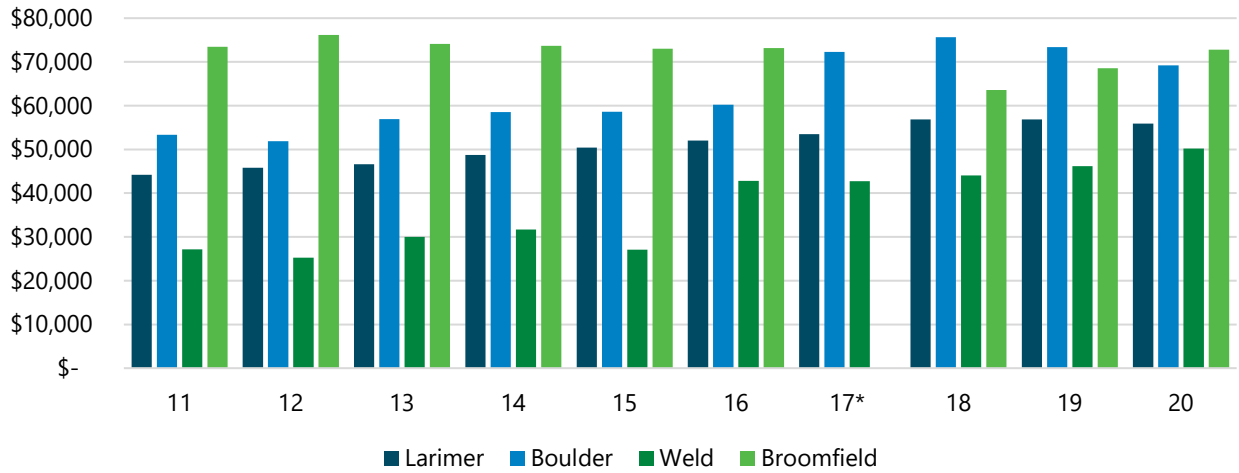
Established	1861
Estimated Populations for 2020	331,895
Unemployment Rate	7.2%
Per Capita Income	\$50,198
Land Area (square miles)	3,987
Most Populous County in Colorado	9th



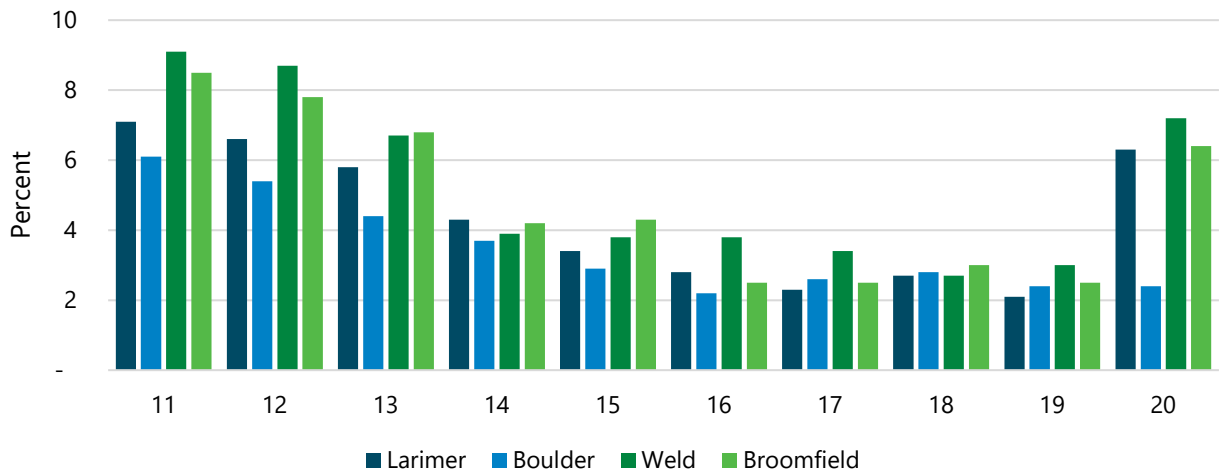
### Broomfield County

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

### Per Capita Income by County



### Unemployment Trend by County



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

## BOARD OF DIRECTORS

The 12-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
Jacob S. Schey	1953-1955	2 years
J. Ben Nix	1955-1976	21 years
Gordon Dyekman	1976-1991	15 years
William Bohlender	1991-1998	7 years

### Current Board of Directors



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



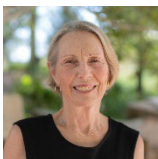
**Dale Trowbridge**  
Vice President  
Weld County  
Aug. 15, 2014 – Sept. 28, 2023



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



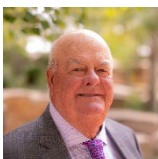
**Jennifer Gimbel**  
Larimer County  
July 15, 2019 – Sept. 28, 2024



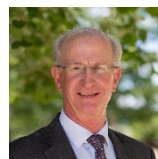
**Sue Ellen Harrison**  
Boulder County  
Sept. 28, 2009 – Sept. 29, 2022



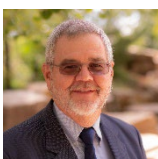
**Don Magnuson**  
Weld County  
Sept. 28, 2004- Sept. 28, 2024



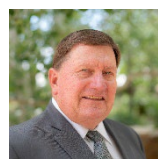
**Gene Manuella**  
Logan County  
Sept. 28, 2018 – Sept. 28, 2022



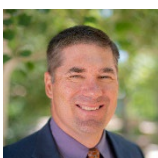
**Rob McClary**  
Sedgwick County  
Sept. 28, 2011 – Sept. 28, 2023



**David Nettles**  
Weld County  
Oct 18, 2018 – Sept. 28, 2022



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

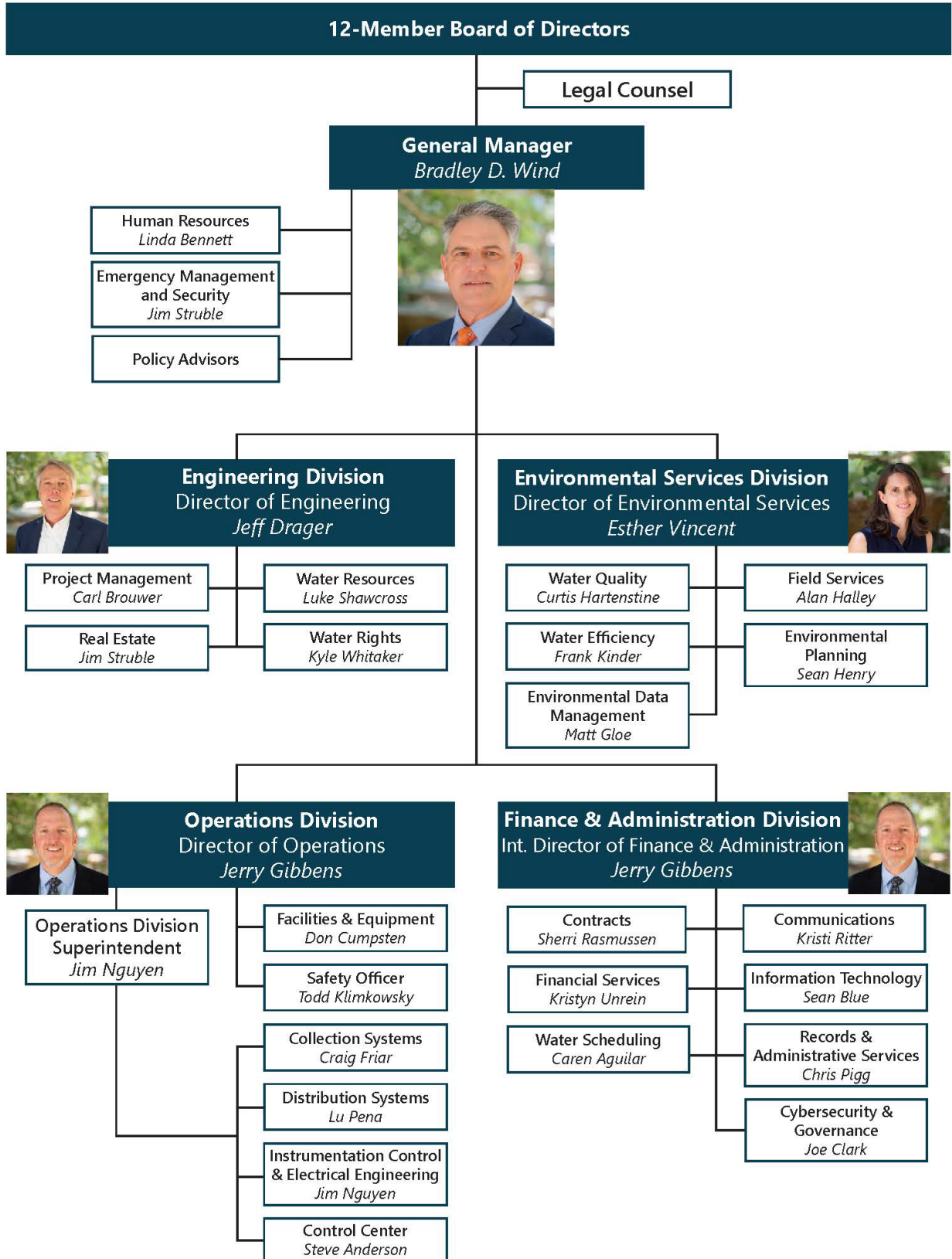


**Todd Williams**  
Boulder County  
Sept. 28, 2017 – Sept. 28, 2025



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

# ORGANIZATIONAL CHART



\*Julie Stoupa began as Human Resources Department Manager on Oct. 11, 2021, following Linda Bennett’s retirement.

\*Jeremy Worth began as Distributions Systems Department Manager on Oct. 25, 2021, following Lu Pena’s retirement.

# 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, 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 13, 2021, appointed Bradley Wind, Karen Rademacher (retired prior to adoption of budget), Jerry Gibbens, Kristyn Unrein and Fahim Ghafoori as budget officers and directed them to prepare and submit the requisite budgets of Northern Water for fiscal year 2022. 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 July 20, 2021.

The 2021 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	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
Formulate key goals and objectives									
Identify major budget assumption									
Budget instructions issued to all department managers									
Review and final recommendations of budget by senior managers									
Appointment of budget officers and prepare budget reports									
Deliver budget to the Board									
Hold public hearing and adopt budget by the Board									
File budget with the state									

### 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 \$75,000, whether budgeted or unbudgeted, must be authorized by the Northern Water Board. Purchase of capital assets over \$25,000, whether budgeted or unbudgeted must be authorized by the General Manager.

# HUMAN CAPITAL

## Staffing

Total full-time positions funded are 186.

Summary of positions planned for:

Filled and funded	162
Vacant and funded	24
<b>Total positions</b>	<b>186</b>

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

### Operations Division

Electrical Engineer

### Administration Division

Administrative Assistant  
 Contract Specialist  
 Procurement Technician  
 IT Help Desk Technician  
 IT Network Administrator  
 Cybersecurity Analyst  
 Water Scheduling Technician

### Engineering Division

Project Management Engineer (two)  
 Water Resources Engineer

### Environmental Services Division

Water Efficiency Garden Manager  
 Environmental Data Engineer  
 Water Quality Engineer (two)

## Schedule of Employees by Division

	Full Time	Open Full Time	Total Full Time	Percent of Total	Part Time
<b>2020</b>					
Operations	52	8	60	37%	3
Engineering	18	6	24	15%	1
Environmental	22	5	27	17%	0
Administration	46	4	50	31%	2
<b>Total</b>	<b>138</b>	<b>23</b>	<b>161</b>	<b>100%</b>	<b>6</b>
<b>2021</b>					
Operations	52	7	59	34%	4
Engineering	25	6	31	18%	1
Environmental	23	1	24	14%	0
Administration	49	9	58	34%	4
<b>Total</b>	<b>149</b>	<b>23</b>	<b>172</b>	<b>100%</b>	<b>9</b>
<b>2022</b>					
Operations	54	8	62	33%	0
Engineering	28	4	32	17%	1
Environmental	26	4	30	16%	0
Administration	54	8	62	33%	0
<b>Total</b>	<b>162</b>	<b>24</b>	<b>186</b>	<b>100%</b>	<b>1</b>

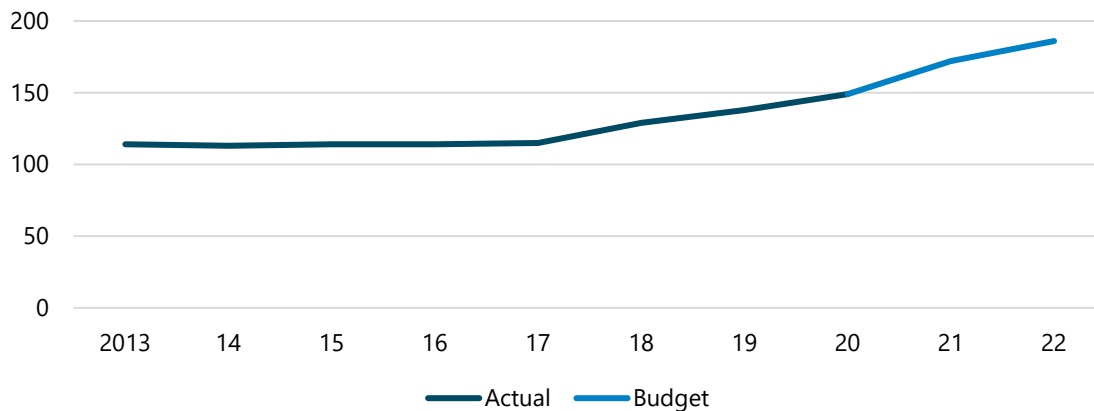
## Labor Expenditures

Labor expenditures are accounted for individually within the organizational divisions of Operations, Engineering, Environmental Services and Administration, and further defined by key activities within each respective division. Labor costs including benefits and capitalized labor are budgeted at \$26,116,226 for fiscal year 2022 compared to \$23,402,714 for fiscal year 2021. Out-of-pocket benefit costs are projected at 41 percent of labor and thus 2022 out-of-pocket benefits are estimated at \$7,594,080 compared to \$6,087,808 compared to 2021. Total labor and benefit expense for fiscal year 2022 is expected to increase from fiscal year 2021 by \$2,713,512 due to an increase of fifteen positions and step and pay structure increases.

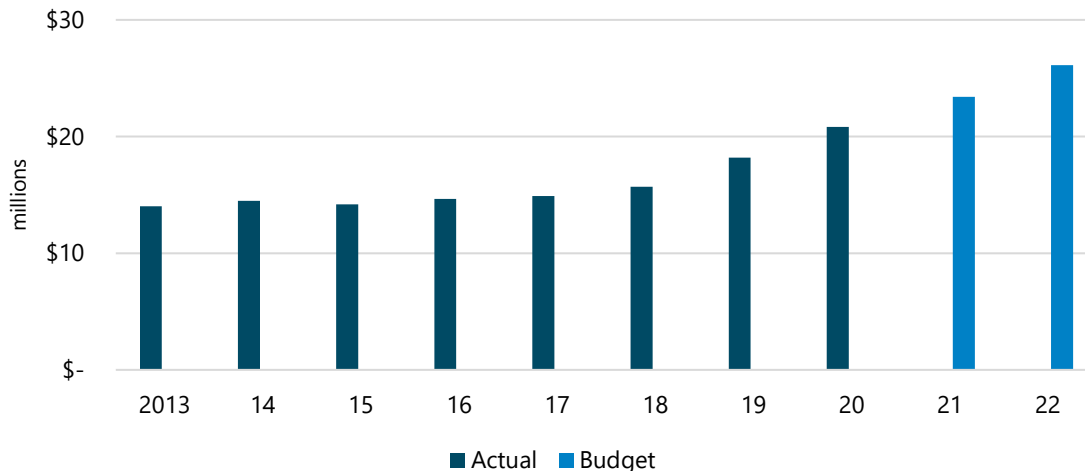
The increase in staffing is related to filling open positions, new and expanded services and support for two new major water projects. Fiscal year 2022 labor costs and out-of-pocket benefit costs are projected to be 14 percent and 6 percent, respectively, of total uses of funds. A 3 percent increase to Northern Water’s salary pay structure is included in the fiscal year 2022 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 2022 budget encompasses labor costs for 186 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.

	<b>Increase</b>	<b>Service</b>	<b>Percentage of Employees</b>
Step 1	5%	6 months	1.2%
Step 2	5%	1 year	1.9%
Step 3	5%	1 year	4.9%
Step 4	5%	1 year	6.8%
Step 5	5%	2 years	20.4%
Step 6	5%	2 years	9.9%
Step 7	5%	3 years	17.9%
Step 8	5%	4 years	13%
Step 9	5%	5 years	13%
Step 10	5%	6 years	4.3%
Step 11	5%		4.3%

The fiscal year 2022 budget includes an additional \$109,615 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.

	<b>Dec. 31 2017</b>	<b>Dec. 31 2018</b>	<b>Dec. 31 2019</b>	<b>Sept. 30 2020</b>	<b>Sept. 23 2021</b>
Number of employees as of date listed	117	128	134	149	162
Average years of active employment	15.6	12.6	13.5	11.6	9.67
Turnover rate (number/percentage)	6/5%	7/5.4%	15/11%	12/8%	14/8.6%
Average years for discontinued employees	19.9	12.6	14.03	15.4	16



## 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.

<b>Reserve</b>	<b>Purpose</b>	<b>Target Funding</b>
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 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.

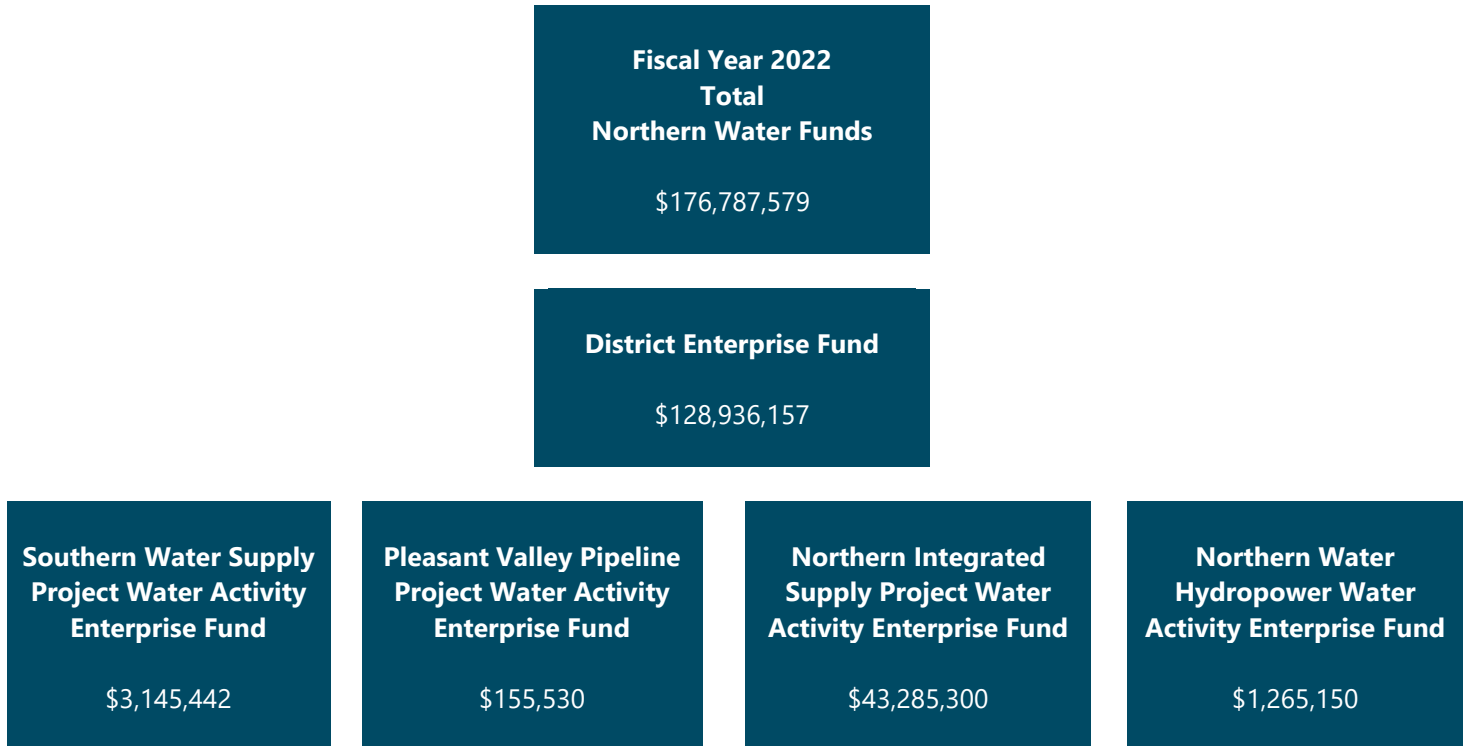
**Capital Contributions**

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).

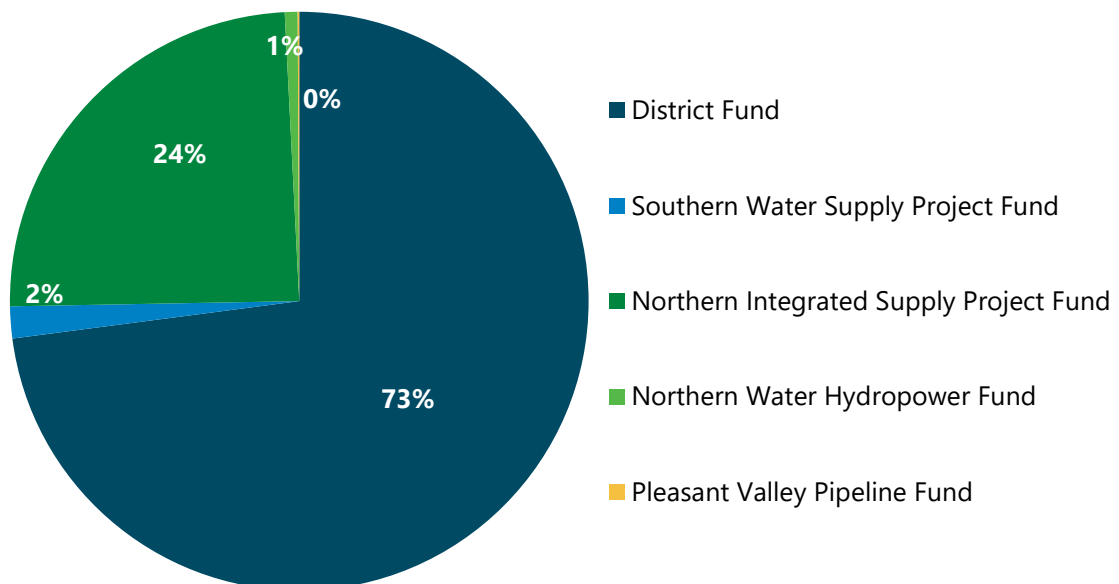
## FUND STRUCTURE AND BUDGET APPROPRIATIONS – ALL FUNDS

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





## **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 trans mountain water diversion, storage and delivery system.

## Budget Summary

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 21 Budget	Percentage Change From Fiscal Year 21 Budget
<b>Beginning Cash &amp; Reserves</b>						
Restricted	2,242,417	2,242,417	2,295,393	<b>55,295,393</b>		
Unrestricted	82,635,360	83,129,195	88,518,745	<b>87,683,536</b>		
<b>Total</b>	<b>84,877,777</b>	<b>85,371,612</b>	<b>90,814,138</b>	<b>142,978,929</b>		
<b>SOURCES</b>						
<b>Revenue Sources</b>						
Property and Specific Ownership Tax	27,187,290	25,249,000	25,249,000	<b>26,870,689</b>	1,621,689	6%
Water Assessments	11,580,149	11,839,319	11,839,319	<b>12,018,132</b>	178,813	2%
Charges for Services	7,961,981	7,776,371	7,765,061	<b>8,512,896</b>	736,525	9%
Indirect Costs	-	-	-	<b>2,773,800</b>	2,773,800	-
Other Operating Revenues	2,509,470	2,384,450	2,368,200	<b>2,480,650</b>	96,200	4%
Intergovernmental - Grants	-	-	-	<b>2,500,000</b>	2,500,000	-
EWP - Fire Recovery	-	-	15,408,000	<b>18,402,000</b>	18,402,000	-
Other Nonoperating Revenues	368,138	104,775	194,775	<b>120,475</b>	15,700	15%
Interfund Loan Receivable- Hydropower Fund	217,840	287,437	287,437	<b>287,437</b>	-	-
Earnings on Investments	2,131,889	2,157,200	2,157,200	<b>476,170</b>	(1,681,030)	-78%
Bond Proceeds	-	54,265,600	63,000,000	<b>38,500,000</b>	(15,765,600)	-
Sale of Assets	-	55,000	55,000	<b>65,000</b>	10,000	-
<b>Total Sources</b>	<b>51,956,757</b>	<b>104,119,152</b>	<b>128,323,992</b>	<b>113,007,249</b>	<b>8,888,097</b>	<b>9%</b>
Balance Sheet Source (Use)	(2,730,677)	-	-	-		
<b>Total Funds Available</b>	<b>134,103,857</b>	<b>189,490,764</b>	<b>219,138,130</b>	<b>255,986,178</b>		

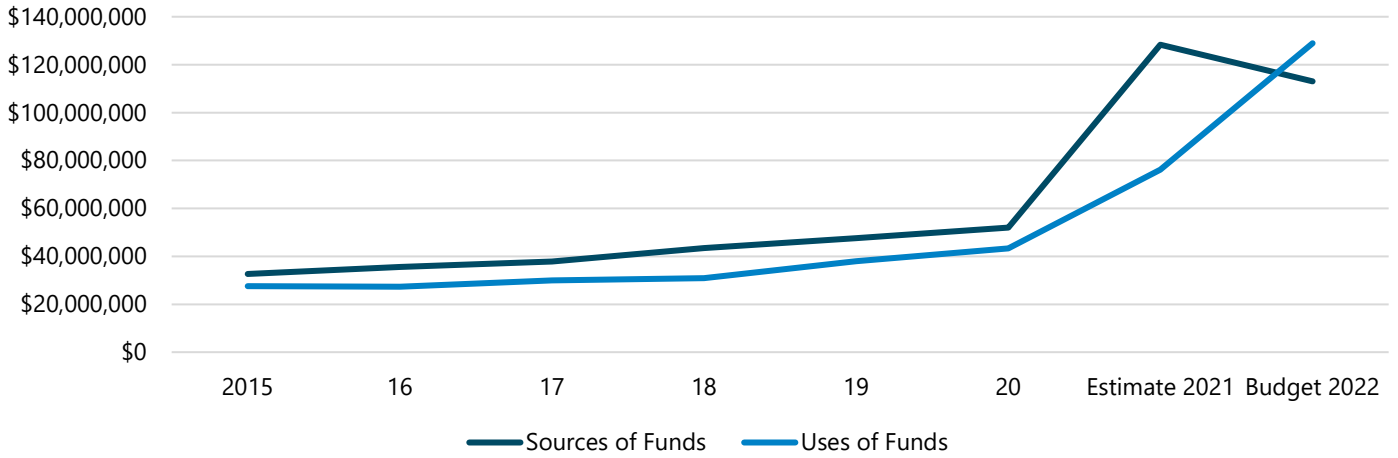
**Budget Summary (continued from page 29)**

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 21 Budget	Percentage Change From Fiscal Year 21 Budget
<b>USES</b>						
<b>Operating Expenses</b>						
Fleet	727,448	934,679	934,679	<b>1,067,369</b>	132,690	14%
Facilities	1,457,638	1,795,820	1,794,870	<b>2,095,422</b>	299,602	17%
Operation & Maintenance	8,135,481	8,823,546	8,671,876	<b>6,967,104</b>	(1,856,442)	-21%
Programs	18,884,885	23,970,022	24,010,803	<b>27,425,180</b>	3,455,158	14%
<b>Total Operating</b>	<b>29,205,452</b>	<b>35,524,067</b>	<b>35,412,228</b>	<b>37,555,075</b>	<b>2,031,008</b>	<b>6%</b>
<b>Capital</b>						
Capital Assets	1,245,159	2,707,500	2,707,500	<b>2,211,500</b>	(496,000)	-18%
Capital Projects - Facilities	1,152,533	458,500	458,500	<b>267,256</b>	(191,244)	-42%
Capital Projects - Other	6,214,327	6,737,845	6,289,371	<b>5,294,660</b>	(1,443,185)	-21.42%
Capital Projects - Campus Development	825,026	27,224,300	10,000,000	<b>50,395,594</b>	23,171,294	n/a
East Troublesome Fire Recovery	-	-	16,258,000	<b>19,902,000</b>	19,902,000	n/a
Airborne Snow Observatory Flights Initiative	-	-	-	<b>2,500,000</b>	2,500,000	n/a
Fuels Treatment Initiative	61,249	348,000	348,000	<b>348,000</b>	-	n/a
Contribution to Chimney Hollow Outlet Works	-	2,000,000	-	<b>2,000,000</b>	-	n/a
Contribution to Colorado River Connectivity Channel	-	-	-	<b>1,000,000</b>	1,000,000	n/a
<b>Total Capital</b>	<b>9,498,294</b>	<b>39,476,145</b>	<b>36,061,371</b>	<b>83,919,010</b>	<b>44,442,865</b>	<b>113%</b>
<b>Debt Service</b>						
Contracts Payable	412,925	323,416	323,416	<b>331,918</b>	8,502	3%
Certificates of Participation	2,483,775	-	2,462,450	<b>5,002,400</b>	5,002,400	n/a
<b>Total Debt Service</b>	<b>2,896,700</b>	<b>323,416</b>	<b>2,785,866</b>	<b>5,334,318</b>	<b>5,010,902</b>	<b>1549%</b>
<b>Net Pension Liability</b>						
Unfunded Pension Plan Liability	229,000	129,125	129,125	-	(129,125)	-100%
<b>Total Unfunded Pension Plan Liability</b>	<b>229,000</b>	<b>129,125</b>	<b>129,125</b>	<b>-</b>	<b>(129,125)</b>	<b>-100%</b>
Contingency Appropriation	-	250,000	-	<b>250,000</b>		n/a
Reserve funding (five percent)	1,460,273	1,776,203	1,770,611	<b>1,877,754</b>	101,551	6%
<b>Total Uses</b>	<b>43,289,719</b>	<b>77,478,956</b>	<b>76,159,201</b>	<b>128,936,157</b>	<b>51,457,201</b>	<b>66%</b>
<b>Ending Cash &amp; Reserves</b>						
Restricted	2,295,393	28,825,217	55,295,393	<b>2,295,393</b>		
Unrestricted	88,518,745	83,186,591	87,683,536	<b>124,754,628</b>		
<b>Total</b>	<b>90,814,138</b>	<b>112,011,808</b>	<b>142,978,929</b>	<b>127,050,021</b>		
<b>Total Funds Accounted For</b>	<b>134,103,857</b>	<b>189,490,764</b>	<b>219,138,130</b>	<b>255,986,178</b>		

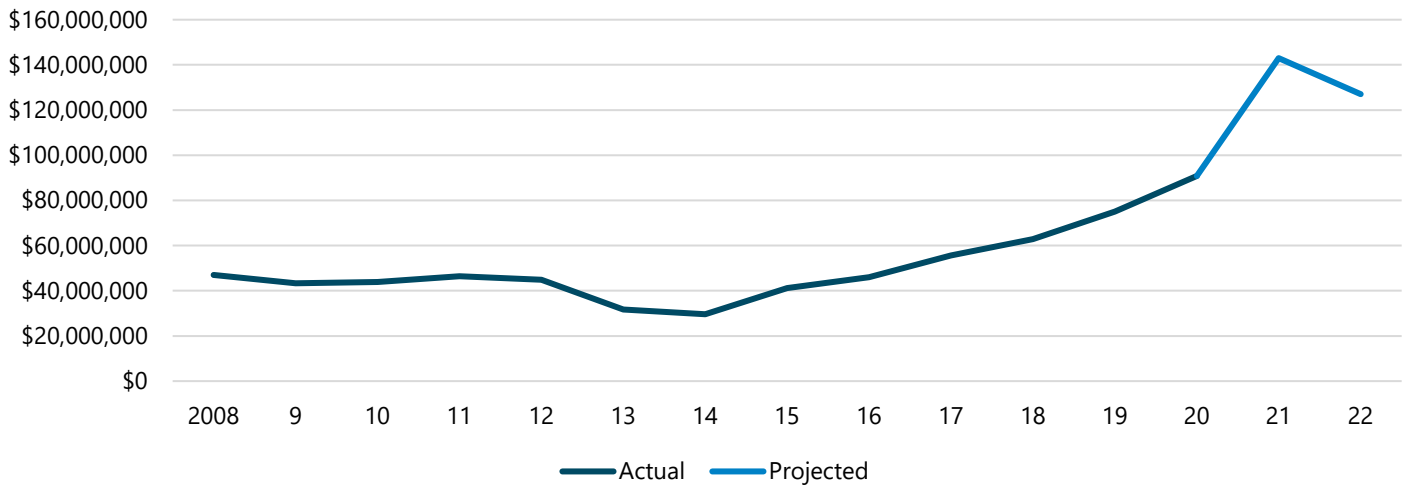
**Fiscal Year 2022 Budget**

<b>Beginning Cash and Reserves</b> \$142,978,929	<b>Sources of Funds</b> \$113,007,249	<b>Uses of Funds</b> \$128,936,157	<b>Ending Cash and Reserves</b> \$127,050,021
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**District Enterprise Funds**  
Sources and Uses of Funds



**District Enterprise Fund**  
Cash and Reserves Trending Higher



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.

## **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 \$128,936,157 for fiscal year 2022. This represents an increase of \$51,457,201 or 66 percent from the fiscal year 2021 budget.

## **Revenues**

The fiscal year 2022 District Enterprise Fund budgeted revenues are \$113,007,249, an increase of \$8,888,097 or 9 percent, compared to \$104,119,152 budgeted for fiscal year 2021. A new revenue source for fiscal year 2022 budget includes \$18,402,000 for fire recovery expense reimbursements.

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 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.

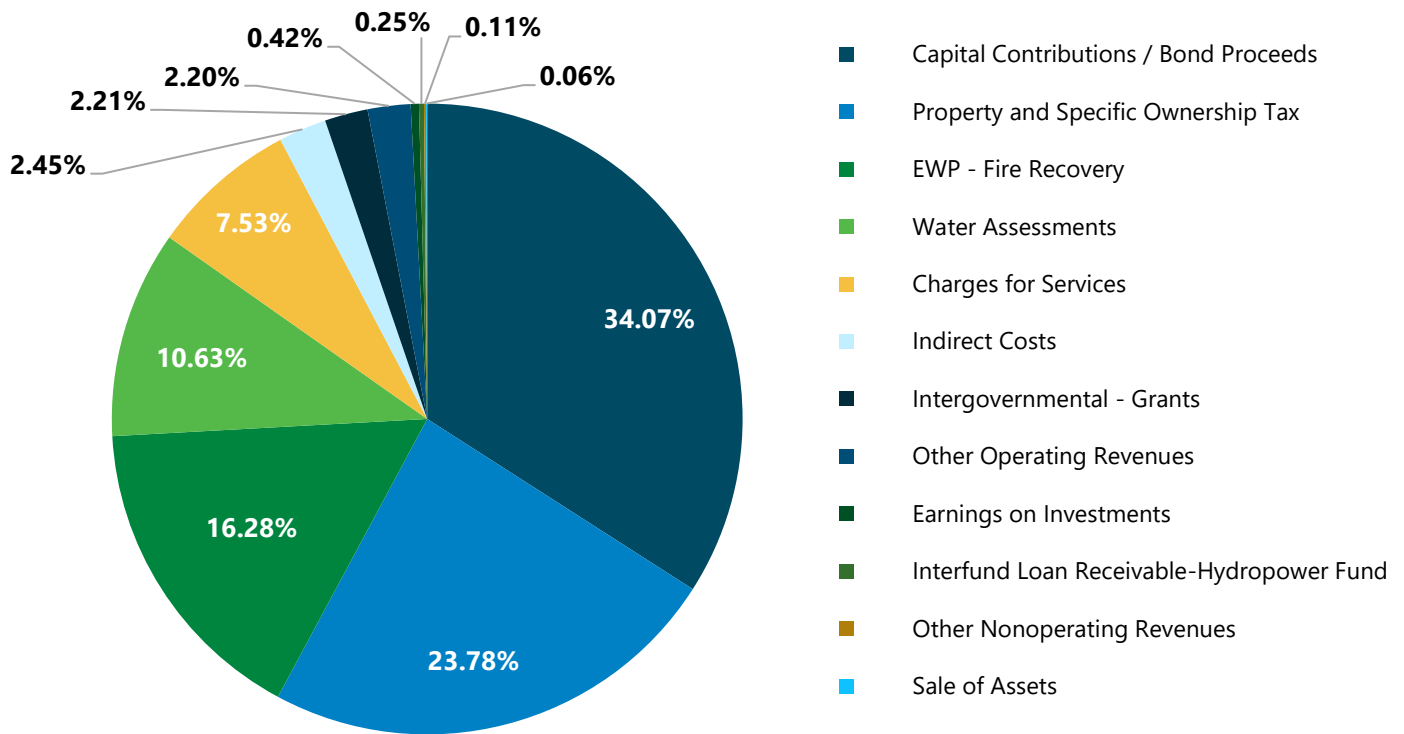
In March 2019, Northern Water entered engaged a third-party consultant to conduct an Indirect Cost Allocation study. Working closely with District staff, the consultant has identified and quantified indirect costs applicable to District enterprise funds. The evaluation was intended to establish adequate 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 the Bureau of 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 requested that indirect costs be included in the Fiscal Year 2022 budget; however, at the time of publication of this document, the Board of Directors has not approved its final resolution surrounding the indirect cost methodology or the timing of implementation.



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	\$38,500,000	34.1%
Property and Specific Ownership Tax	\$26,870,689	23.8%
EWP – Fire Recovery	\$18,402,000	16.3%
Water Assessments	\$12,018,132	10.6%
Charges for Services	\$8,512,896	7.5%
Indirect Costs	\$2,773,800	2.5%
Intergovernmental – Grants	\$2,500,000	2.2%
Other Operating Revenues	\$2,480,650	2.2%
Earnings on Investments	\$476,170	0.4%
Interfund Loan Receivable – Hydropower Fund	\$287,437	0.3%
Other Nonoperating Revenues	\$120,475	0.1%
Sale of Assets	\$65,000	0.1%
<b>Total</b>	<b>\$113,007,249</b>	<b>100%</b>

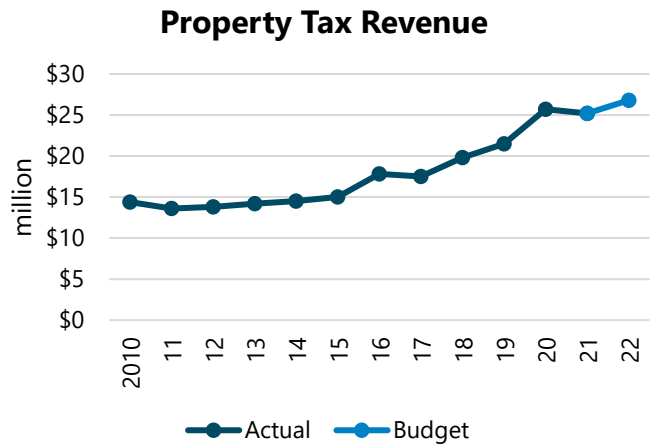
# DISTRICT ENTERPRISE FUND OVERVIEW

## Property and Specific Ownership Tax Revenue (23.8% 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 2022, ad valorem taxes are estimated to be \$26,870,689 or 23.8 percent of the total District Enterprise Fund revenues. Fiscal year 2022 is a property reassessment year and Northern Water’s taxable real property is projected to increase from fiscal year 2021. 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. Over time, this revenue has grown as assessed valuation (AV) has grown. The increase 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

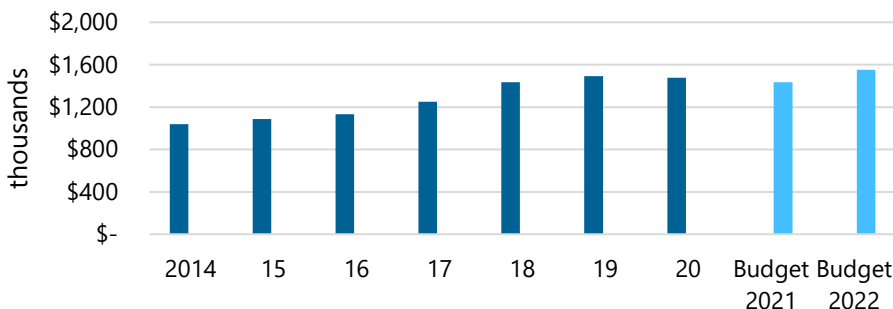
	Budget	Percent of Total Property and Specific Ownership Tax
Boulder County	\$9,012,611	33.54%
Larimer County	\$6,253,511	23.27%
Weld County	\$8,337,469	31.03%
Broomfield County	\$971,446	3.62%
Morgan County	\$523,313	1.95%
Logan County	\$189,705	0.71%
Sedgwick County	\$27,035	0.10%
Washington County	\$2,909	0.01%
Specific Ownership (primarily Boulder, Larimer, and Weld)	\$1,552,690	5.78%
<b>Total</b>	<b>\$26,870,689</b>	<b>100%</b>



### Specific Ownership Tax

A type of Ad Valorem tax on motor vehicles.

### Specific Ownership Tax



## Water Assessments Revenue (10.6% of Total Sources of Funds)

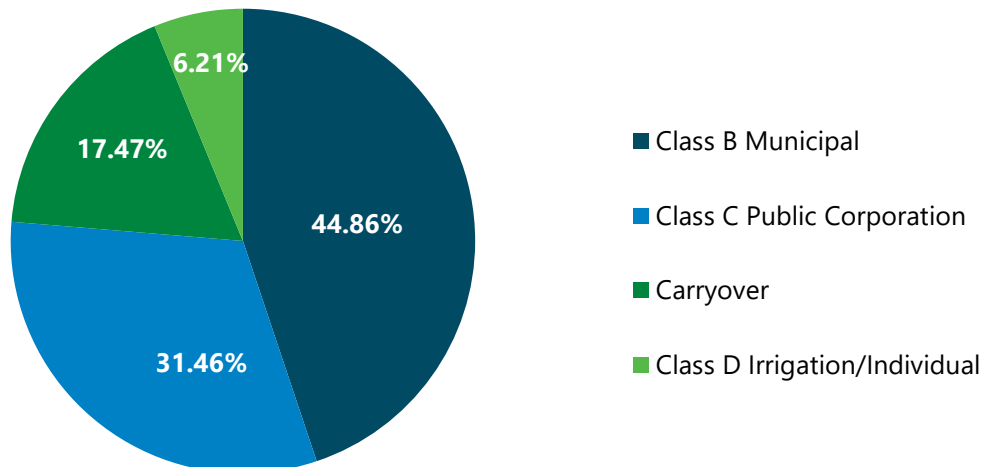
Northern Water is obligated to assess water assessments to meet funding obligations under the Repayment Contract. Wholesale water assessments are collected annually from water supply contract holders based on C-BT units held. The assessments are not contingent on delivery of water and must be paid without 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' transition 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 2022 wholesale open-rate water assessments are projected to increase \$178,813 or 2 percent from fiscal year 2021 budget based on the following rates: \$29 per acre-foot for agricultural users, \$49.10 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.

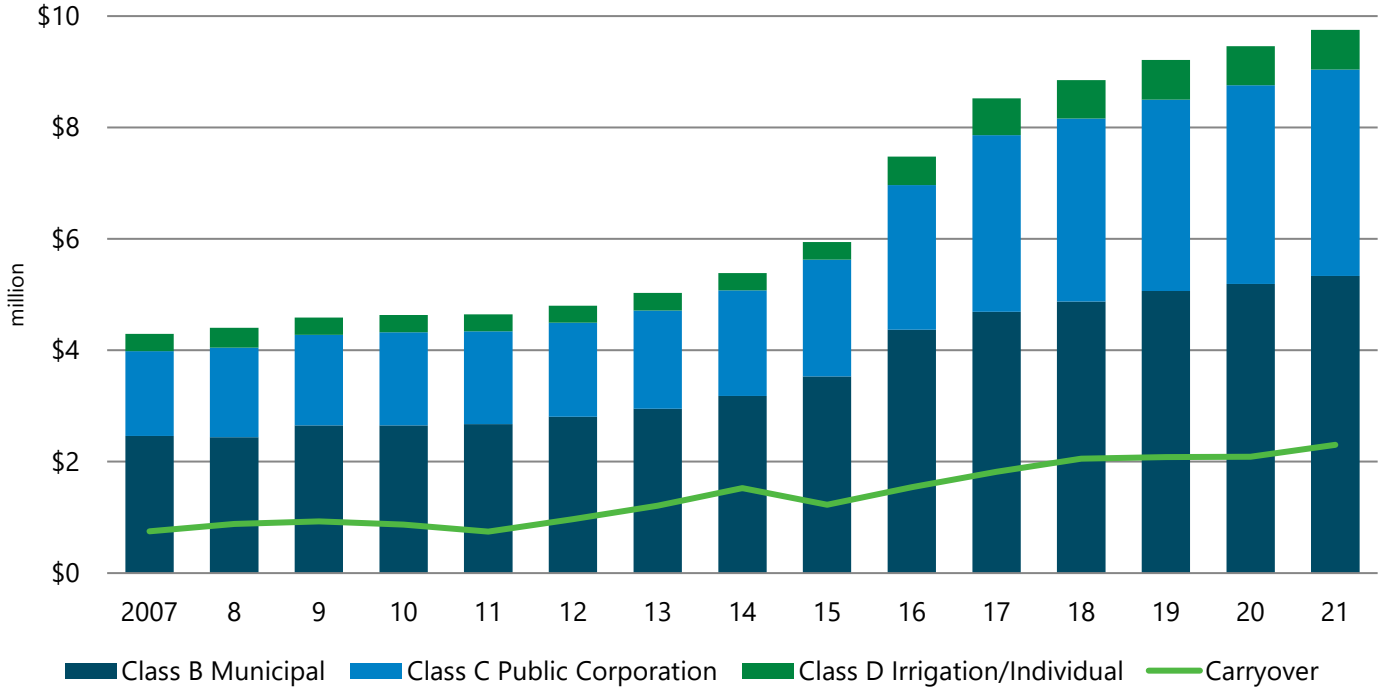
On average over the last ten years, 578 units are annually transferred and changed to open-rate assessments. The trend in water allotment contract ownership changes within Northern Water is from agricultural ownership to municipal ownership. Also included in water assessments are revenues related to 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 \$2,100,000, a decrease of \$100,000 or 5 percent from the fiscal year 2021 budget. Fiscal year 2022 budget was based on a three-year average with a projected water assessment rate increase of 2.8 percent. A summary is provided in the chart and table below.

### Water Assessments by Class of Service

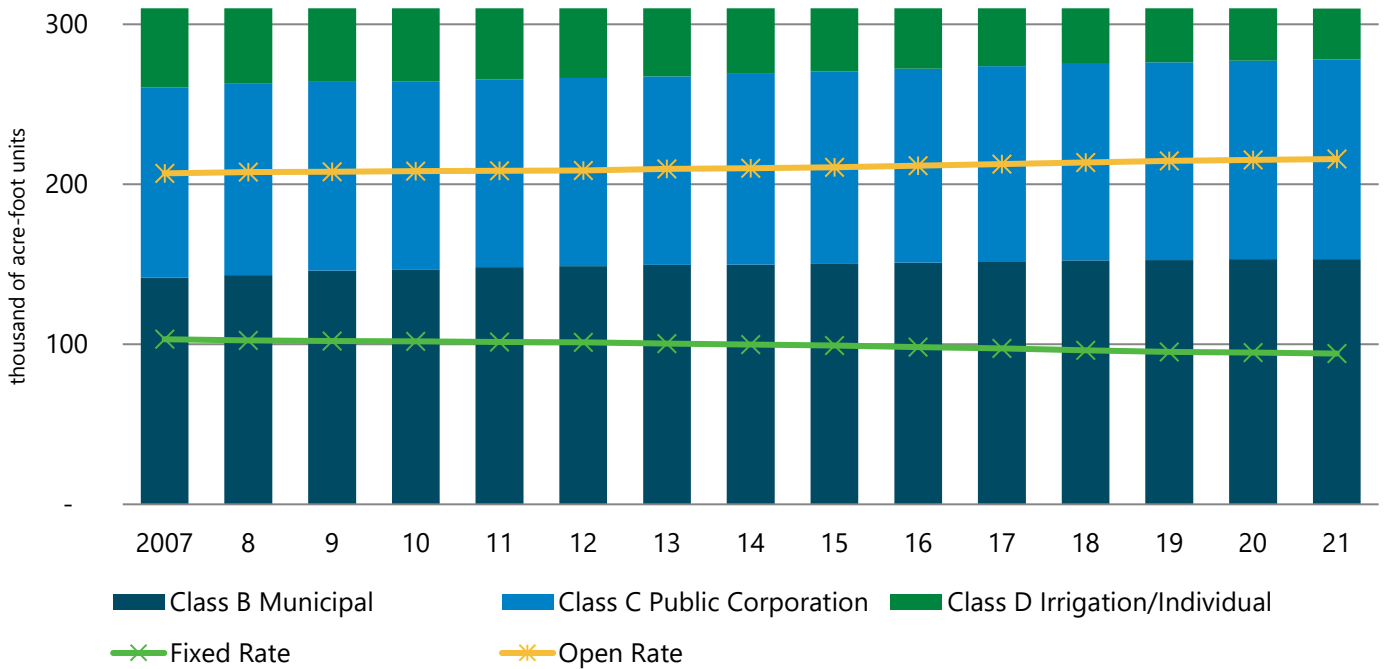
	<b>Budget</b>	<b>Percent of Total Water Assessments</b>
Class B Municipal	\$5,390,755	44.86%
Class C Public Corporation	\$3,781,055	31.46%
Carryover	\$2,100,000	17.47%
Class D Irrigation/Individual	\$746,322	6.21%
<b>Total</b>	<b>\$12,018,132</b>	<b>100%</b>



### Water Assessments by Class of Service



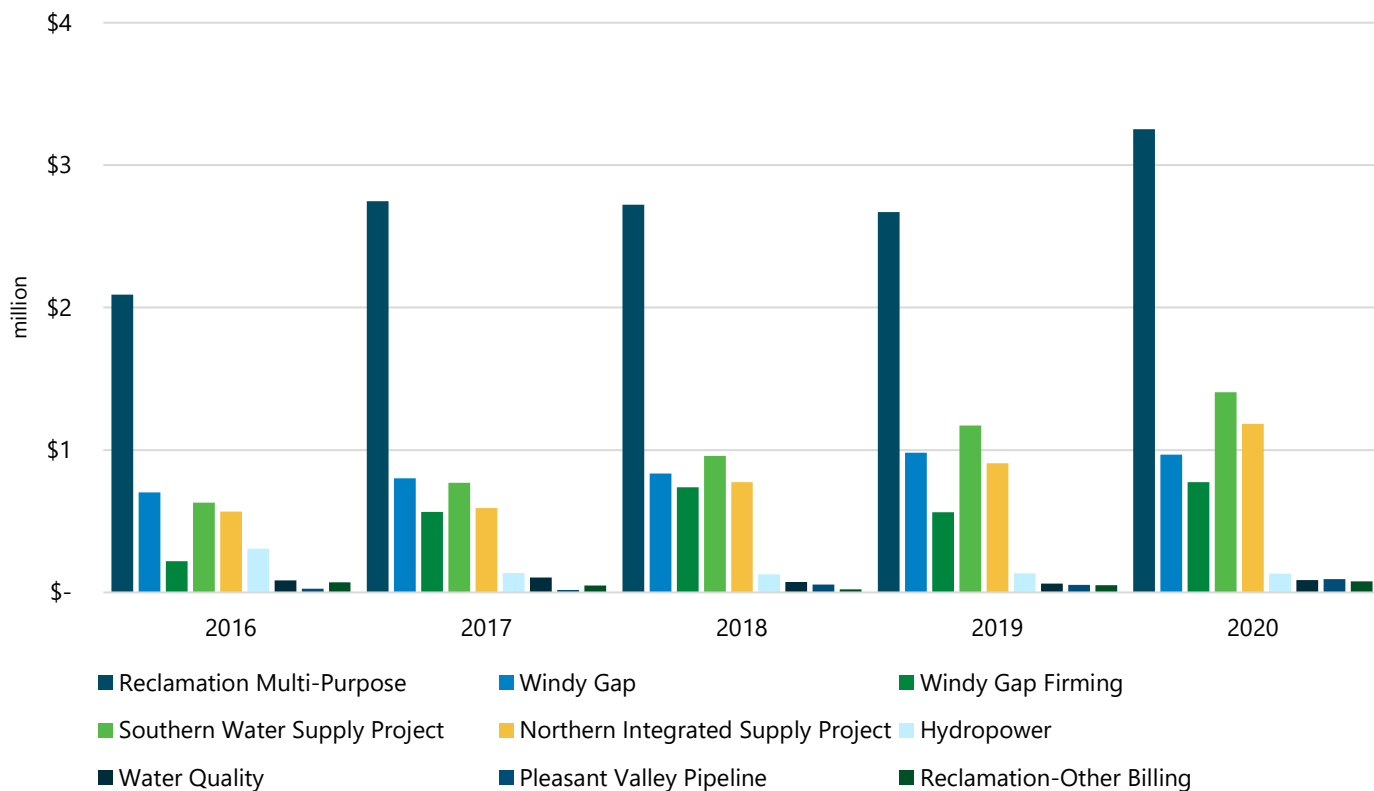
### C-BT Ownership by Water Allotment Contract Class



## 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 the 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 2021 revenues are projected to decrease 1.65 percent or \$130,588 as the result of lower number of labor hours billed. A summary is provided in the chart and table below.

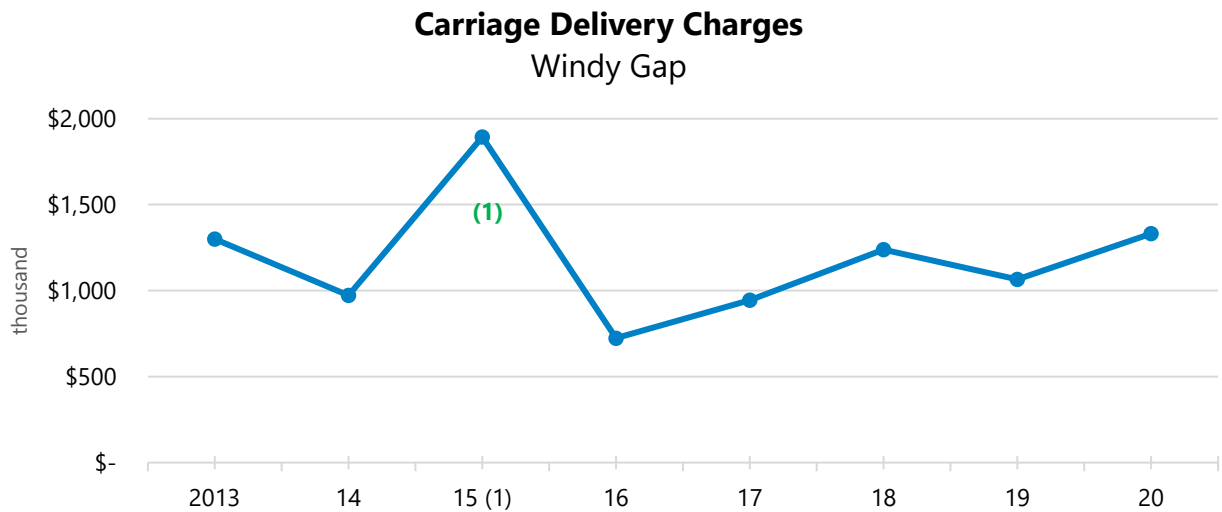
### Charges for Services



	Budget	Percent of Total Charges for Services
Reclamation Multi-Purpose	\$2,620,000	31%
Northern Integrated Supply Project Enterprise	\$1,721,703	20%
Southern Water Supply Project Enterprise	\$1,325,274	16%
Windy Gap Firming Enterprise	\$1,034,297	12%
Windy Gap Enterprise	\$1,551,999	18%
Hydropower Enterprise	\$175,926	2%
Pleasant Valley Pipeline Enterprise	\$71,697	1%
Reclamation Special Billing	\$12,000	0%
<b>Total</b>	<b>\$8,512,896</b>	<b>100%</b>

## Other Operating Revenue (2.2% 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 2022 Other Operating Revenues are projected to be \$2,480,650, an increase of \$96,200 or 4 percent compared to fiscal year 2021. A summary is provided in the chart and table below.



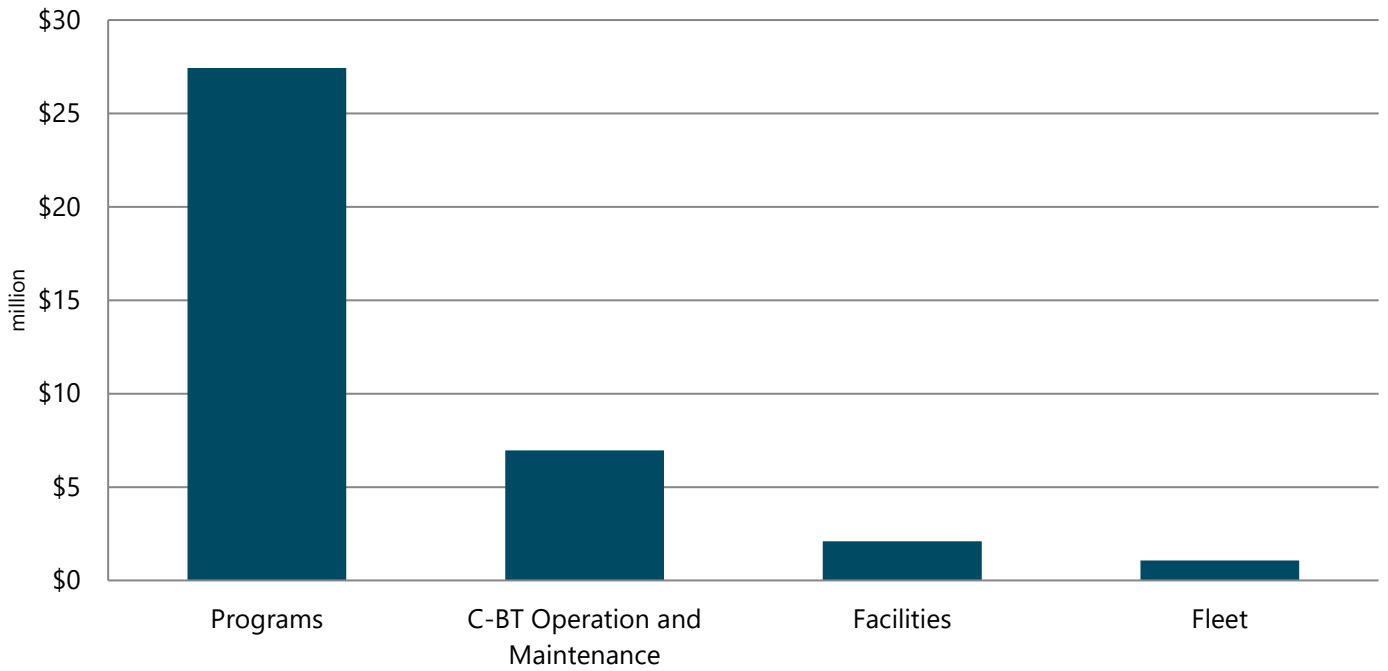
- (1) The carriage delivery assessment is calculated on the costs of providing the service and on total water carried through the C-BT Project Adams Tunnel. When less water is carried through the tunnel, Windy Gap Project water becomes a larger percent of the total, resulting in higher water delivery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

	<b>Budget</b>	<b>Percent of Other Operating Revenues</b>
Carriage Delivery – Windy Gap	\$1,300,000	52.41%
Rule 11	\$700,000	28.22%
Carriage Credit – Reclamation	\$299,000	12.05%
Water Conveyance – Reclamation	\$100,000	4.03%
Transfer Fees	\$27,000	1.09%
Winter Delivery Fees	\$17,600	0.71%
Regional Pool Fees	\$16,250	0.66%
Irrigation Class Fees	\$9,800	0.40%
Power Interference	\$8,000	0.32%
Non Allottee Industrial Water Accounts	\$3,000	0.12%
<b>Total</b>	<b>\$2,480,650</b>	<b>100%</b>

## Total Operating Expenses

The fiscal year 2022 District Enterprise Fund budgeted operating expenses are \$37,555,075. A summary is provided in the chart and table below.

### Operating Expenses by Function

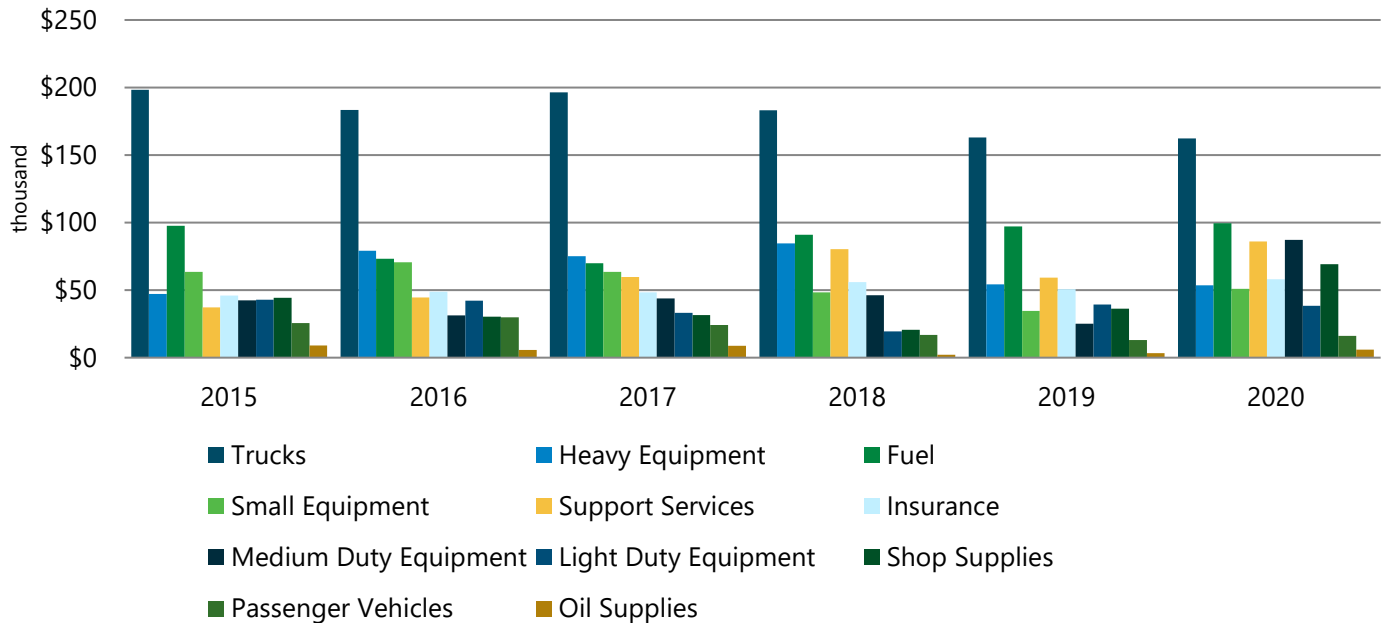


	Budget	Percent of Total Operating Expenses	Labor	Non-Labor
Programs	\$27,425,180	73.0%	\$17,797,331	\$9,627,849
C-BT Operation and Maintenance	\$6,967,104	18.6%	\$5,237,704	\$1,729,400
Facilities	\$2,095,422	5.6%	\$1,226,522	\$868,900
Fleet	\$1,067,369	2.8%	\$382,769	\$684,600
<b>Total</b>	<b>\$37,555,075</b>	<b>100%</b>	<b>\$24,644,326</b>	<b>\$12,910,749</b>

## 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 2022 fleet expenses are expected to be \$1,067,369. This represents an increase of \$132,690 or 14 percent from the fiscal year 2021 budget mainly due to higher maintenance, repair and labor costs related to fleet service. A summary of historical actual expenditures and the fiscal year 2022 budget is provided in the chart and tables below.

### Breakdown of Fleet Expenses



	Budget	Percent of Total Fleet Expenses
Support Services	\$393,369	36.85%
Fuel	\$180,000	16.86%
Trucks	\$120,000	11.24%
Light Duty Equipment	\$104,000	9.74%
Insurance	\$70,000	6.56%
Shop Supplies	\$65,000	6.09%
Heavy Equipment	\$43,000	4.03%
Medium Duty Equipment	\$35,000	3.28%
Small Equipment	\$86,000	4.60%
Passenger Vehicles	\$30,000	1.60%
Oil Supplies	\$23,000	1.23%
<b>Total</b>	<b>\$1,067,369</b>	<b>100%</b>

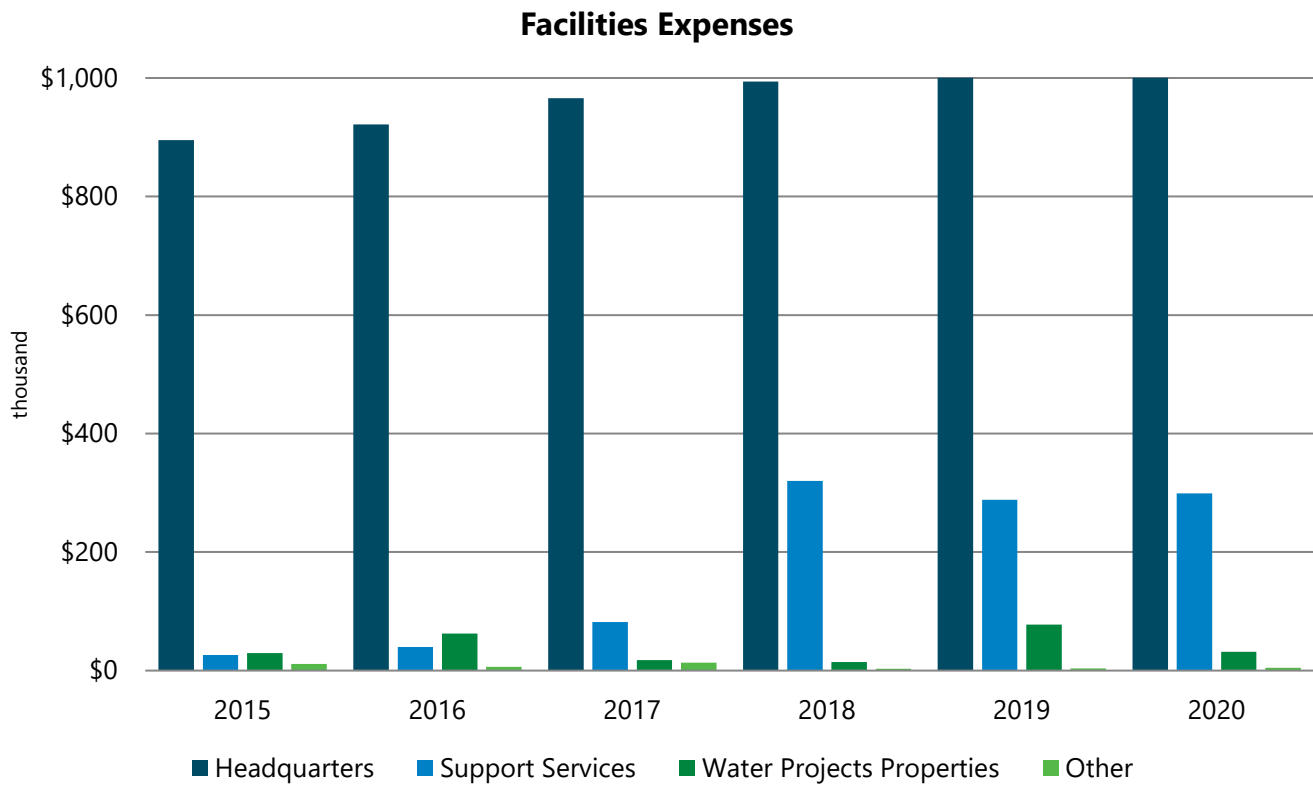
### Expenses by Category

Non-Labor	\$382,769	35.86%
Labor	\$684,600	64.14%
<b>Total</b>	<b>\$1,067,369</b>	<b>100%</b>



## Facilities Expenses (1.6% 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 2022 Facilities budget is projected at \$2,095,422. This represents an increase of \$299,602 or 17 percent more than fiscal year 2021 budget. A summary is provided in the chart and tables below.



	<b>Budget</b>	<b>Percent of Total Facilities Expenses</b>
Headquarters	\$1,645,341	78.52%
Support Services	\$392,723	18.74%
Water Project Properties	\$38,271	1.83%
Other	\$19,087	0.91%
<b>Total</b>	<b>\$2,095,422</b>	<b>100%</b>

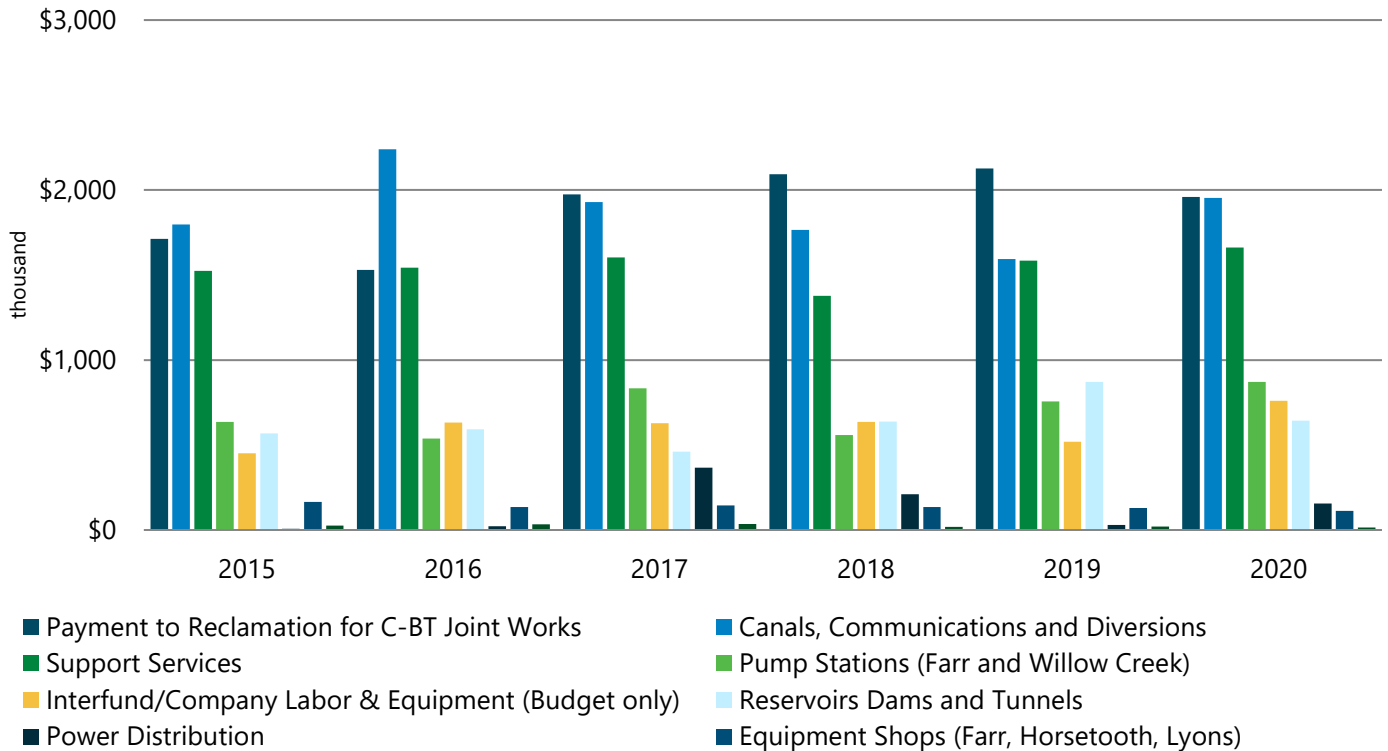
### Expenses by Category

Non-Labor	\$1,226,522	58.53%
Labor	\$868,900	41.47%
<b>Total</b>	<b>\$2,095,422</b>	<b>100%</b>

## C-BT Operation and Maintenance Expenses (5.4% 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 2022 Operation and Maintenance budget totals \$6,967,104, which represents a 21 percent decrease from the fiscal year 2021 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	\$2,005,908	28.79%
Support Services	\$1,759,276	25.25%
Pump Stations (Farr and Willow Creek)	\$1,081,039	15.52%
Reservoirs Dams and Tunnels	\$852,571	12.24%
Interfund/Company Labor & Equipment (budget only)	\$1,071,435	15.38%
Equipment Shops (Farr, Horsetooth and Lyons)	\$89,655	1.29%
Power Distribution	\$79,500	1.14%
Steam Gaging	\$27,720	0.40%
<b>Total</b>	<b>\$6,967,104</b>	<b>100%</b>

### Expenses by Category

Non-Labor	\$5,237,704	75.18%
Labor	\$1,729,400	24.82%
<b>Total</b>	<b>\$6,967,104</b>	<b>100%</b>

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**

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 experience in civil, mechanical and electrical trades.

During the spring and early summer runoff season, natural inflows are collected in Lake Granby along with water pumped from Willow Creek and Windy Gap reservoirs. The department coordinates with Reclamation to deliver water to the East Slope through the West Portal of the Adams Tunnel in accordance with the annual operating plan and C-BT Project power generation requirements. 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. Northern Water operators monitor and control West Slope pumping stations, both hydropower plants and the East Slope Southern Water Supply Project.

The West Slope Collection Systems Program 2022 major initiatives include:

- Replace programmable logic controllers at Farr Pump Plant.
- Upgrade bridge crane controls at Farr Pump Plant.
- Upgrade grounds sprinkler system at Farr Pump Plant.
- Continue improvements to seepage monitoring at Granby Dike 3 in coordination with Reclamation.
- Improve safety in all facilities and dams by continuing to concentrate on fall protection.
- Replace hydraulic pressure unit at Willow Creek Pump Plant.
- Install cameras on pump and motor floors at Farr Pump Plant.

The West Slope Collections Systems Program 2021 accomplishments include:

- Improved seepage monitoring at Granby Dike 3 in coordination with Reclamation.
- Improved cooling water systems at Willow Creek Pump Plant.
- Improved process for cleaning West Portal fish screens.
- Replaced multiple floor sections on Willow Creek pump canal.

## Division: Operations - Distribution Systems

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.

The East Slope Distribution Systems Program 2022 major initiatives include:

- Construct concrete flume in the Boulder Feeder Canal near the Cemex plant.
- Sandblast and paint east 72-inch steel penstock at Horsetooth Dam.
- Implement a new meter program for meter rehabilitation.
- Repair floor in outlet tunnel at Carter Lake Dam #1.
- Repair Big Thompson siphon outlet headwall.
- Complete assessment of the C-BT system, including Masonville siphon and cross drains on Hansen Feeder Canal and Hansen Supply Canal.
- Automate Boulder Reservoir outlet.
- Replace Broomfield blowoff.
- Install actuators at Star, Lefthand and Little Thompson.
- Install S. Vrain Supply Canal flow measuring device.

The East Slope Distribution Systems Program 2021 accomplishments include:

- Restored soldered 54-inch and 48-inch valve.
- Sealed canal at Jessup/flow north.
- Completed Cottonwood siphon repair / 930 section concrete repair.
- Armored Fisherman's Point at Boulder Reservoir.
- Completed bridge replacement at Weeble area Boulder Feeder Canal.
- Installed security fence at Boulder and Whiterock's turnout.
- Installed 20-ton bridge over Coal Ridge canal.

## Division: Operations – Control Center

The Control Center Department works with the Collections and Distributions 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 distributions 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 operator's go through an extensive training syllabus through their first three years with Northern Water.

The Control Center Program 2022 major initiatives include:

- 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:
  - 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.
- Create PowerPoint for Hazardous Energy Control Program training.
- Update Standard Operating Procedures for department.

The Control Center Program 2021 accomplishments include:

- Completed the Interconnected Source of Power clearance for the Western Area Power Authority fiber work at Willow Creek Pump Plant.
- Prepared and issued clearances on Willow Creek Dam Outlet and Shadow Mountain Dam for Reclamation inspections.
- Prepared and issued clearances for annual maintenance on the pump plants as well as any other maintenance requirements that were needed regarding the Hazardous Energy Control Program.
- Two operators completed the required three-year operational training; one operator has completed approximately 1.5 years of operational training; one operator began operational training.

## **Division: Operations - Facilities and Equipment**

The Facilities and Equipment Department responsibilities include budgeting for and maintaining the Berthoud headquarters campus, which includes nine buildings and their associated heating and ventilation, electrical, mechanical, security systems, structural, custodial, grounds and landscape needs. There is now an additional office rental property to support at the Lincoln Campus in Champion. Special projects include modernization of existing headquarters, new construction infrastructure and additions to offices and workspace areas.

Other responsibilities include specifying and ordering new vehicles and equipment while maintaining existing vehicles and heavy equipment from general maintenance to complete overhaul and reconditioning.

The department also supports all other Northern Water staff members with their projects as our trades may apply, as well as support special events onsite and offsite.

### **2022 Budgeted East Slope Facilities and Equipment Replacements**

#### Facilities Support Services

- Security: replacement parts inventory, latches, proximity readers, crash bars, cameras, etc.

#### Building A

- Main chiller replacement project with two APC chilled and hot water pump replacements.
- Continue replacement of 110 individual pneumatic VAV box controls of the HVAC system.
- Cooling tower upgrade: install soft starting controls (VFD) fan speed to maintain a more accurate cooling tower water temperature. The system will be tied into the Trane building automation system.
- Roof repairs and installation of snow falling devices on existing buildings.
- Replacement of ADA door openers.
- Office furniture and equipment replacements, upgrades and workstation changes.

#### Building B

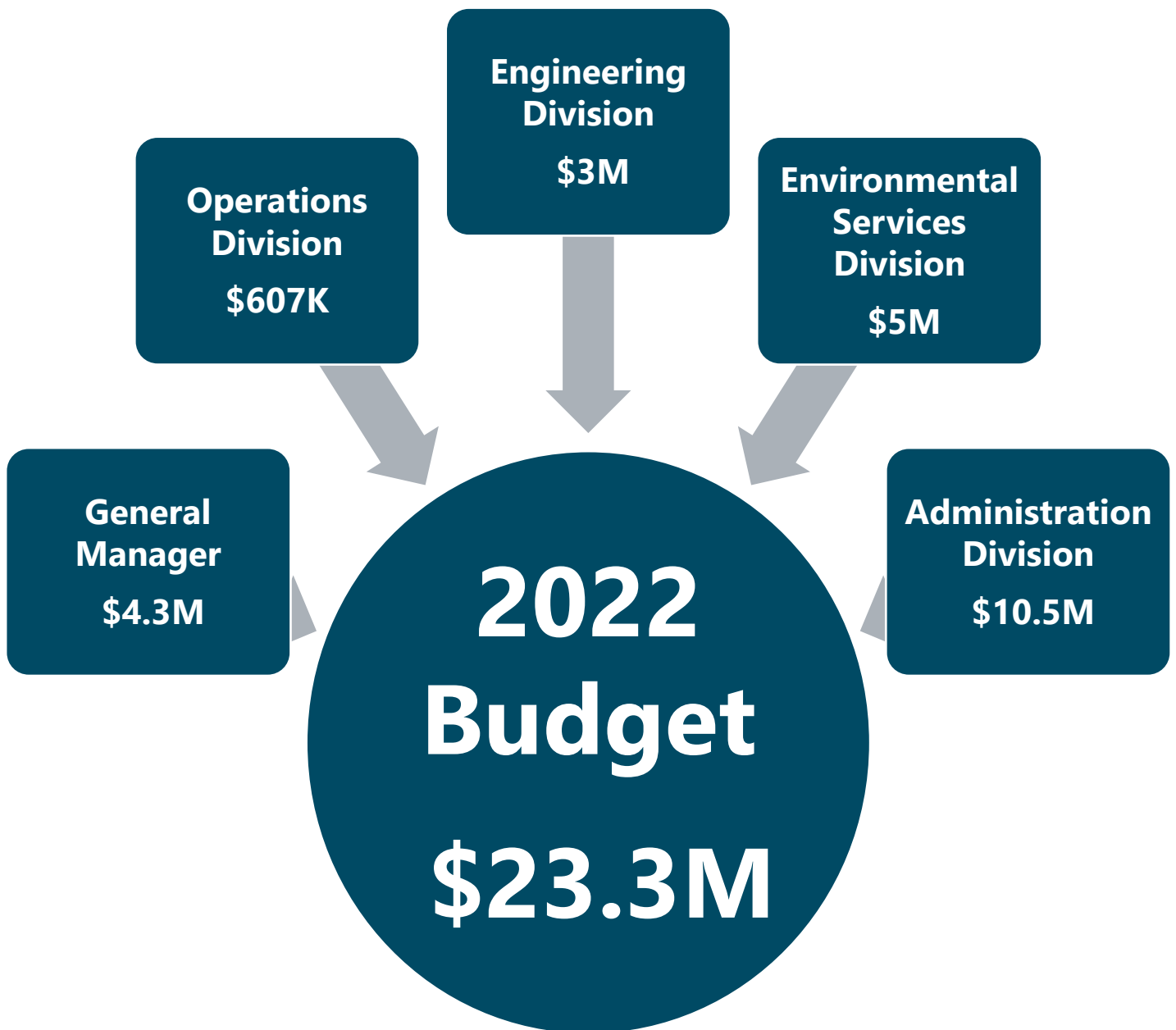
- Installation of overhead garage door operators.
- Update first floor lighting.

#### Facilities Grounds

- Replace water feature pump.

### Programs Expenses (21.3% of Total Uses of Funds)

Program expenses are the cost of 19 programs unique to Northern Water that provide administrative, environmental and engineering functions to the organization. The fiscal year 2022 program budget totals \$27.4 million consisting of \$23.3 million for Northern Water division expenses and an additional \$4.1 million for interfund labor expense. 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

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.

The Senior Management Program 2022 major initiatives include:

- 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.
- Respond to stages of the COVID-19 pandemic by enacting policies and practices to protect employees and guests and ensure uninterrupted service by the organization.
- 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 the 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 Creek wildfire response and 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, including completion of Berthoud Campus and Granby Campus Phase I construction, and initiating Berthoud Campus Phases II and III final design and construction.
- Provide oversight of Series 2022 Certificates of Participation debt issuance to fund Berthoud Campus Phase II and III campus development activities.
- Respond to major unforeseen contingency projects and expenses.

The Senior Management Program 2021 accomplishments include:

- Responded to stages of the COVID-19 pandemic by transitioning staff from remote work back to in-office work, while implementing public health practices to protect employees and guests and ensure uninterrupted service by the organization.
- Transitioned public Board and participant meetings to a hybrid format that mixes in-person attendance and remote attendance using Zoom and other technologies.
- Hired 35 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 Indirect Cost Allocation Study and Rate Study update.
- Oversaw Cameron Peak and East Troublesome Creek wildfire response and 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 Granby Campus Phase I construction activities.
- Oversaw Series 2021 Certificates of Participation debt issuance of \$63 million to fund Berthoud Campus and Granby Campus Phase I campus development activities.

<b>Senior Management</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Senior Management	\$768,614	\$541,667	\$541,667	\$854,821	\$313,154	57.8%
South Platte River Basin	119,808	76,177	76,177	128,156	51,979	68.2%
Poudre River Basin	4,118	381	381	0	-381	-100.0%
Water Rights	103,268	61,275	61,275	103,318	42,043	68.6%
Team Initiatives	9,868	8,834	8,834	19,471	10,637	120.4%
Safety	3,156	4,533	4,533	2,537	-1,996	-44.0%
Legal Matters	604,841	680,776	680,776	780,137	99,361	14.6%
Board of Directors	228,337	236,094	236,094	377,966	141,872	60.1%
Senior Mgmt. Meetings	290,518	319,621	319,621	361,002	41,381	12.9%
General Programs	746,391	818,573	1,068,573	894,896	76,323	9.3%
Travel and Training	72,010	156,722	156,722	108,013	-48,709	-31.1%
<b>Total</b>	<b>\$2,950,929</b>	<b>\$2,904,653</b>	<b>\$3,154,653</b>	<b>\$3,630,317</b>	<b>\$725,664</b>	<b>25.0%</b>
<b>Summary by Category</b>						
Labor	\$1,528,538	\$1,646,653	\$1,646,653	\$1,869,817	\$223,164	13.6%
Non Labor	1,422,391	1,258,000	1,508,000	1,760,500	502,500	39.9%
<b>Total</b>	<b>\$2,950,929</b>	<b>\$2,904,653</b>	<b>\$3,154,653</b>	<b>\$3,630,317</b>	<b>\$725,664</b>	<b>25.0%</b>

## Division: Senior Management - Human Resources

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 HRIS and provides relevant personnel reports on behalf of all employees.

The Human Resources Program 2022 major initiatives include:

- Continue to adjust and comply with Colorado's Equal Pay for Equal Work Act, which went into effect on January 1, 2021, by continuing with compensation analysis and re-writing or updating job descriptions.
- Support managers in recruiting approximately 20 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 training when appropriate and necessary.
- 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.
- Plan and host the yearly employee benefits fair.
- Complete HRIS upgrade.

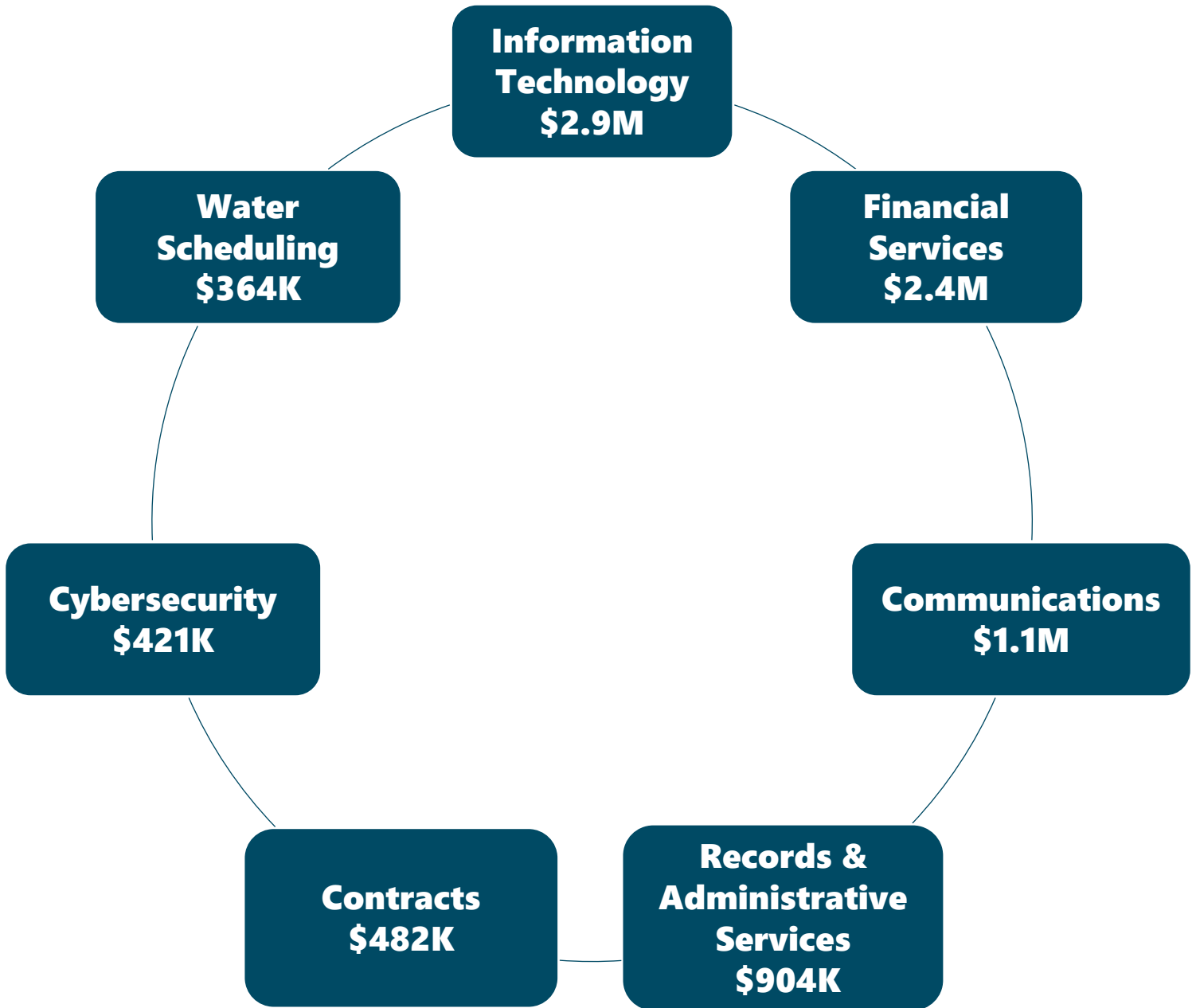
The Human Resources Program 2021 accomplishments include:

- Hired 35 new employees in various professions in a complicated market; conducted the new hire orientations and benefits enrollments for new employees during the COVID-19 pandemic.
- Off-boarded 13 employees, six of whom retired.
- Completed compensation analysis and rewrote job descriptions to comply with Colorado's Equal Pay Work Act.
- Conducted annual renewal of insurance benefits to consider plan design improvements, determine premium increases, and review the performance of existing benefit vendors.
- Held a downsized benefit fair, which still offered flu shots and blood draws.
- Revised the employee handbook to accommodate the new Healthy Families and Workplace Act.
- Visualized, retooled and participated in a holiday gift giving drive-by necessitated by COVID-19 restrictions.
- Began working on HRIS major upgrade and implementation.

Human Resources	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Human Resources General	\$325,730	\$462,077	\$462,077	\$445,938	-\$16,139	-3.49%
Benefits Management	6,769	26,690	26,690	15,201	-11,489	-43.05%
Employee Morale	5,516	9,569	9,569	5,184	-4,385	-45.83%
Recruiting	121,373	156,559	156,559	135,840	-20,719	-13.23%
Retirements	5,103	11,137	11,137	3,168	-7,969	-71.55%
Travel and Training	11,430	15,341	15,341	19,543	4,202	27.39%
<b>Total</b>	<b>\$475,920</b>	<b>\$681,373</b>	<b>\$681,373</b>	<b>\$624,874</b>	<b>-\$56,499</b>	<b>-8.29%</b>
<b>Summary by Category</b>						
Labor	\$420,999	\$576,105	\$576,105	\$549,174	-\$26,931	-4.67%
Non Labor	54,921	105,268	105,268	75,700	-29,568	-28.09%
<b>Total</b>	<b>\$475,920</b>	<b>\$681,373</b>	<b>\$681,373</b>	<b>\$624,874</b>	<b>-\$56,499</b>	<b>-8.29%</b>

## ADMINISTRATION DIVISION PROGRAMS

The 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: Administration - Administrative Program

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.

The Administration Program 2022 major initiatives include:

- Continue to support hybrid Board and participant meetings during the COVID-19 pandemic and beyond.
- Improve workflows to efficiently collect, schedule and approve topics to be presented at Northern Water's Board meetings.
- Continue to develop improved workflows to provide word processing and meeting support to staff working in the office and from remote locations.
- Develop an electronic notification system to track and schedule the publication of notices required by statute.

The Administration Program 2021 accomplishments include:

- Standardized the look and feel of Northern Water's documents and correspondence by implementing a new and improved workflow.
- Implemented software to capture and manage electronic signatures.
- Developed new procedures to facilitate hybrid Board and participant meetings during the COVID-19 pandemic.
- Scheduled weekly meetings with staff members in other departments integral in the board meeting planning cycle to collect information, discuss board meeting topics and the need for possible executive sessions, determine IT requirements, communicate specifics to the Board of Directors, and create an attendance list of Board members, guest presenters and required staff.
- Coordinated enhancements to the electronic agenda management system to facilitate public comment and participation during Board meetings.

<b>Administrative Services</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Administrative Support	\$144,534	\$239,765	\$234,765	\$363,684	\$123,919	51.68%
Workroom	25,089	38,320	23,820	26,715	-11,605	-30.28%
Travel and Training	14,253	25,309	14,809	44,310	19,001	75.08%
<b>Total</b>	<b>\$183,876</b>	<b>\$303,394</b>	<b>\$273,394</b>	<b>\$434,709</b>	<b>\$131,315</b>	<b>43.28%</b>
<b>Summary by Category</b>						
Labor	\$141,804	\$229,894	\$229,894	\$375,209	\$145,315	63.21%
Non Labor	42,071	73,500	43,500	59,500	-14,000	-19.05%
<b>Total</b>	<b>\$183,876</b>	<b>\$303,394</b>	<b>\$273,394</b>	<b>\$434,709</b>	<b>\$131,315</b>	<b>43.28%</b>

## Division: Administration - Communications Program

The Communications Department 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.

The Communications Program 2022 major initiatives include:

- Increase external communications to build the Northern Water brand and share its story through various formats including website, social media, and video communications.
- Continue to build social media engagement on all platforms utilizing analytics to determine appropriate tactics.
- Continue to develop Water Efficiency Program outreach and program materials.
- Redevelop our public tour program for a hopeful return in 2022 since the COVID-19 pandemic has eliminated public tours for the past two years.

The Communications Program 2021 accomplishments include:

- Increased external communications to build the Northern Water brand and share its story through website articles, social media posts, videos, public relations and more.
- Increased social media engagement on all platforms and studied analytics to find effective communication tactics.
- Increased video production to share more stories through multimedia efforts.
- Launched a fire recovery website called Grand County Watershed Recovery in partnership with Grand County, Middle Park Conservation District, Three Lakes Watershed Association, and the Colorado River Water Conservation District. The website details recovery efforts of areas in Grand County affected by the East Troublesome Fire.
- Worked alongside the Campus Development team to host two groundbreaking events for both the Berthoud Campus and Granby Campus projects.
- Reinstated Northern Water public events under appropriate state and county protocols, including major groundbreaking events.

<b>Communications</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Communications						
Programs	\$741,890	\$905,474	\$845,524	\$798,370	-\$107,104	-11.83%
Website	241,464	224,831	224,831	214,309	-10,522	-4.68%
Travel and Training	34,254	22,588	45,588	34,328	11,740	51.97%
<b>Total</b>	<b>\$1,017,608</b>	<b>\$1,152,893</b>	<b>\$1,115,943</b>	<b>\$1,047,007</b>	<b>-\$105,886</b>	<b>-9.18%</b>
<b>Summary by Category</b>						
Labor	\$889,331	\$999,943	\$999,943	\$888,757	-\$111,186	-11.12%
Non Labor	128,277	152,950	116,000	158,250	5,300	3.47%
<b>Total</b>	<b>\$1,017,608</b>	<b>\$1,152,893</b>	<b>\$1,115,943</b>	<b>\$1,047,007</b>	<b>-\$105,886</b>	<b>-9.18%</b>

## Division: Administration - Contracts Program

Contracts Department staff oversee the 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 Department 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 Department 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 Department administers general insurance policies and handles all general liability claims. The Contracts Department collaborates closely with Northern Water's Risk Manager to protect the organization's interest.

The Contracts Program 2022 major initiatives include:

- Evaluate and select Certificate of Insurance software service to further streamline COI review.
- Assist in the implementation and rewrite of Northern Water's Allotment System.
- Evaluate Northern Water's insurance brokerage needs.
- Refine approach to audits related to Class D Contracts and ownership in Boulder, Larimer and Weld counties.
- Continue efforts to work closely with water providers to remain current on any changes related to their service boundaries.
- Conduct quarterly insurance meetings with various departments within Northern Water to stay abreast of new projects or new purchases requiring additional insurance requirements.
- Work with management to create a new Insurance Committee to include management and Board members.

The Contracts Program 2021 accomplishments include:

- Developed internal contracting processes consistent with procurement policies and procedures.
- Utilized software to track contract dates and insurance expirations.
- Participated in a risk management study, which included an inventory review of insured assets, and analysis of templates for contracts, purchase orders, leases and other miscellaneous agreements. The study found no issues.
- Implemented recommendations of risk management study.
- Updated and monitored corrective actions related to C-BT Project allotment contracts including landowner and legal description changes.
- Initiated corrective action related to parking agreements.
- Streamlined contracts process to include risk management and insurance requirements review prior to the procurement process to ensure adequate levels.
- Worked diligently with several large municipalities to ensure that their services areas continue to be fully contained within Northern Water boundaries.

<b>Contracts</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Contracts	\$46,680	\$47,486	\$51,486	\$240,451	\$192,965	406.36%
Allotments	192,266	244,415	209,376	260,956	16,541	6.77%
Inclusions	120,028	161,762	146,232	126,605	-35,157	-21.73%
Travel and Training	5,546	29,312	20,312	11,782	-17,530	-59.80%
<b>Total</b>	<b>\$364,520</b>	<b>\$482,975</b>	<b>\$427,406</b>	<b>\$639,794</b>	<b>\$156,819</b>	<b>32.47%</b>
<b>Summary by Category</b>						
Labor	\$349,373	\$374,475	\$374,475	\$470,844	\$96,369	25.73%
Non Labor	15,147	108,500	52,931	168,950	60,450	55.71%
<b>Total</b>	<b>\$364,520</b>	<b>\$482,975</b>	<b>\$427,406</b>	<b>\$639,794</b>	<b>\$156,819</b>	<b>32.47%</b>

## Division: Administration - Cybersecurity and IT Governance Program

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 with ensuring Northern Water's compliance with related federal and state laws, including the 2018 Colorado Protections for Consumer Data Privacy law.

Separation of these functions from their previous home in the Information Technology Services Department provides added accountability and objective compliance monitoring. 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.

The Cybersecurity and IT Governance Program 2022 initiatives include:

- Continue development and implementation of COBIT-based information technology governance policies. This will include updating the policy approval process to adapt to management changes.
- Undertake a data identification project to provide a baseline for data protection, classification. This project will also provide a baseline for a business continuity plan.
- Implement a formalized Risk Assessment Program, including risk registries.
- Develop a formalized Cybersecurity Incident Response plan which includes policies and procedures to support recovery from a cybersecurity event.
- Coordinate an external review of OT/ISC security posture.

The Cybersecurity and IT Governance Program 2021 accomplishments include:

- Implemented a monthly internal audit of the financial system.
- Supported the annual financial audit by developing financial based governance policies.
- Continued development and updating of COBIT-based information technology governance policies.

Cybersecurity and Governance	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Cybersecurity and Governance	\$243,840	\$302,284	\$297,284	\$510,303	\$208,019	68.82%
Policy Administration	31,136	31,429	31,429	14,711	-16,718	-53.19%
Security	46,106	36,501	36,501	66,550	30,049	82.32%
Infrastructure	0	283	283	0	-283	-100.00%
Travel and Training	27,533	50,741	34,241	56,107	5,366	10.58%
<b>Total</b>	<b>\$348,615</b>	<b>\$421,238</b>	<b>\$399,738</b>	<b>\$647,671</b>	<b>\$226,433</b>	<b>53.75%</b>
<b>Summary by Category</b>						
Labor	\$346,798	\$380,238	\$380,238	\$614,671	\$234,433	61.65%
Non Labor	1,816	41,000	19,500	33,000	-8,000	-19.51%
<b>Total</b>	<b>\$348,615</b>	<b>\$421,238</b>	<b>\$399,738</b>	<b>\$647,671</b>	<b>\$226,433</b>	<b>53.75%</b>



## Division: Administration - Financial Services Program

The Financial Services Program consists of accounting, payroll and purchasing functions and support of Northern Water's Board, senior management, and staff on issues relating to financial reporting, budgets, investments, special projects, contracts, retirement, debt issuance and adherence to financial policies and procedures.

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.

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

The Financial Services Program 2022 major initiatives include:

- Analyze and update overhead cost allocation, rate study, reserves and Forward Guidance policies and procedures.
- Implement additional modules which will continue to enhance the comprehensive financial software.
- Continue to refine purchasing procedures.
- Continue to enhance the Accounting Policies and Procedures Manual.
- Implement additional cross-training among staff.

The Financial Services Program 2021 accomplishments include:

- Earned the Award for Outstanding Achievement in Comprehensive Annual Financial Reporting for the 34th consecutive year for the District and the Subdistrict from the Government Finance Officers Association (GFOA).
- Earned the Distinguished Budget Presentation Award for the third consecutive year for the District and for the fourth consecutive year for the Subdistrict from the GFOA.
- Significant work to upgrade ERP software for financial, payroll and purchasing functions; will go live on the new platform before the end of calendar year 2021.
- Implemented cyclical subledger and general ledger close procedures which result in closing all subledgers and ledgers monthly.
- Played an integral role in securing the Campus Development COPs issuance.

<b>Financial Services</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Accounting Services	\$773,733	\$988,644	\$988,644	\$1,137,194	\$148,550	15.03%
Auditing	119,386	143,859	143,859	150,129	6,270	4.36%
Purchasing	233,333	203,794	203,794	445,544	241,750	118.62%
Treasury	534,210	754,846	754,846	757,102	2,256	0.30%
Budget	187,586	192,749	192,749	158,115	-34,634	-17.97%
Payroll	82,698	102,273	102,273	99,155	-3,118	-3.05%
Pension	23,243	24,171	24,171	16,743	-7,428	-30.73%
Travel and Training	4,967	8,017	8,017	27,292	19,275	240.43%
<b>Total</b>	<b>\$1,959,156</b>	<b>\$2,418,353</b>	<b>\$2,418,353</b>	<b>\$2,791,274</b>	<b>\$372,921</b>	<b>15.42%</b>
<b>Summary by Category</b>						
Labor	\$1,064,531	\$1,279,350	\$1,279,350	\$1,637,224	\$357,874	27.97%
Non Labor	894,625	1,139,003	1,139,003	1,154,050	15,047	1.32%
<b>Total</b>	<b>\$1,959,156</b>	<b>\$2,418,353</b>	<b>\$2,418,353</b>	<b>\$2,791,274</b>	<b>\$372,921</b>	<b>15.42%</b>

## **Division: Administration - Information Technology Services Program**

The Information Technology Services Department supports Northern Water technical and information resources. The IT department is divided into four focus areas: Geographical Information System (GIS); Client Support Services; Network Infrastructure; Software Development and Application 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 also provides support for the property and Right-of-Way Department by generating maps of our property locations, easements and Northern Water infrastructure.

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

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, but not limited to servers, routers, switches, cybersecurity and firewalls.

Software Development and Application Support are responsible for Northern Water's custom applications and off-the-shelf enterprise applications. This group provides support for 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.

The Information Technology Services Program 2022 major initiatives include:

- Boardroom Audio/Visual (A/V) Refresh – Northern Water's boardroom A/V system is end-of-life. The A/V hardware, software and programming are necessary for the operation of Northern Water and Municipal Subdistrict Board meetings. The project will include new monitors and equipment to enable video conferences. A/V consulting services are required for calibration, programming and configuring the system.
- Migrating services to Hybrid Cloud – Migrating critical services to a hybrid cloud will 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 2022. Microsoft solutions have already been migrated to this model.

The Information Technology Services Program 2021 accomplishments include:

- Deployed Microsoft Advanced Threat Analytics (ATA) platform to elevate Northern Water's network security posture. Microsoft ATA helps protect Northern Water's network from multiple types of advanced targeted cyberattacks and insider threats. Microsoft ATA uses data gathered by on-premise ATA gateways, machine learning, network logs and events, and past user and device behavior to detect suspicious activity and malicious attacks.
- Expanded the Microsoft Office Suite to include Advanced Compliance and Risk Management. The advanced security toolset provides real time alerts to IT staff of suspicious risks to the network and business systems.
- Implemented a Virtual Private Network certificate authentication protocol to enhance Northern Water's remote access security.
- Implemented unified print queue software to allow Northern Water staff to print from any computer and securely retrieve their print jobs at any enterprise printer.

- Upgraded Northern Water's primary data center cabling and switching infrastructure to provide scalability, security, efficiency, and state-of-the-art technology. Data centers are vital to the continuity of daily operations.
- Fully deployed a mobile device management system to maintain Northern Water's mobile devices.
- Fully deployed CrowdStrike Endpoint protection software to secure Northern Water's electronic devices (e.g., iPads, iPhones, laptops).
- Implemented a learning management system for the administration, documentation, tracking, reporting, automation and delivery of educational courses and training programs.
- Supported the technical buildout of the new Lincoln Campus. Coordinated the network re-cabling and implemented secure network infrastructure between headquarters and the new office location. Installed and configured conference room technology and relocated staff technical equipment and enterprise printers.
- Integrated the Northern Water campus notification system (Alertus) with our Everbridge mass notification system to send alerts simultaneously to staff on and off campus. This will allow Northern Water to announce weather, active shooter, fires and other alerts at headquarters buildings and to remote workers.
- Introduced Microsoft Power Apps and Power BI to Northern Water. Power BI unifies data from many sources to create interactive, immersive dashboards and reports that provide actionable insights and drive business results. Power Apps build powerful end-to-end business solutions by connecting the entire Microsoft Power Platform with our current systems like WMS. We are utilizing Power Apps to allow water runners to enter meter readings in the field and update the WMS system in real time.
- Provided GIS support for the East Troublesome Fire activities. The GIS team facilitated the data collection efforts for the Emergency Watershed Protection and provides ongoing mapping support.
- Developed and deployed the first phase of the Land Information Navigation Exchange (LYNX) software system. The LYNX project will integrate the Northern Integrated Supply Project right of entry acquisition efforts performed by the Real Estate Department with a custom customer relations management system.

<b>Information Technology</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Programming	\$173,280	\$261,917	\$261,917	\$410,258	\$148,341	56.6%
IT Support Services	1,765,390	2,140,238	2,140,238	2,717,789	577,551	27.0%
Geographic Information System	257,936	337,604	337,604	276,749	-60,855	-18.0%
Policy Administration	17,677	41,258	41,258	13,512	-27,746	-67.2%
IT General	68,842	30,086	30,086	169,211	139,125	462.4%
Travel and Training	45,503	160,798	160,798	195,707	34,909	21.7%
<b>Total</b>	<b>\$2,328,627</b>	<b>\$2,971,901</b>	<b>\$2,971,901</b>	<b>\$3,783,226</b>	<b>\$811,325</b>	<b>27.3%</b>
<b>Summary by Category</b>						
Labor	\$953,349	\$1,056,901	\$1,056,901	\$1,571,276	\$514,375	48.7%
Non Labor	1,375,278	1,915,000	1,915,000	2,211,950	296,950	15.5%
<b>Total</b>	<b>\$2,328,627</b>	<b>\$2,971,901</b>	<b>\$2,971,901</b>	<b>\$3,783,226</b>	<b>\$811,325</b>	<b>27.3%</b>

## Division: Administration - Records Program

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.

The Records Program 2022 major initiatives include:

- 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.
- Inventory and index maps/large drawings located in Building B and incorporate the material into the eDocs DM/RM system for long-term permanent records preservation.
- Continue to revise policy documents related to CORA requests and update internal procedures.
- Continue to develop records training documentation for new employees and facilitate the transfer of records from offboarding/retiring personnel.

The Records Program 2021 accomplishments include:

- Responded to records requests from Northern Water staff and the public.
- Implemented a new file and box inventory taxonomy in the Building B records vault and incorporated the material into the eDocs DM/RM system for long-term permanent records preservation; 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.

<b>Records</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Records	\$534,269	\$538,571	\$526,071	\$609,094	\$70,523	13.09%
Travel and Training	41,448	62,345	46,845	27,208	-35,137	-56.36%
<b>Total</b>	<b>\$575,717</b>	<b>\$600,916</b>	<b>\$572,916</b>	<b>\$636,302</b>	<b>\$35,386</b>	<b>5.89%</b>
<b>Summary by Category</b>						
Labor	\$489,686	\$519,666	\$519,666	\$555,102	\$35,436	6.82%
Non Labor	86,030	81,250	53,250	81,200	-50	-0.06%
<b>Total</b>	<b>\$575,717</b>	<b>\$600,916</b>	<b>\$572,916</b>	<b>\$636,302</b>	<b>\$35,386</b>	<b>5.89%</b>

## Division: Administration - Water Scheduling Program

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 report and analytical products.

The Water Scheduling Program 2022 major initiatives include:

- 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.
- Create, maintain and submit reservoir accounting for Carter Lake, Horsetooth, Flatiron and Boulder reservoirs.
- Develop data collection support related to Article 19 protection of the 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.

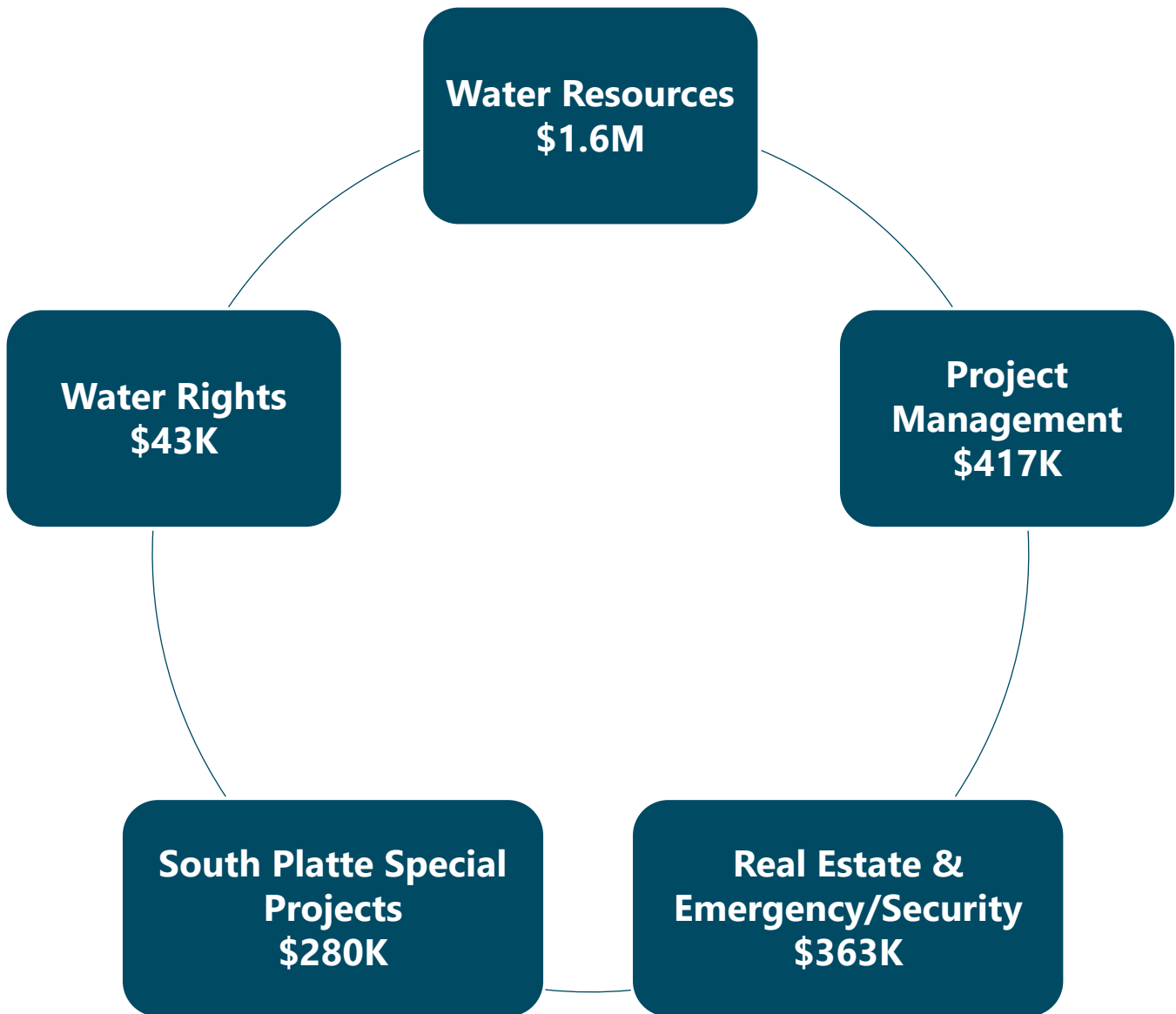
The Water Scheduling Program 2021 accomplishments include:

- Increased use of multiple shared Excel spreadsheets to ensure all staff are using the most up-to-date information.
- Implemented PDF fillable forms for field staff to enter, save and file real-time data.
- Continued with a seamless transition of remote work due to ongoing coronavirus concerns.
- 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 accessibility of flow data.

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Water Scheduling</b>						
<b>Expenditures:</b>						
<b>Program Summary</b>						
Water Scheduling						
General	\$287,269	\$302,340	\$302,340	\$469,958	\$167,618	55.44%
Travel and Training	\$35,317	\$62,527	\$53,027	\$13,240	-\$49,287	-78.83%
<b>Total</b>	\$322,586	\$364,867	\$355,367	\$483,198	\$118,331	32.43%
<b>Summary by Category</b>						
Labor	\$310,903	\$343,367	\$343,367	\$460,698	\$117,331	34.17%
Non Labor	11,682	21,500	12,000	22,500	1,000	4.65%
<b>Total</b>	\$322,586	\$364,867	\$355,367	\$483,198	\$118,331	32.43%

## 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

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

The Project Management Program 2022 major initiatives include:

- Manage the design and construction activities for Berthoud Campus and Granby Campus facilities.
- Provide ongoing support for activities related to the East Troublesome Fire.
- Provide ongoing support for the construction of the Berthoud Campus and Granby Campus additions.
- Provide support to Distribution and Collection programs related to budgeting, planning, design and construction management for various hydraulic structure improvements and rehabilitation.

The Project Management Program 2021 accomplishments include:

- Began construction of new office facilities at Berthoud Campus and Granby Campus.

General Engineering, Project Management and Civil Engineering	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
General Engineering	\$21,781	\$19,720	\$19,720	\$16,019	-\$3,701	-18.77%
Project Management	231,317	312,474	332,474	311,032	-1,442	-0.46%
Travel and Training	56,773	104,922	104,922	48,456	-56,466	-53.82%
<b>Total</b>	<b>\$309,871</b>	<b>\$437,116</b>	<b>\$457,116</b>	<b>\$375,507</b>	<b>-\$61,609</b>	<b>-14.09%</b>
<b>Summary by Category</b>						
Labor	\$257,913	\$384,116	\$384,116	\$297,507	-\$86,609	-22.55%
Non Labor	51,958	53,000	73,000	78,000	25,000	47.17%
<b>Total</b>	<b>\$309,871</b>	<b>\$437,116</b>	<b>\$457,116</b>	<b>\$375,507</b>	<b>-\$61,609</b>	<b>-14.09%</b>

## Division: Engineering - Real Estate Services Program

The mission of the Real Estate Program is to manage, protect, acquire and dispose of real property rights for Northern Water and multiple Water Activity Enterprises (Enterprise) established by Northern Water. 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.

The Real Estate Program 2022 major initiatives include:

- Continue to develop relationships with contractors and other community partners along the Enterprises' pipelines.
- Monitor increased development activities adjacent to the Enterprises' pipelines.

The Real Estate Program 2021 accomplishments include:

- Worked with the IT Department to develop a right-of-way acquisition and management tool for current and future properties owned by Northern Water and its multiple Enterprises.
- Worked with Northern Water's insurance provider on property damage and structure losses due to the East Troublesome Fire.
- Worked with Northern Water's Recovery Team on acquiring permission from property owners to provide reclamation services.

<b>Real Estate</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Real Estate General	\$66,992	\$56,708	\$56,708	\$57,189	\$481	0.85%
Real Estate Travel/Training	26,994	51,763	41,763	30,990	-20,773	-40.13%
<b>Total</b>	<b>\$93,987</b>	<b>\$108,471</b>	<b>\$98,471</b>	<b>\$88,179</b>	<b>-\$20,292</b>	<b>-18.71%</b>
<b>Summary by Category</b>						
Labor	\$72,127	\$76,471	\$76,471	\$57,179	-\$19,292	-25.23%
Non Labor	21,860	32,000	22,000	31,000	-1,000	-3.13%
<b>Total</b>	<b>\$93,987</b>	<b>\$108,471</b>	<b>\$98,471</b>	<b>\$88,179</b>	<b>-\$20,292</b>	<b>-18.71%</b>



## Division: Engineering - Security and Emergency Management Program

The mission of the Security and Emergency Management Program is to protect and secure 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 and the multiple Water Activity Enterprises established by Northern Water.

The Security and Emergency Management Program 2022 major initiatives include:

- Continue to respond to the COVID-19 pandemic by following guidelines from the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Health and Human Services (HHS) in the best interest of Northern Water, its staff, and constituents.
- Continue to assist U.S. Bureau of Reclamation (Reclamation) on updating security site plans for federally owned C-BT Project facilities.
- Develop agreements with Larimer County and Grand County Sheriff's Departments for security patrols of C-BT Project facilities operated by Northern Water.
- Complete setup of the Lenel Access Control System and integration of the Milestone Camera system.
- Complete installation of Lenel Access Control System at the new Granby Campus and new facilities at Berthoud Campus.

The Security and Emergency Management Program 2021 accomplishments include:

- 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 installation and management of the Lenel Access Control System.
- Completed the installation of Lenel Access Control System for Northern Water and its Enterprise facilities.

Emergency/Security Management	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Security General	\$177,082	\$184,686	\$178,686	\$446,499	\$261,813	141.76%
Communications	18,301	15,113	16,113	12,126	-2,987	-19.76%
Travel and Training	35,858	55,678	44,278	11,762	-43,916	-78.87%
<b>Total</b>	<b>\$231,241</b>	<b>\$255,477</b>	<b>\$239,077</b>	<b>\$470,387</b>	<b>\$214,910</b>	<b>84.12%</b>
<b>Summary by Category</b>						
Labor	\$195,316	\$203,977	\$203,977	\$184,187	-\$19,790	-9.70%
Non Labor	35,925	51,500	35,100	286,200	234,700	455.73%
<b>Total</b>	<b>\$231,241</b>	<b>\$255,477</b>	<b>\$239,077</b>	<b>\$470,387</b>	<b>\$214,910</b>	<b>84.12%</b>

## Division: Engineering - South Platte Special Projects Program

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.

The South Platte Special Projects Program 2022 major initiatives include:

- Participate in the South Platte Mapping and Analysis Project through Colorado State University (CSU), including AWAS, IDSCU and ReSET, to provide cooperative agency support to various software applications used by South Platte water users.
- Participate with CSU 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 (SPWRAP).
- 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 Colorado-Big Thompson Project water in Substitute Water Supply Plans.

The South Platte Special Projects Program 2021 accomplishments include:

- Represented Colorado South Platte water users on the 3-States ESA Platte River Recovery and Implementation Program (PRRIP) Water Advisory Committee (WAC).
- 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.

South Platte Special Projects	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Mapping and Analysis	\$12,500	\$0	\$20,000	\$20,000	\$20,000	n/a
USDA Deficit Study	108,999	112,788	152,788	157,541	44,753	39.68%
Tamarack Project	4,230	4,920	5,920	10,181	5,261	106.93%
General Projects	158,127	160,157	160,157	210,236	50,079	31.27%
Travel and Training	2,607	3,014	4,014	1,000	-2,014	-66.82%
<b>Total</b>	<b>\$286,463</b>	<b>\$280,879</b>	<b>\$342,879</b>	<b>\$398,958</b>	<b>\$118,079</b>	<b>42.04%</b>
<b>Summary by Category</b>						
Labor	\$261,811	\$280,879	\$280,879	\$336,958	\$56,079	19.97%
Non Labor	24,652	0	62,000	62,000	62,000	n/a
<b>Total</b>	<b>\$286,463</b>	<b>\$280,879</b>	<b>\$342,879</b>	<b>\$398,958</b>	<b>\$118,079</b>	<b>42.04%</b>

## Division: Engineering - Water Resources Program

The Water Resources program performs engineering activities that support Northern Water and the various Water Activity Enterprise funds. Specific engineering assignments include projects operations planning and modeling, river basin modeling, water availability studies, water supply quantifications, streamflow forecasting, water rights engineering and quantification of C-BT Project return flows.

The Water Resources Program 2022 major initiatives include:

- Inform leadership of available C-BT supplies and make recommendations for allocation and use.
- Analyze effects of the East Troublesome and Cameron Peak fires on project operations.
- Update operations models of C-BT and advise the Board, management and staff on proposed operations.
- Update and calibrate streamflow forecasts using the latest available models and techniques.
- Develop new ways to access, manage and visualize water resources data and create regular informational reports for the Board, management and staff.
- Participate in the funding and planning of the 2022 Colorado Airborne Snow Observatory (CASO) project including the planning of CASO flights.
- Complete the second year of a two-year collaborative project with Reclamation and U.S. Geological Survey (USGS) to implement a state-of-the-art snow modeling system.
- Protect C-BT return flows within Northern Water boundaries as per the Repayment Contract.

The Water Resources Program 2021 accomplishments include:

- Produced water supply and operations forecasts of the C-BT projects and informed the Board, management, staff and participants of water availability for allocation and use.
- Analyzed effects of the East Troublesome and Cameron Peak fires on project operations.
- Assisted legal counsel with the completion of Grey Mountain and South Platte Water Conservation Project water rights due diligence.
- Implemented the Flood Early Warning System platform to house and operate Northern Water's existing streamflow forecasting models.
- Contracted, performed as fiscal agent and participated in the 2021 CASO collaborative study.
- Completed first year of a two-year collaborative project with Reclamation and USGS to implement a state-of-the-art snow modeling system.

<b>Water Resources</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Water Resources General	\$105,214	\$213,036	\$213,036	\$116,533	-\$96,503	-45.30%
Return Flow Study	71,011	177,341	177,341	4,734	-172,607	-97.33%
Stream Flow Forecast	156,438	301,997	301,997	480,578	178,581	59.13%
Red Top Ditch/10825	19	1,160	1,160	0	-1,160	-100.00%
Climate Change	22,926	67,527	67,527	62,459	-5,068	-7.51%
South Platte WRAP	8,799	5,651	5,651	8,633	2,982	52.77%
Riverware System Model	1,169	1,100	1,100	18,418	17,318	1574.36%
CBT Project Operations	141,482	121,040	121,040	256,636	135,596	112.03%
Water Rights	115,584	210,211	210,211	115,338	-94,873	-45.13%
Water Diligence and Opposition	121,792	524,381	524,381	25,340	-499,041	-95.17%
Travel and Training	32,984	41,675	41,675	23,559	-18,116	-43.47%
<b>Total</b>	<b>\$777,419</b>	<b>\$1,665,119</b>	<b>\$1,665,119</b>	<b>\$1,112,228</b>	<b>-\$552,891</b>	<b>-33.20%</b>
<b>Summary by Category</b>						
Labor	\$578,452	\$764,052	\$764,052	\$661,228	-\$102,824	-13.46%
Non Labor	198,967	901,067	901,067	451,000	-450,067	-49.95%
<b>Total</b>	<b>\$777,419</b>	<b>\$1,665,119</b>	<b>\$1,665,119</b>	<b>\$1,112,228</b>	<b>-\$552,891</b>	<b>-33.20%</b>

## Division: Engineering - Water Rights Program

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.

The Water Rights Program 2022 major initiatives include:

- 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.
- Provide water rights and water resources expertise for other Northern Water programs.

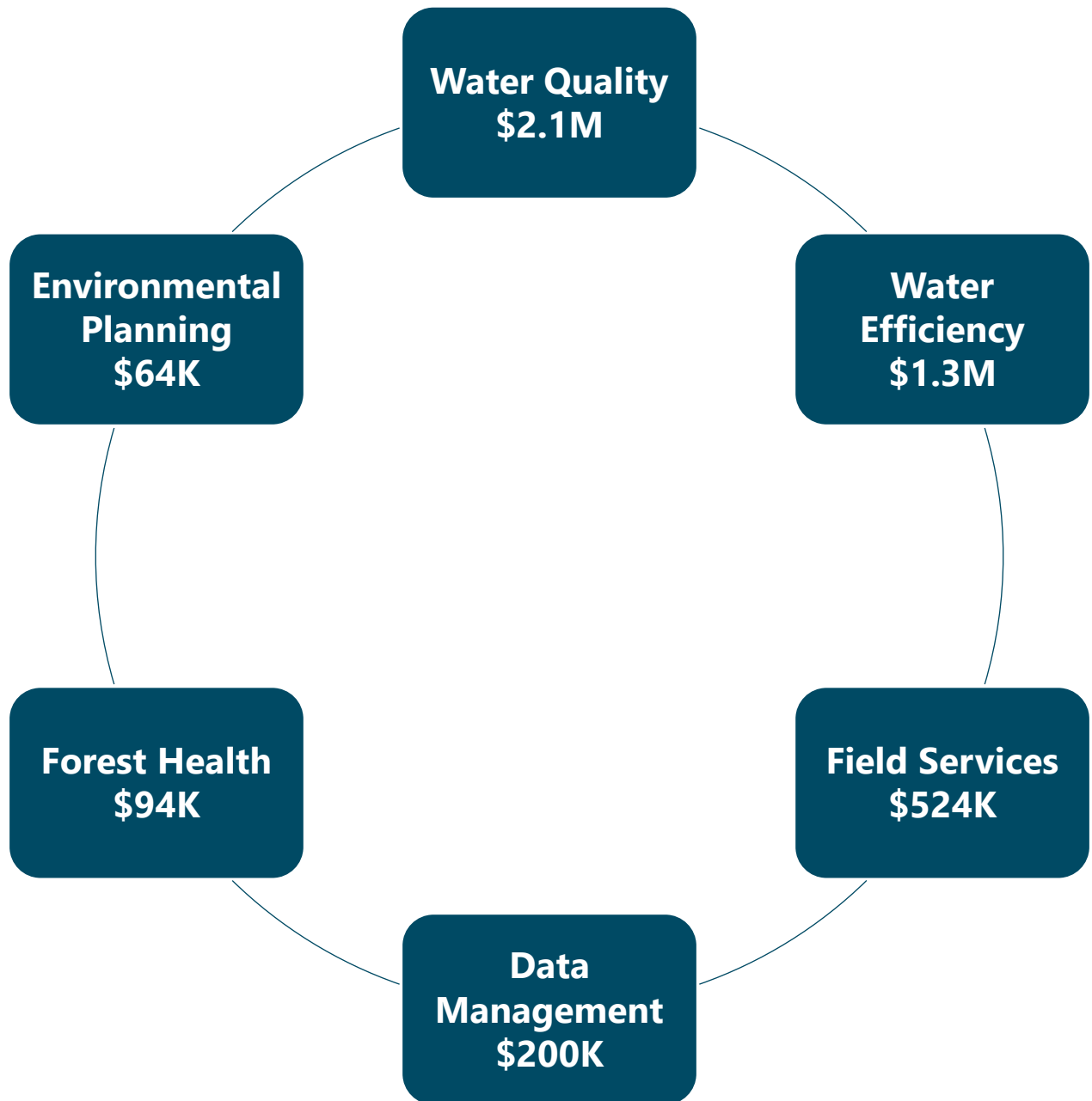
The Water Resources Program 2021 accomplishments include:

- 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 water rights and completed due diligence on C-BT water rights.
- Participated in the completion of a Wild & Scenic Alternative Management Plan for the Colorado River for the reach from Kremmling to Glenwood Springs.

<b>Water Rights</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Water Rights Return Flow Study	\$0	\$0	\$0	\$150,000	\$150,000	n/a
Water Opposition United, EC, ACW	0	0	0	150,000	150,000	n/a
Water Opposition Other	0	0	0	175,000	175,000	n/a
Water Rights General	461	8,000	8,000	65,080	57,080	713.5%
Travel and Training	0	35,000	35,000	39,000	4,000	11.4%
<b>Total</b>	<b>\$461</b>	<b>\$43,000</b>	<b>\$43,000</b>	<b>\$579,080</b>	<b>\$536,080</b>	<b>1246.7%</b>
<b>Summary by Category</b>						
Labor	\$0	\$0	\$0	\$57,080	\$57,080	n/a
Non Labor	461	43,000	43,000	522,000	479,000	1114.0%
<b>Total</b>	<b>\$461</b>	<b>\$43,000</b>	<b>\$43,000</b>	<b>\$579,080</b>	<b>\$536,080</b>	<b>1246.7%</b>

## 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

The Environmental Data Department 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. The Environmental Data Department 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.

The Environmental Data Department 2022 initiatives include:

- Finalize the WISKI data migration project for all environmental data (Water Quality, Conservation Garden).
- Develop additional data access and visualization tools for public data dissemination.
- Collaborate with staff to replace older data tools and workflows dependent on previous generation data systems.
- Continue development and implementation of a data governance framework to ensure proper data management, ownership and retention.
- Continue to collaborate with various departmental staff to develop, implement and document standard QAQC processes for data.

The Environmental Data Department’s 2021 accomplishments include:

- Finalized the migration of Northern Water’s flow and SCADA data.
- Implemented new tools and dashboards for data visualization for staff and partner groups.
- Collaborated with staff to develop QAQC processes for data review within the WISKI system.
- Developed new data web pages for public consumption and field cooperators (weather quick summary, water temperature data).

<b>Environmental Data Management</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Environmental						
Data Management	\$61,690	\$170,798	\$170,798	\$176,466	\$5,668	3.32%
Travel and Training	9,850	29,892	29,892	7,000	-22,892	-76.58%
<b>Total</b>	<b>\$71,540</b>	<b>\$200,690</b>	<b>\$200,690</b>	<b>\$183,466</b>	<b>-\$17,224</b>	<b>-8.58%</b>
<b>Summary by Category</b>						
Labor	\$70,460	\$182,190	\$182,190	\$173,466	\$182,190	100.00%
Non Labor	1,080	18,500	18,500	10,000	-199,414	-1077.91%
<b>Total</b>	<b>\$71,540</b>	<b>\$200,690</b>	<b>\$200,690</b>	<b>\$183,466</b>	<b>-\$17,224</b>	<b>-8.58%</b>

## Division: Environmental Services - Environmental Planning Program

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.

The Environmental Planning Program 2022 major initiatives include:

- Provide environmental compliance support for East Troublesome Fire (ETF) Recovery, including creative and/or pragmatic methods for environmental compliance streamlining. Act as primary environmental 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. Activities including, but 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.
- Provide environmental stewardship guidance and education to internal divisions. Promote organizational stewardship achievements.

The Environmental Planning Program 2021 accomplishments include:

- Completed successful environmental permitting and compliance for ETF debris booms at Grand Lake and Willow Creek Reservoir, as well as ETF aerial mulching on private and U.S. Forest Service Lands.
- Completed successful environmental permitting and compliance for multiple operations and maintenance projects, including but not limited to canal repairs, pipeline blowoff valve replacement, and Boulder Reservoir dredging and dam improvements.
- Represented the interests of Northern Water, with the support of legal counsel, during CDPHE's effort to stand up new legislation and a permitting program for impacts to streams and wetlands no longer under federal jurisdiction due to the Navigable Waters Protection and Trump Rule.
- Provided presentations and updates to the Board of Directors on the ever-changing definition of Waters of the United States and the potential for new State Gap Waters and Dredge and Fill legislation and permitting program.

Environmental Planning	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Environmental Planning	\$44,818	\$50,391	\$50,391	\$69,643	\$19,252	38.21%
Travel and Training	3,273	14,100	14,100	9,000	-5,100	-36.17%
<b>Total</b>	<b>\$48,092</b>	<b>\$64,491</b>	<b>\$64,491</b>	<b>\$78,643</b>	<b>\$14,152</b>	<b>21.94%</b>
<b>Summary by Category</b>						
Labor	\$45,081	\$55,991	\$55,991	\$65,643	\$9,652	17.24%
Non Labor	3,010	8,500	8,500	13,000	4,500	52.94%
<b>Total</b>	<b>\$48,092</b>	<b>\$64,491</b>	<b>\$64,491</b>	<b>\$78,643</b>	<b>\$14,152</b>	<b>21.94%</b>

## Division: Environmental Services - Field Services Program

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.

The Field Services Program 2022 major initiatives include:

- Continue collection of water quality samples from flowing rivers, streams, and canal locations throughout Northern Water’s boundaries and from C-BT Project reservoirs and lakes.
- Continue collection of water quality samples to support the ongoing permitting processes for the South Platte Water Conservation Project.
- Provide operational support and maintenance for the automated electrical conductivity stations located on the South Platte and Cache la Poudre River, the automated streamflow 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 and the water activity enterprises.
- Continued 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.

The Field Services Program 2021 major accomplishments include:

- Installed new multiparameter sondes at the Berthoud Campus and Granby Campus facilities. The sondes provide real-time water quality data to monitor post fire impacts on the C-BT system.
- Conducted additional water quality sampling to assess post fire impacts.
- Continued to upgrade equipment on flow monitoring stations throughout Northern Water boundaries.
- Completed sensor calibrations on weather station network.
- Implemented new quality assurance and quality control procedures on weather station data.

<b>Field Services</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Flow Monitoring Stations	\$243,386	\$266,478	\$266,478	\$297,736	\$31,258	11.7%
Weather Stations	147,197	206,696	206,696	225,942	19,246	9.3%
Field Services Programs	19,142	28,134	28,134	16,857	-11,277	-40.1%
Travel and Training	16,747	23,450	23,450	36,000	12,550	53.5%
<b>Total</b>	<b>\$426,472</b>	<b>\$524,758</b>	<b>\$524,758</b>	<b>\$576,535</b>	<b>\$51,777</b>	<b>9.9%</b>
<b>Summary by Category</b>						
Labor	\$312,927	\$363,758	\$363,758	\$390,535	\$26,777	7.4%
Non Labor	113,544	161,000	161,000	186,000	25,000	15.5%
<b>Total</b>	<b>\$426,472</b>	<b>\$524,758</b>	<b>\$524,758</b>	<b>\$576,535</b>	<b>\$51,777</b>	<b>9.9%</b>



## Division: Environmental Services - Forest Health Program

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 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.

<b>Forest Health</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Forest Health Studies	\$2,558	\$50,668	\$50,668	\$41,140	-\$9,528	-18.8%
Fuels Treatment	14,771	1,743	1,743	0	-1,743	-100.0%
Watershed	33,117	41,155	41,155	41,377	222	0.5%
Travel and Training	1,172	1,267	1,267	0	-1,267	-100.0%
<b>Total</b>	<b>\$51,618</b>	<b>\$94,833</b>	<b>\$94,833</b>	<b>\$82,517</b>	<b>-\$12,316</b>	<b>-13.0%</b>
<b>Summary by Category</b>						
Labor	\$12,612	\$23,233	\$23,233	\$7,717	-\$15,516	-66.8%
Non Labor	39,005	71,600	71,600	74,800	3,200	4.5%
<b>Total</b>	<b>\$51,618</b>	<b>\$94,833</b>	<b>\$94,833</b>	<b>\$82,517</b>	<b>-\$12,316</b>	<b>-13.0%</b>

## Division: Environmental Services - Water Efficiency Program

The Water Efficiency Program’s mission is to develop, promote, support, and assess 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 C-BT Project system resilience to drought and increased climate uncertainty, minimize structural and non-structural water development costs, and support environmental conservation.

The Water Efficiency Program 2022 major initiatives include:

- Implement new water-efficient landscape demonstrations in areas of campus development and in renovations of the conservation gardens.
- Expand reach and capacity of technical support of water use efficiency through landscape consultations, indoor and outdoor water audits and facilitating collaborative water-efficient landscape grants.
- Support municipalities, special districts, and rural domestics in managing non-revenue water through partnering with Colorado Water Conservation Board (CWCB) to host beginner and advanced distribution water loss audit training.
- Develop water stewardship, drought, and efficiency messaging options with allottees.
- In support of the Colorado Water Plan, partner with Sonoran Institute and CWCB to develop and host a Growing Water Smart workshop for allottees to integrate water efficiency and land use planning.
- Support small-scale landscape transitions through partnering with non-profit Resource Central to create and provide a Northern Water-branded Garden in a Box pre-planned garden.

The Water Efficiency Program 2021 accomplishments include:

- Completed 13 Collaborative Water-Efficient Landscape Grant projects in three counties.
- Piloted a new commercial, industrial, and institutional indoor water audit service.
- Sponsored and facilitated a Growing Water Smart workshop for Loveland, Erie, and others.
- Published a new grant case study with EPA WaterSense for a homeowners association in Loveland.
- Awarded Utility Promotional Partner of the Year by EPA WaterSense.
- Supported sustainability via LEED and SITES credits in campus development and certification.
- Established new CoAgMET partnership for Weather Network data QAQC and propagation.
- Completed strategic indoor and outdoor water auditing and design improvements for Thompson School District.
- Formed new partnerships and support for stormwater and sustainable landscape management training.

<b>Water Efficiency</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Water Efficiency						
Programs	\$308,869	\$501,478	\$458,478	\$456,960	-\$44,518	-8.88%
Workgroups	339,150	665,323	465,323	471,647	-193,676	-29.11%
Landscape Grants	145,886	0	200,000	200,000	200,000	n/a
Conservation Gardens	52,822	138,274	138,274	240,265	101,991	73.76%
Travel and Training	29,452	47,295	47,295	30,326	-16,969	-35.88%
<b>Total</b>	<b>\$876,180</b>	<b>\$1,352,370</b>	<b>\$1,309,370</b>	<b>\$1,399,198</b>	<b>\$46,828</b>	<b>3.46%</b>
<b>Summary by Category</b>						
Labor	\$572,670	\$748,370	\$748,370	\$778,198	\$29,828	3.99%
Non Labor	303,510	604,000	561,000	621,000	17,000	2.81%
<b>Total</b>	<b>\$876,180</b>	<b>\$1,352,370</b>	<b>\$1,309,370</b>	<b>\$1,399,198</b>	<b>\$46,828</b>	<b>3.46%</b>

## Division: Environmental Services - Water Quality Program

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

The Water Quality Program 2022 major initiatives include:

- Support East Troublesome Wildfire recovery efforts through data collection and analysis, stakeholder engagement, mitigation project management and other efforts.
- 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.
- 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.

The Water Quality Program 2021 accomplishments include:

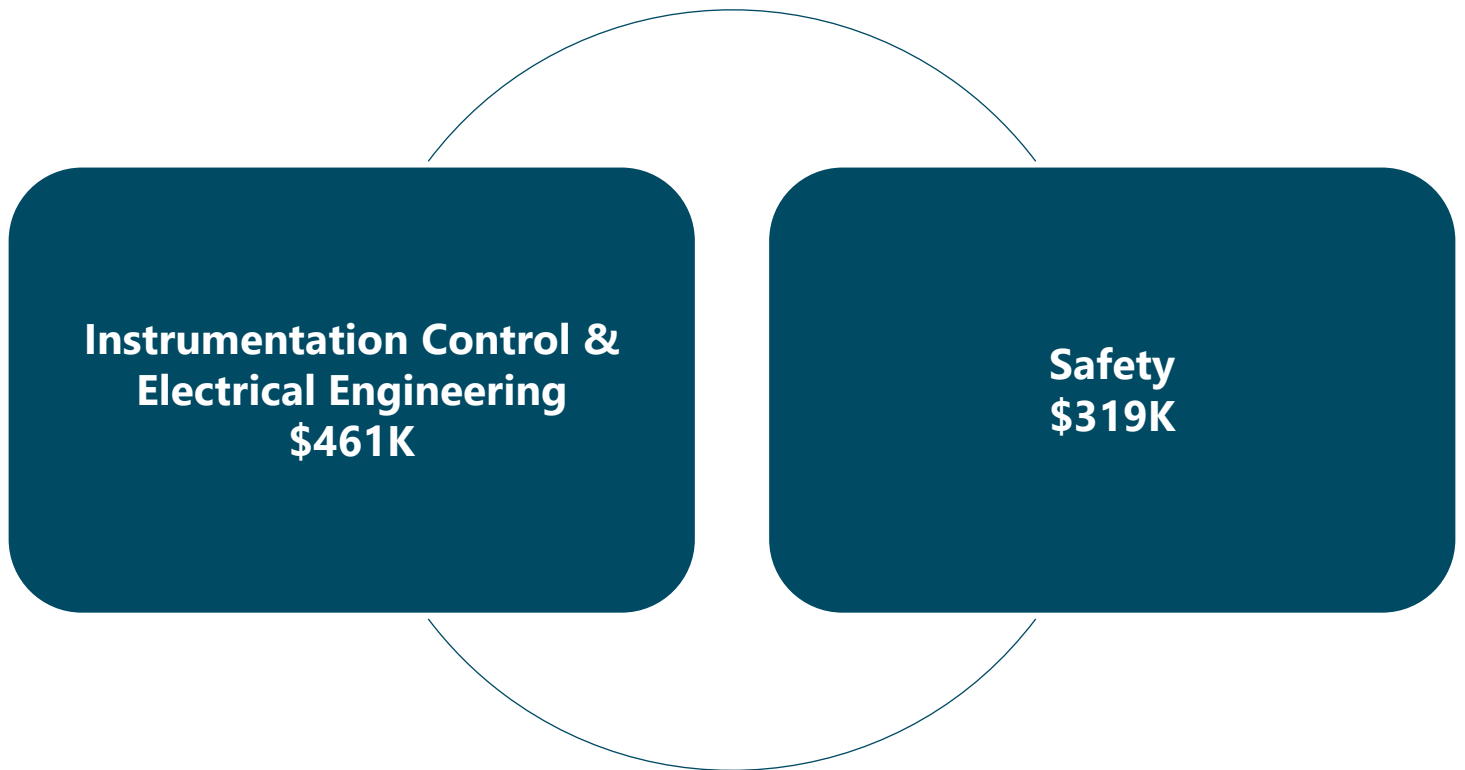
- Monitored water quality in support of multiple Northern Water planning and permit requirements.
- Developed outreach materials associated with the collaborative monitoring of emerging contaminants in water supply.
- Participated in the Colorado River Learning by Doing Program.
- Executed a multi-year intergovernmental agreement with Colorado State Forest Service and USDA Conservation Districts for Forest Health mitigation projects.
- Renewed 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.

<b>Water Quality</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Water Quality Programs	\$564,548	\$629,686	\$629,686	\$918,248	\$288,562	45.83%
Baseline Monitoring	498,800	517,816	517,816	566,985	49,169	9.50%
Water Quality Studies	317,447	646,089	646,089	872,473	226,384	35.04%
Watershed Groups	96,372	98,319	98,319	97,285	-1,034	-1.05%
Regulations	129,661	60,943	60,943	34,525	-26,418	-43.35%
Source Water Protection	21,837	123,705	123,705	133,858	10,153	8.21%
Travel and Training	19,989	41,390	41,390	63,979	22,589	54.58%
<b>Total</b>	<b>\$1,648,654</b>	<b>\$2,117,948</b>	<b>\$2,117,948</b>	<b>\$2,687,353</b>	<b>\$569,405</b>	<b>26.88%</b>
<b>Summary by Category</b>						
Labor	\$900,115	\$864,659	\$864,659	\$1,210,604	\$345,945	40.01%
Non Labor	748,539	1,253,289	1,253,289	1,476,749	223,460	17.83%
<b>Total</b>	<b>\$1,648,654</b>	<b>\$2,117,948</b>	<b>\$2,117,948</b>	<b>\$2,687,353</b>	<b>\$569,405</b>	<b>26.88%</b>

## OPERATIONS DIVISION PROGRAMS

The Operations Division's largest responsibilities include operating and maintaining the transferred works and joint works portions of the CB-T Project and the Windy Gap Project, 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 stations, 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

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.

The Instrumentation Controls and Electrical Engineering Program 2022 major initiatives include:

- Replace legacy control systems for the Farr Pump Plant on the West Slope.
- 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.
- Develop new control rooms' layouts.
- Upgrade and maintain video management system.

The Instrumentation Controls and Electrical Engineering Program 2021 accomplishments include:

- Maintained system reliability and resiliency and availability and uptime of control systems Northern Water-wide.
- Developed control narratives for Eastern Pump Plant.
- Integrated Eastern Pump Plant control system.
- Integrated and monitored testing of Erie's hydropower plant within the constraints of the pipeline.
- Developed and tested logics for the automation of Horsetooth outlet.
- Installed new fiber for Boulder Reservoir, Carter Lake Outlet, Soldier Canyon and Horsetooth.

<b>Instrumentation Control &amp; Electrical Engineering</b>	<b>Fiscal Year 2020 Actual</b>	<b>Fiscal Year 2021 Budget</b>	<b>Fiscal Year 2021 Estimated Actual</b>	<b>Fiscal Year 2022 Budget</b>	<b>Dollar Change From Fiscal Year 2021 Budget</b>	<b>Percentage Change From Fiscal Year 2021 Budget</b>
<b>Expenditures:</b>						
<b>Program Summary</b>						
Instrumentation Control & Electrical Engineering	\$203,866	\$436,916	\$431,916	\$230,212	-\$206,704	-47.31%
Travel and Training	25,844	24,822	34,822	41,290	16,468	66.34%
<b>Total</b>	<b>\$229,710</b>	<b>\$461,738</b>	<b>\$466,738</b>	<b>\$271,502</b>	<b>-\$190,236</b>	<b>-41.20%</b>
<b>Summary by Category</b>						
Labor	\$154,248	\$425,738	\$425,738	\$231,502	-\$194,236	-45.62%
Non Labor	75,462	36,000	41,000	40,000	4,000	11.11%
<b>Total</b>	<b>\$229,710</b>	<b>\$461,738</b>	<b>\$466,738</b>	<b>\$271,502</b>	<b>-\$190,236</b>	<b>-41.20%</b>

## Division: Operations - Safety Program

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.

The Safety Program 2022 major initiatives include:

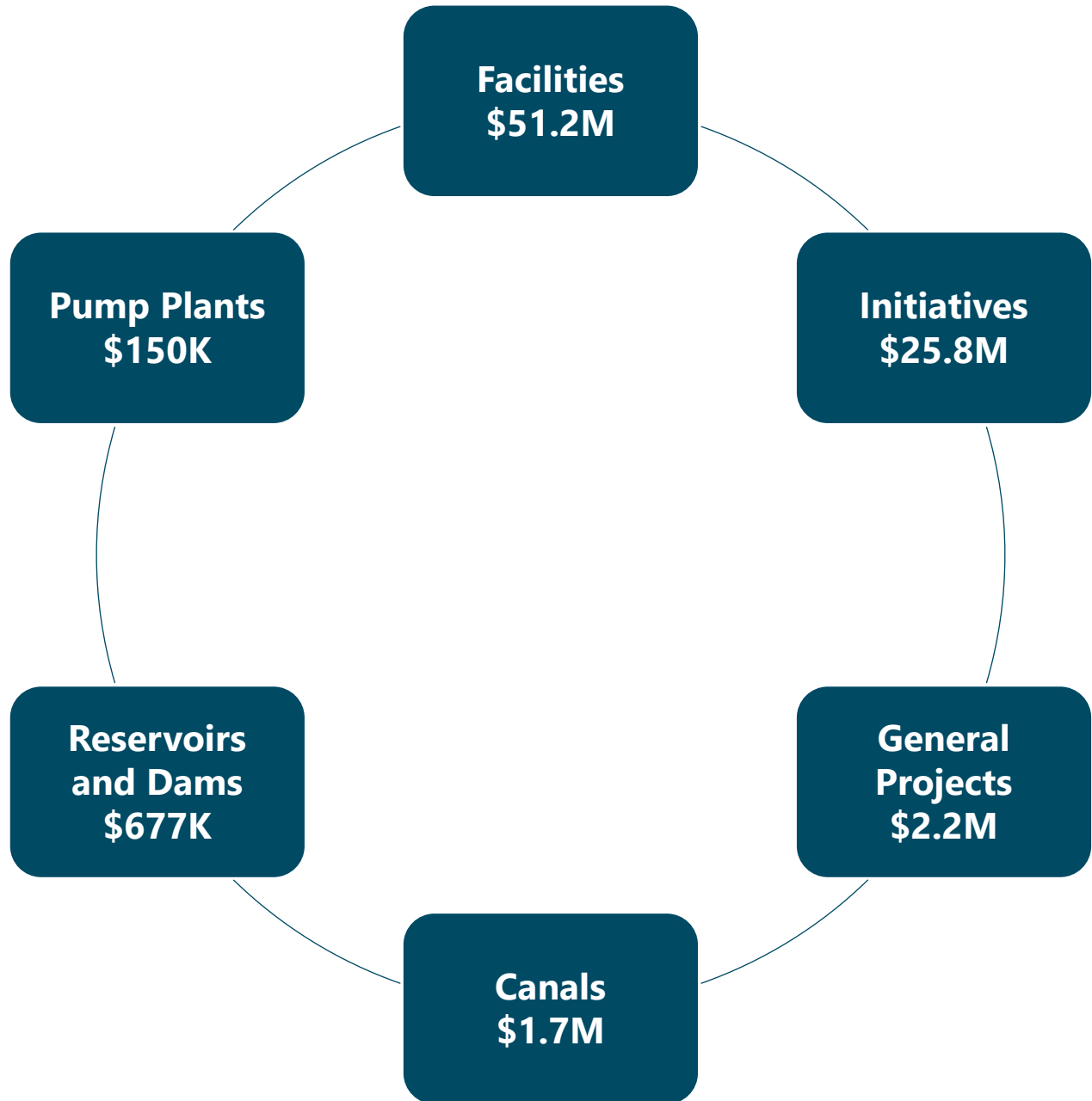
- Purchase Personal Protective Equipment (PPE) and other supplies to ensure employees are safe and feel comfortable while navigating the COVID-19 pandemic and the threat of another outbreak.
- Create an inventory of ergonomic supplies for the employees at Northern Water.
- Add a vertical lifeline to Willow Creek shaft house and re-evaluate the space to determine if this would be a non-permit confined space.
- Install a catwalk to the underside of the Carter Lake tower bridge to ensure work orders can be completed yearly.
- Develop an LMS training on Hazardous Energy Control Procedure for employees who work in a protected system.
- Complete the respiratory protection program and annual fit testing completed in house.
- Set up medical monitoring on the West Slope for respiratory evaluation and Colorado Department of Transportation (CDOT) commercial driver's license (CDL) random testing.
- Install various fall protection systems in places where risks have been identified.
- Hire an intern or technician in the safety department.

The Safety Program 2021 major accomplishments include:

- Purchased sufficient PPE and other supplies to ensure employees were safe and felt comfortable while navigating the COVID-19 pandemic and the threat of another outbreak.
- Developed strategies to work through COVID-19 and quarantine periods.
- Implemented medical monitoring to support a respiratory protection program and started fit testing employees.
- Labeled all confined spaces and permitted confined spaces at Northern Water.
- Provided access to the safety data sheet database through EHS.com to every employee.
- Maintained the KeepStock program from the Operations Manager.
- Implemented annual safety training for all employees through the LMS 365 software.
- Hired a summer occupational safety intern.

Safety	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year	Fiscal Year	Dollar	Percentage
			2021 Estimated Actual	2022 Budget	Change From Fiscal Year 2021 Budget	Change From Fiscal Year 2021 Budget
<b>Expenditures:</b>						
<b>Program Summary</b>						
Safety Programs	\$61,152	\$53,536	\$51,036	\$55,698	\$2,162	4.04%
Safety Contractors	0	899	399	1,000	101	11.23%
Environmental Health	4,065	6,920	5,120	15,249	8,329	120.36%
Safety Medical	4,668	7,348	6,848	10,688	3,340	45.45%
Safety Staff Training	76,276	101,877	78,077	89,172	-12,705	-12.47%
Safety General	124,203	127,404	116,804	149,814	22,410	17.59%
Safety Travel and Training	8,430	21,793	16,193	13,871	-7,922	-36.35%
<b>Total</b>	<b>\$278,793</b>	<b>\$319,777</b>	<b>\$274,477</b>	<b>\$335,492</b>	<b>\$15,715</b>	<b>4.91%</b>
<b>Summary by Category</b>						
Labor	\$174,591	\$187,977	\$187,977	\$184,992	-\$2,985	-1.59%
Non Labor	104,202	131,800	86,500	150,500	18,700	14.19%
<b>Total</b>	<b>\$278,793</b>	<b>\$319,777</b>	<b>\$274,477</b>	<b>\$335,492</b>	<b>\$15,715</b>	<b>4.91%</b>

## CAPITAL PROJECTS



## Capital Projects and Initiatives

A capital project is defined as the purchase, replacement, maintenance or repair of infrastructure and fixed assets. The fiscal year 2022 capital projects and initiatives budget totals \$83,919,010. A listing of the capital projects and initiatives is provided below.

	<b>Fiscal Year 2022 Budget</b>	<b>Total Cost Estimate</b>
<b>Pump Plants</b>		
Farr Cooler Replacement	\$150,000	\$150,000
<b>Canals</b>		
Cemex Concrete Flume	\$457,443.29	
Lower Boulder Canfield	\$309,627.08	
Big Thompson Pipe Headwall Repair	\$270,142.86	
Hansen Supply Canal Box Culvert Rehabilitation	\$146,617.07	
Hansen Feeder Canal Crack Sealing	\$143,402.77	
Hanson Feeder Canal 550 Section Capacity	\$99,318.00	
Highway 52 Project / Lower Boulder Ditch Crossing	85,509.14	
Lower Boulder Diversion Gates	54,825.42	
Star and Lefthand Actuators	39,388.35	
Little Thompson T.O. Actuators	\$44,724.73	
Erie Deliveries Pilot	35,000.00	
Rabbit Mountain Auto Gates	\$28,103.94	
Longmont T.O. Actuator Replacement	17,241.58	\$1,731,344.23
<b>Reservoirs and Dams</b>		
Horsetooth Auxiliary Outlet	\$235,000	
Soldier Canyon Elevator	\$202,756	
Horsetooth Penstock Tape Wrap	\$75,192	
Carter Lake Floor Repair	\$73,905	
Boulder Reservoir Automation	\$63,992	
Boulder Reservoir Actuators	\$26,153	\$676,998
<b>Facilities</b>		
Campus Development Project – East Slope	\$33,781,992	
Campus Development Project – West Slope	\$16,613,602	
Fiber Connectivity	\$500,000	
Building A Chiller Replacement	\$204,506	
Roofing Repairs (Buildings A and B)	\$50,751	
Building B Garage Door Actuators	\$12,000	
Security Camera Upgrades	\$10,000	\$51,172,851
<b>General Projects</b>		
ERP Software Upgrade	\$404,500	
Willow Creek Reservoir Fiber	\$400,000	
West Portal Paving	\$400,000	
Backup and Recovery System	\$250,000	
Meter Rehabilitation Program	\$180,617	
Cybersecurity Monitoring	\$150,000	
System Condition Assessment	\$150,000	
IT Service Management Tool	\$100,000	
VM3 Hypervisor Cluster Replacement	\$50,000	
VM5 Hypervisor Cluster Replacement	\$50,000	
Web App Firewall / Reverse Proxy / SSL Termination	\$10,000	
ArcGIS Monitor	\$8,200	\$2,153,317



**Initiatives**

EWP Fire Recovery Efforts	\$19,902,000	
Colorado Airborne Snow Observatory	\$2,500,000	
Chimney Hollow Outlet Works	\$2,000,000	
Windy Gap Connectivity Channel Contribution	\$1,000,000	
Forest Fire Fuels Treatment	\$348,000	\$25,750,000
TOTAL		\$81,634,510

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

**Pump Plants**

Cooler Replacement Farr Pump Plant (\$150,000) – Replace coolers on all three motor units at Farr Pump Plant.

**Canals**

Cemex Concrete Flume (\$457,443.29) – Design and construct concrete flume on the Boulder Feeder Canal in the Cemex area to stabilize the hillside where seepage and rockslides are occurring.

Big Thompson Pipe Headwall Repair (\$270,142.86) – This project will include engineering, design and construction of repairs to the outlet leg of the Big Thompson Siphon to maintain stable support for the structure.

Hansen Supply Canal Box Culvert Rehabilitation (\$146,617.07) – Design and construct failing existing box culverts identified by system assessment study.

Hansen Feeder Canal Jessup Area Crack Sealing - USBR (\$143,402.77) – Pressure wash and seal concrete canal panels with polyurea to reduce seepage.

Highway 52 Project / Lower Boulder Ditch Crossing (\$85,509.14) – Design and construct project to address drainage problem in area near Highway 52 on the Lower Boulder Ditch Crossing.

Lower Boulder Diversion Gates (\$54,825.42) – Replace three gates and add three new actuators to gates at Lower Boulder's diversion structure on Boulder Creek.

Star and Lefthand Actuators (\$44,724.73) – Add actuators to turnout gates on Boulder Feeder Canal at Star and Lefthand Creek turnouts. These two turnouts are old hand wheels and by adding actuators, Northern Water will have the capability to upgrade the automations. This will provide a more constant and accurate flow to the water user.

Little Thompson T.O. Actuators (\$39,388.35) – Add an actuator to Little Thompson No. 1 turnout gate and to one of the pool gates to allow for a modernized automation system for deliveries to the Little Thompson River. Pool levels vary greatly when large changes are made in the St. Vrain Supply Canal.

Rabbit Mountain Auto Gates St. Vrain Supply Canal (\$28,103.94) – Add automated card reader gates on St. Vrain Supply Canal near Rabbit Mountain parking lot. Install solar powered gate openers to gates on both sides of the road to be used by the south end water runner daily. It is a good location for automated gates.

Longmont T.O. Actuator Replacement (\$17,241.58) – Replace and upgrade the Longmont turnout gate actuator that controls gate automation. The new actuator will have better programable logic for future upgrades to the gate and pool automation.

## **Reservoirs and Dams**

Horsetooth Auxiliary Outlet (\$235,000) – 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 2022 the scope of work will initiate alternative design studies and environmental studies to build upon the previous alternative studies completed in previous years.

Soldier Canyon Elevator – USBR (\$202,756.36) – Replace elevator used to reach dome chamber to get to guard gate for maintenance. Current elevator is 40 years old.

Horsetooth Penstock Tape Wrap - USBR (\$75,191.83) This is for wax coat and tape wrap of the first two pipe segments on East and West raceway by Dome Chamber in Horsetooth Dam.

Carter Lake Floor Repair (\$73,904.58) – Repair concrete floor exiting in the Carter Lake Outlet tunnel with has worn to expose gravel and rebar. Will heat area to ensure no freezing temps affect products.

Boulder Reservoir Automation (\$63,992.24) – This automation will allow staff to make controlled reservoir releases remotely.

Boulder Res Actuators (\$26,152.87) – Replace and upgrade the old actuators to new Rotork actuators, which will be the first step in getting the valve house capable of remote gate control for emergency operations.

## **Facilities**

Campus Development Project – East Slope (\$33,781,992) – 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 of 2021 and is anticipated to be completed in September of 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, which are currently in design and could begin construction in the spring of 2022, consist of remodels and an addition to the existing main office complex on the Berthoud Campus and other shop and storage facilities.

Campus Development Project – West Slope (\$16,613,602) – Northern Water completed a Master Plan study in January 2020 to evaluate the Berthoud headquarters campus, as well as our West Slope Granby campus. Farr Pump Plant was constructed from 1947 to 1951 but does not allow for expansion. This led Northern Water to break ground on a new campus for the West Slope in May 2021. The new campus will be located just south of our Willow Creek Pump Plant on land owned by Northern Water. The campus building will be approximately 41,000 square feet and will be a mix of office and fleet maintenance space, as well as home to our control room. The new campus will house approximately 30 full-time employees and is intended to replace the existing office/shop facilities at Farr and Windy Gap pump plants.

Fiber Connectivity (\$500,000) – Fiber connectivity will provide secure, reliable data transport from the Berthoud headquarters to the Farr Pump Plant, as well as to remote sites. This fiber network will allow Northern Water to operate projects in real time. The new network will also provide enhanced capability for disaster recovery and business continuity.

Building A Chiller Replacement (\$204,505.64) – Labor to install new chiller, which was purchased in 2021 budget.

Roofing Repairs - Buildings A & B (\$50,750.94) – Repair roof and gutters, roof jacks and down spouts on campus Building A and B. Additional hardware will be added to prevent snow falling from entry and exit doors.

Building B Garage Door Actuators - Big Doors (\$12,000) – Replace three large garage door actuators, one spare on hand.

Security Camera Upgrade - Berthoud Campus (\$10,000) - Replace outdated equipment.

## **General Projects**

Willow Creek Reservoir Fiber (\$400,000) – Replace multimode fiber between Willow Creek Pump Plant to Willow Creek Dam to provide secure and reliable connectivity.

West Portal Paving (\$400,000) – Replace failing asphalt around West Portal intake and structure.

Backup and Recovery System (\$250,000) – Northern Water’s current backup and recovery solution (CommVault) subscription is expiring. The project will evaluate our current system versus a new system. The CommVault Backup and Recovery is a unified platform for data protection and management of both on-premises and cloud workloads. Key capabilities include data backup, snapshots, replication, archive, cloud migration and protection, granular recovery, content index and search, disaster recovery and reporting.

Meter Rehabilitation Program - USBR (\$180,617.07) – Replace or repair existing water meters along canal system and develop a calibration program. Ensure accurate water deliveries to water users and account for that water with assurance of accuracy for Northern Water.

Cybersecurity Monitoring (\$150,000) –Cyber attacks are an increasingly sophisticated and evolving danger to Northern Water, as attackers employ new methods powered by social engineering and artificial intelligence to circumvent traditional security controls. Cybersecurity monitoring project includes hardware, software and third-party vendor services to allow for 24/7 security monitoring of Northern Water systems.

VM3 Hypervisor Cluster Replacement (\$50,000) – Hypervisors host our virtual machine infrastructure which accounts for more than 90 percent of servers. Purchase and replace three servers to avoid the risk of hardware failure inherent in the use of end-of-life hardware in production.

VM5 Hypervisor Cluster Replacement (\$50,000) – System administrator will install the hardware, configure the cluster software and migrate virtual machines to the new hardware as appropriate.

Web Application Firewall / Reverse Proxy / SSL termination (\$10,000) – A web application firewall could either be hosted in a "software-as-a-service" scenario with minimal setup time, or as an appliance that the Information Technology Department would install and configure. Northern Water's Internet-facing web resources (www.northernwater.org, data web services, etc.) are constantly facing probing attacks from bad actors.

ArcGIS Monitor (\$8,200) – Northern Water's ArcGIS Enterprise system does not have a health monitoring or reporting mechanism. The monitoring system will alert IT/GIS when GIS systems are experiencing performance issues. The project goal is to prevent system crashes and keep GIS line of business services online.

## **Northern Water Initiatives**

Colorado Airborne Snow Observatory (\$2,500,000) – 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 (ASO) 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.

Windy Gap Connectivity Channel Contribution (\$1,000,000) – As part of the 1041 permit conditions for the Windy Gap Firming Project, the Windy Gap Reservoir Modification Study preferred alternative was creation of the Colorado River Connectivity Channel (CRCC). The CRCC is a modification to the existing Windy Gap dam as necessary to bypass flows through and/or around the Windy Gap Reservoir. Project contributions are being made by the Windy Gap Firming Project, Northern Water, and several other organizations.

Fuels Treatment Initiatives (\$348,000) – Fuel treatments, such as mechanical thinning and prescribed burning, can help reduce wildfire hazards and increase watershed resilience. Northern Water works with several local, state, and federal partners on both sides of the divide to identify and implement fuel treatment projects within the watersheds that supply water for the C-BT and Windy Gap Projects. These treatments are important to protect and maintain the long-term water quality and protect infrastructure from wildfire risk.

## 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 \$2,010,500. A summary is provided in the tables and chart below.

	<b>Budget</b>	<b>Percent of Total Capital Assets Purchases</b>
Fleet Vehicles and Equipment	\$2,284,500	100%
TOTAL	\$2,284,500	100%

	<b>Amount</b>
<b>Fleet Vehicles and Equipment</b>	
Vehicle Fleet Replacements	\$648,000
Large Trucks (Truck Crane & Water Truck)	\$540,000
Mowers	\$216,000
Telescopic & Articulated Boom Lifts	\$200,000
Front End/Rubber Tire Loader	\$190,000
Chemical Applicator	\$110,000
Portable Compressors	\$85,000
Precision Water Quality Instruments	\$42,000
Mobile Lab Camper	\$40,000
Toro Workman	\$36,000
Wood Chipper	\$30,000
Electric Standup Ride Forklift	\$26,000
Iron Worker and Bits	\$25,000
Snow Mobile & Sled w/Trailer	\$22,000
Precision Flow Tracker	\$18,000
Welding Platen Table	\$15,000
Dump Trailer	\$14,000
Hydraulic Torque Wrench	\$12,000
Utility Locate Machine	\$9,000
Drill Press and Accessories	\$6,500
Total Capital Purchases	\$2,284,500

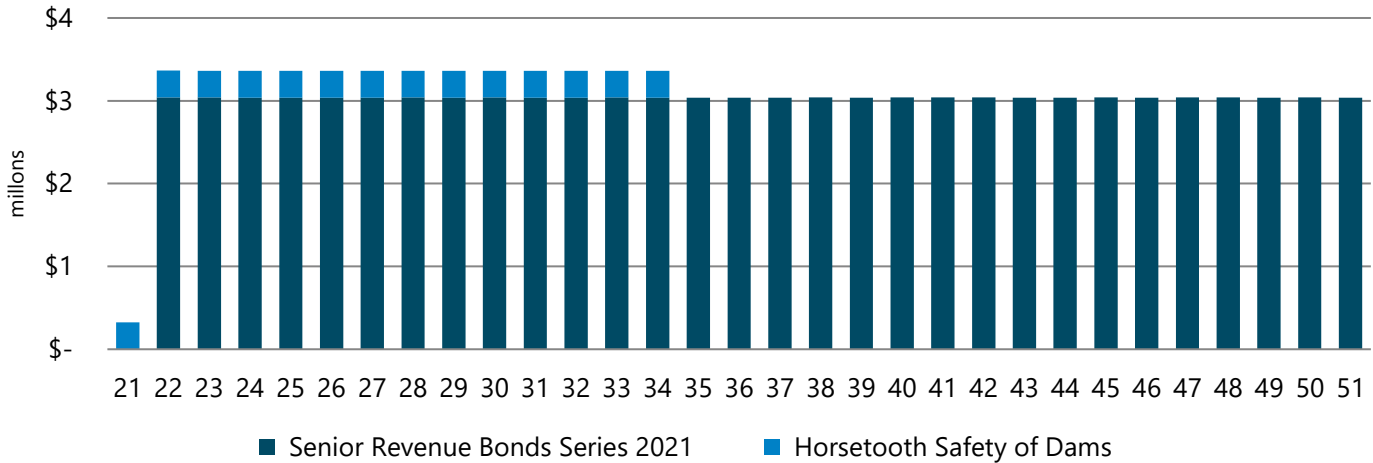
## Impacts to Operating Costs

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.

**Debt Service (0.41% of Total Uses of Funds)**

The fiscal year 2022 Debt Service is scheduled at \$5,334,318 to fund the principal and interest due related to Northern Water’s outstanding contract payable with the U.S. Bureau of Reclamation for the Horsetooth Safety of Dams project (of which \$2,729,814 remains due), as well as to fund the principal and interest due related to Northern Water’s outstanding Series 2021 Certificates of Participation (COPs). \$52,050,000 in COPs were closed on August 11, 2021 and have been amortized through 2051. A summary is provided in the chart below.

**Certificates of Participation Series 2021**

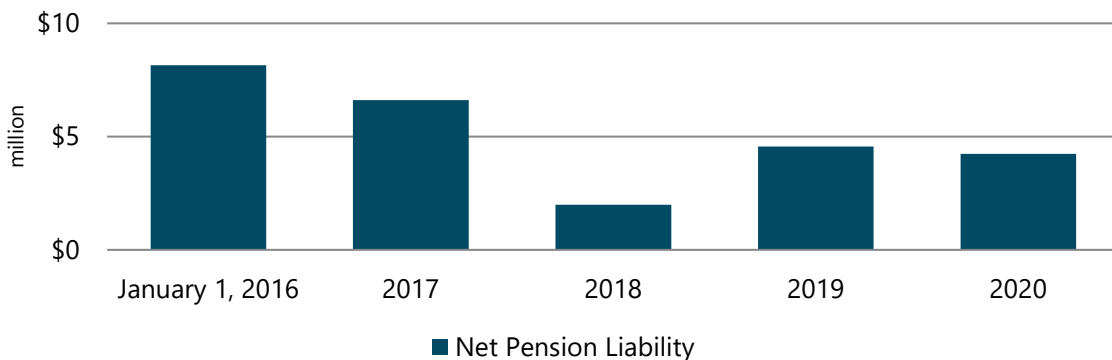


**Net Pension Liability (0.17% of Total Uses of Funds)**

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 liability of \$4,230,985 is included in the District Fund on Northern Water’s financial statements on September 30, 2020. This was determined by an actuarial valuation as of January 1, 2020, using a long-term expected rate of return, net of investment expense of 5.50 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. In addition, for the past several years, Northern Water has made supplemental contributions to the Pension Plan to reduce the unfunded liability. For fiscal year 2021, Northern Water has budgeted contributions to the plan of \$2.3 million, including the actuarially determined contribution of \$1,483,961 and the remainder as a supplemental contribution. A summary is provided in the table and chart below.

	<u>Budget</u>
<b>Net Pension Liability</b>	
Unfunded Pension Plan Liability Payment	\$129,125

**Defined Benefit Plan**  
Five year pay down





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

## Budget Summary

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Beginning Cash &amp; Reserves</b>						
Unrestricted	1,548,580	1,548,580	2,425,582	<b>7,310,600</b>		
Restricted	17,027,758	7,706,024	6,789,668	-		
<b>Total</b>	<b>18,576,338</b>	<b>9,254,604</b>	<b>9,215,250</b>	<b>7,310,600</b>		
<b>SOURCES</b>						
<b>Revenues</b>						
Operating Revenues						
Pipeline Assessments	1,839,740	1,639,223	1,639,223	<b>2,510,639</b>	871,416	53.16%
Other operating revenue	-	-	-	-		
<b>Total operating revenues</b>	<b>1,839,740</b>	<b>1,639,223</b>	<b>1,639,223</b>	<b>2,510,639</b>	<b>871,416</b>	<b>53.16%</b>
<b>Other revenues</b>						
Earnings on Investments	11,020	-	-	-		
Other nonoperating revenues	-	-	-	-		
<b>Total other revenues</b>	<b>11,020</b>	<b>-</b>	<b>-</b>	<b>-</b>		
<b>Contributions</b>						
Pipeline and Pump Station Projects	9,853,917	264,000	260,000	-	(264,000)	-100.00%
Return of Capital Contributions			(1,606,796)	-	-	n/a
<b>Total Contributions</b>	<b>9,853,917</b>	<b>264,000</b>	<b>260,000</b>	<b>-</b>	<b>(264,000)</b>	<b>-100.00%</b>
<b>Total Sources</b>	<b>11,704,677</b>	<b>1,903,223</b>	<b>1,899,223</b>	<b>2,510,639</b>	<b>607,416</b>	<b>31.92%</b>
Balance Sheet Source (Use)	(1,949,898)	-	-	-		
<b>Total Funds Available</b>	<b>28,331,117</b>	<b>11,157,827</b>	<b>11,114,473</b>	<b>9,821,239</b>		
<b>USES</b>						
<b>Expenses</b>						
<b>Operating</b>						
Operation & Maintenance	1,250,910	1,539,223	1,529,873	<b>1,427,339</b>	(111,884)	-7.27%
Indirect Cost	-	-	-	<b>983,300</b>	983,300	n/a
<b>Total Operating</b>	<b>1,250,910</b>	<b>1,539,223</b>	<b>1,529,873</b>	<b>2,410,639</b>	<b>871,416</b>	<b>56.61%</b>
<b>Capital</b>						
Capital Projects/Assets	17,864,957	2,274,000	2,274,000	<b>634,803</b>	(1,639,197)	-72.08%
<b>Total Capital Projects</b>	<b>17,864,957</b>	<b>2,274,000</b>	<b>2,274,000</b>	<b>634,803</b>	<b>(1,639,197)</b>	<b>-72.08%</b>
<b>Total Capital</b>	<b>17,864,957</b>	<b>2,274,000</b>	<b>2,274,000</b>	<b>634,803</b>	<b>(1,639,197)</b>	<b>-72.08%</b>
Contingency Appropriation	-	100,000	-	<b>100,000</b>	-	n/a
<b>Total Uses</b>	<b>19,115,867</b>	<b>3,913,223</b>	<b>3,803,873</b>	<b>3,145,442</b>	<b>(767,781)</b>	<b>-19.62%</b>
<b>Ending Cash &amp; Reserves:</b>						
Unrestricted	2,425,582	7,244,604	7,310,600	<b>6,675,797</b>		
Restricted	6,789,668			-		
<b>Total</b>	<b>9,215,250</b>	<b>7,244,604</b>	<b>7,310,600</b>	<b>6,675,797</b>		
<b>Total Funds Accounted For</b>	<b>28,331,117</b>	<b>11,157,827</b>	<b>11,114,473</b>	<b>9,821,239</b>		



## 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 station 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 stations. The fiscal year 2022 Southern Water Supply Project Water Activity Enterprise Fund budget, including operating expenses and capital outlay, totals \$3,145,442, which is less than previous years. This reflects the completion of the Eastern Pump Station. There are no future debt financing plans for the SWSP.

Major initiatives for 2022 include:

- Continue to develop and test control systems to support the Eastern Pump Plant on the SWSP Pipeline.
- Continue to work with property owners on reclamation needs on the SWSP II pipeline.
- Replace legacy control systems for the Broomfield and Longmont Flow Control Structures on SWSP.
- Replace Broomfield blowoff.
- Rebuild or replace Rodney Hunt valve at mainline #1 vault.
- Install Southern Water Supply Project isolation valve at Boulder vault.

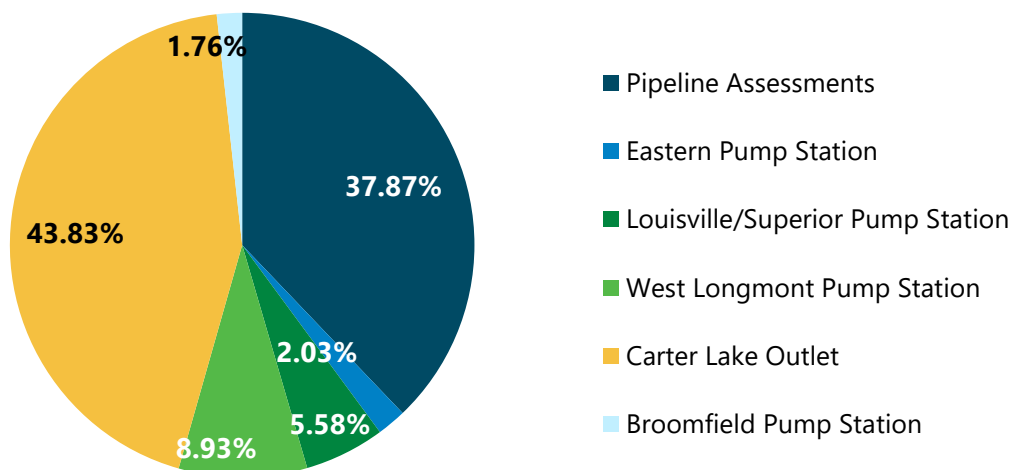
Initiatives completed in 2021 included:

- Installed interrupters on Broomfield pipeline.
- Applied epoxy coatings at Broomfield pump plant.
- Installed AC grounding mat on Superior line.
- Completed blowoff valve replacement on Superior line.
- Brought the SWSP II pipeline online.

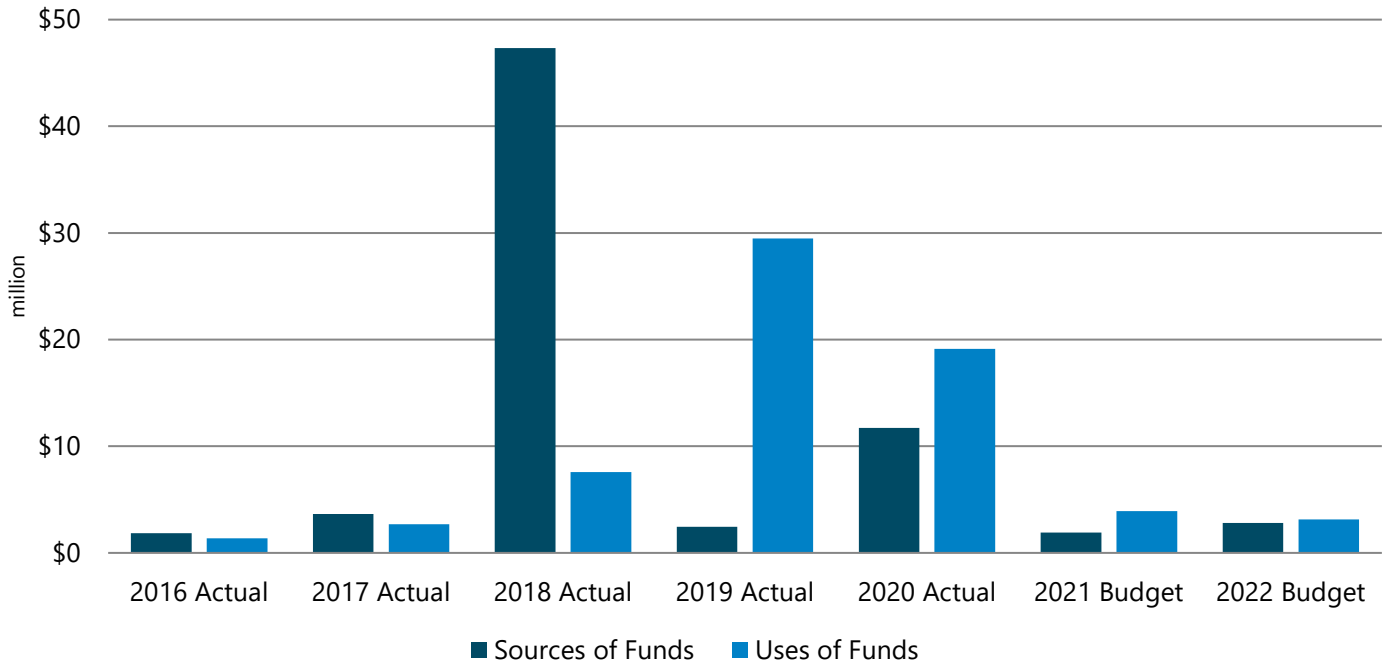
## Revenues

The fiscal year 2022 Southern Water Supply Project Water Activity Enterprise Fund revenues and contributions total \$2,510,639. This amount represents an increase of \$607,416 from the fiscal year 2021 budget. A summary is provided in the table and charts below.

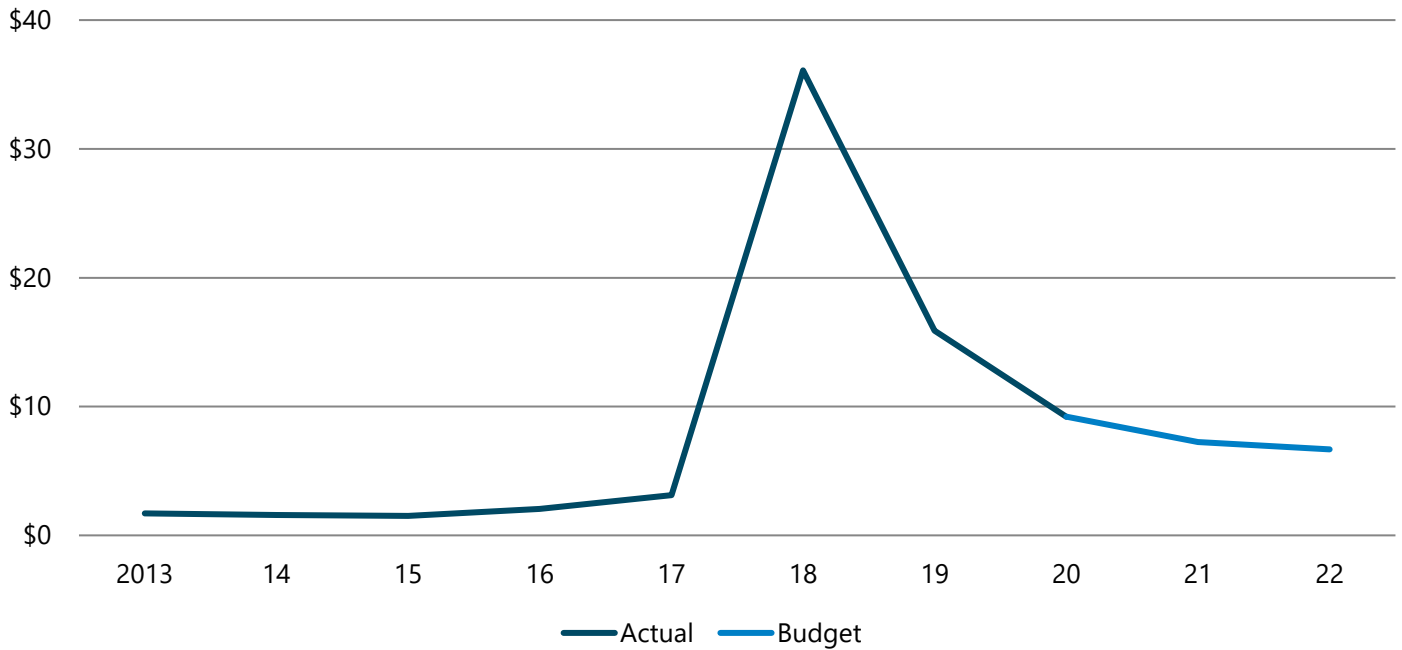
	<b>Budget</b>	<b>Percent</b>
Pipeline Assessments	\$950,654	37.87%
Eastern Pump Station	\$51,000	2.03%
Louisville/Superior Pump Station	\$140,213	5.58%
West Longmont Pump Station	\$224,263	8.93%
Carter Lake Outlet	\$1,100,437	43.83%
Broomfield Pump Station	\$44,072	1.76%
<b>Total</b>	<b>\$2,510,639</b>	<b>100%</b>



### SWSP Enterprise Sources and Uses of Funds



### SWSP Enterprise Cash and Reserves

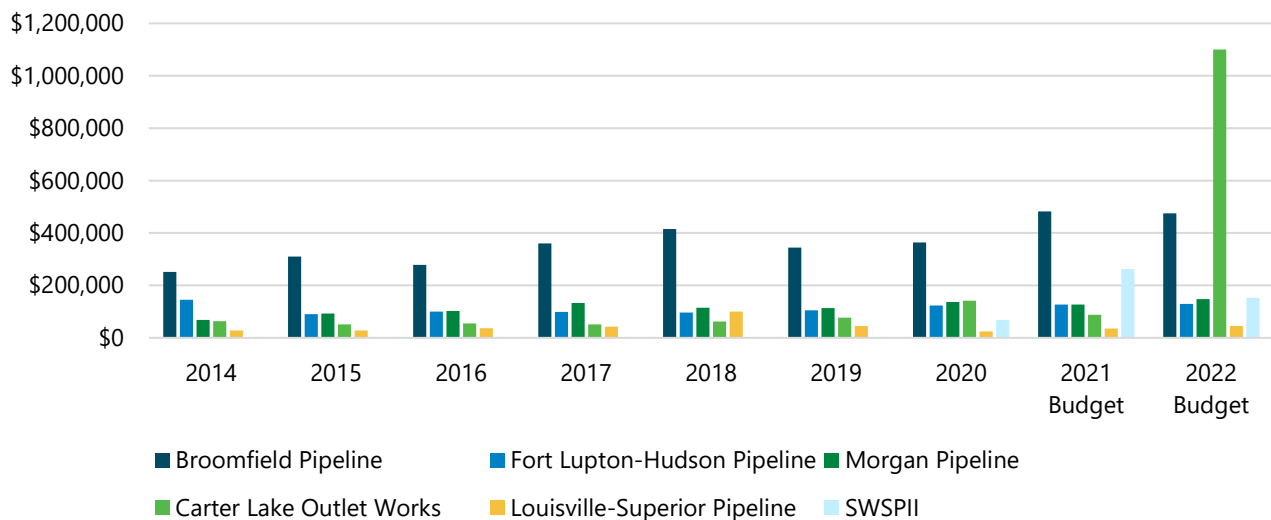


## Expenses

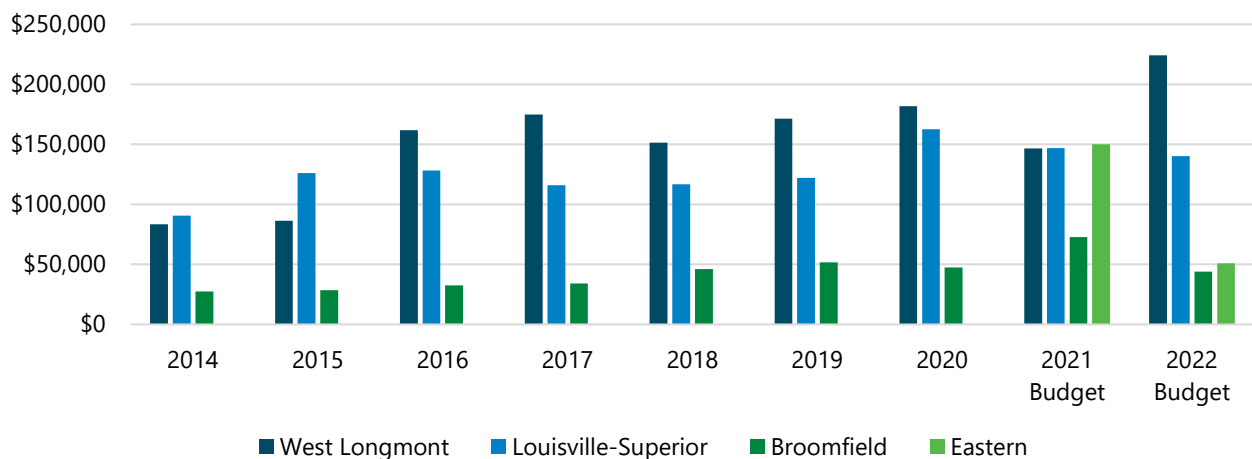
The fiscal year 2022 Southern Water Supply Project Water Activity Enterprise Fund operating expense budget totals \$2,510,639. This represents an increase of \$871,416 more than the fiscal year 2021. This is due mainly to the addition of indirect costs due the District and is budgeted to the Carter Lake Outlet Works line item. A summary of the operating expenses by pump station, pipeline and outlet is provided in the table and charts below.

	Fiscal Year 2018 Actual	Fiscal Year 2019 Actual	Fiscal Year 2020 Actual	Fiscal Year 2021 YTD Actual	Fiscal Year 2021 Budget	Fiscal Year 2022 Budget
Broomfield Pipeline	415,454	344,990	363,869	569,710	482,795	475,246
Broomfield Pump Station	46,119	51,654	47,397	83,408	72,660	44,072
Carter Lake Outlet Works	844,614	77,375	142,025	107,883	87,368	1,100,437
Eastern Pump Station	-	-	-	2,325	150,000	51,000
Fort Lupton / Hudson Pipeline	96,354	105,172	123,218	94,591	127,374	129,947
Louisville / Superior Pipeline	99,693	105,172	24,763	28,219	35,426	44,932
Louisville / Superior Pump Station	116,850	122,031	162,610	103,079	147,037	140,213
Morgan Pipeline	114,760	113,125	137,120	105,785	127,469	147,987
SWSP II Pipeline	2,907	7,373	68,069	330,026	262,552	152,542
West Longmont Pump Station	151,381	171,144	181,840	158,433	146,542	224,263

### Pipeline, Outlet and Turnout Expenses



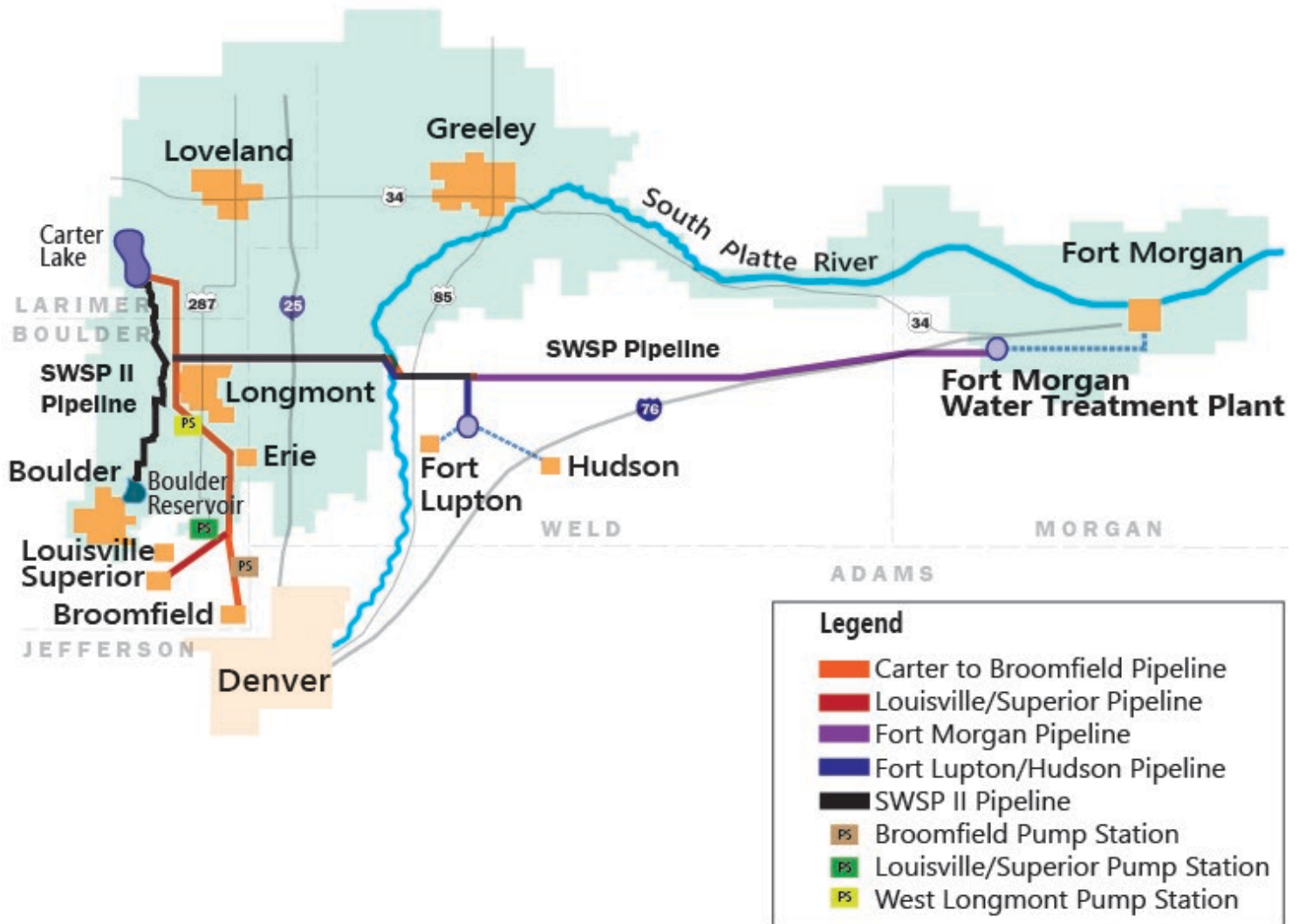
### Pump Station Expenses



## Southern Water Supply Project Pipelines and Stations Map

The original SWSP includes four pipelines spanning 180 miles and three related pump stations 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 million. Total project costs, including design, permitting, administration, management and right-of-way were approximately \$44 million.



## Capital Outlay

The fiscal year 2022 Southern Water Supply Project Water Activity Enterprise Fund capital outlay budget totals \$634,803.

**Carter Lake Flow Meter – (\$175,000)** This will provide accurate flow data as water are delivered through the Carter Lake Gatehouse. The existing parshall flume does not provide adequate accuracy for accurate control of gates. The new flow meter will provide accuracy within one percent.

**SWSP II Boulder Isolation Valve – (150,000)** The SWSP-2 pipeline directly upstream of the Boulder turnout vault is needed to deliver water to every pipeline turnout upstream of the Boulder Vault delivery point while maintenance and repairs are being done inside the Boulder vault. This eliminates an entire shutdown or outage for the SWSP II pipeline.

**Carter Lake Outlet Works PLC Replacement – (\$100,000)** Replace obsolete programmable logic controller system at Carter Lake Outlet and master programmable logic controller to include parshall flume, dissipating valve, intake tower, overflow and main redundant programmable logic controller systems. This replacement will provide automation for delivery of water out of Carter Lake.

**Broomfield Blow-Off Replacement – (\$50,540)** Replace the blow-off valve which will not close completely by adding a 6-foot manhole ring vault to make replacement and maintenance easier in the future.

**SWSP Test Stations – (\$35,153)** Raise and secure the cathodic protection test stations on the SWSP I pipeline. The project will raise the test stations from ground level to 3 feet high in a 3-inch galvanized pipe, cemented in with cathodic protection test wires and an aluminum cap. This project makes the cathodic protection test stations more visible, easier to get readings, and less prone to damage or getting lost.

**SWSP Access Road – (\$34,591)** Build a new access road to two air-vacs and two blow-offs on the SWSP I and SWSP II pipelines. It may also require adding a culvert. The distance is about 60 to 700 feet and would be the shortest route to the air-vacs and blow-offs. This will provide better access to the SWSP pipelines and maintenance needs.

**Broomfield Vaults - Wax Tape – (\$30,153)** Apply tape wrap to all piping and valves/meters within two vaults just west of the Broomfield Pump Plant. One has a butterfly valve and the other has a mag meter. Both of these vaults have sump pumps, but the vaults are always damp inside which is causing rust.

**Old Erie Pipeline Plug – (\$16,452)** Excavate a small section of the old Erie pipeline. Cut out a short segment of pipe that is attached to the isolation valve and put a blind flange on the isolation valve. Completion of the project will be to backfill and reshape the area.

**Eastern Power Plant Manlift – (\$15,508)** Install a rolling single man manlift at the new Eastern Pump Plant, which has a high ceiling with light fixtures, exhaust fans and filters.

**Louisville / Superior Pump Plant Isolation Valves – (\$12,000)** Remove and replace non-sealing isolation valves to allow for work to be done on the pumps without having to drain a portion of the pipeline.

**Motor Alignment Laser Tool – (\$12,000)** Purchase a new motor alignment laser tool for aligning pump motors on SWSP pump plants. The benefits will be longer bearing life on pumps and motors.



**PLEASANT VALLEY PIPELINE  
WATER ACTIVITY ENTERPRISE FUND**

## Budget Summary

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Beginning Cash &amp; Reserves</b>						
Unrestricted	79,825	44,625	106,774	<b>181,524</b>		
Total	79,825	44,625	106,774	<b>181,524</b>		
<b>SOURCES</b>						
<b>Operating Revenues</b>						
Pipeline Assessments	76,205	103,279	159,199	<b>155,530</b>	52,251	50.59%
Total Operating Revenues	76,205	103,279	159,199	<b>155,530</b>	52,251	50.59%
<b>Other Revenues</b>						
Earnings on Investments	588	-	436	-		
Total Other Revenues	588	-	436	-		
<b>Contributions</b>						
Projects	-	-	-	-	-	n/a
Total Sources	76,793	103,279	159,635	<b>155,530</b>	52,251	50.59%
Balance Sheet Source (Use)	96,450	-	-	-		
Total Funds Available	253,068	147,904	266,409	<b>337,054</b>		
<b>USES</b>						
<b>Expenses</b>						
<b>Operating</b>						
Pleasant Valley Non Segment	18,398	50,721	22,020	<b>49,366</b>	(1,355)	-2.67%
Pleasant Valley Segment PV1	32,338	31,327	35,340	<b>27,438</b>	(3,889)	-12.41%
Pleasant Valley Segment PV2	24,182	18,731	26,525	<b>28,928</b>	10,197	54.44%
Pleasant Valley Segment PV3	2,347	-	-	-		
Pleasant Valley Segment PV4	10,668	1,500	-	<b>5,898</b>	4,398	n/a
Participant Only	-	1,000	1,000	-	(1,000)	-100.00%
Indirect Cost	-	-	-	<b>43,900</b>		
Total	87,933	103,279	84,885	<b>155,530</b>	52,251	50.59%
<b>Non Operating</b>						
Loss on Asset Disposal	10,000	-	-	-	-	n/a
Total Non Operating	10,000	-	-	-	-	n/a
<b>Capital</b>						
Capital Projects	48,361	-	-	-	-	n/a
Total Capital Projects	48,361	-	-	-	-	n/a
Total Uses	146,294	103,279	84,885	<b>155,530</b>	52,251	50.59%
<b>Ending Cash &amp; Reserves:</b>						
Unrestricted	106,774	44,625	181,524	<b>181,524</b>		
Total	106,774	44,625	181,524	<b>181,524</b>		
Total Funds Accounted For	253,068	147,904	266,409	<b>337,054</b>		

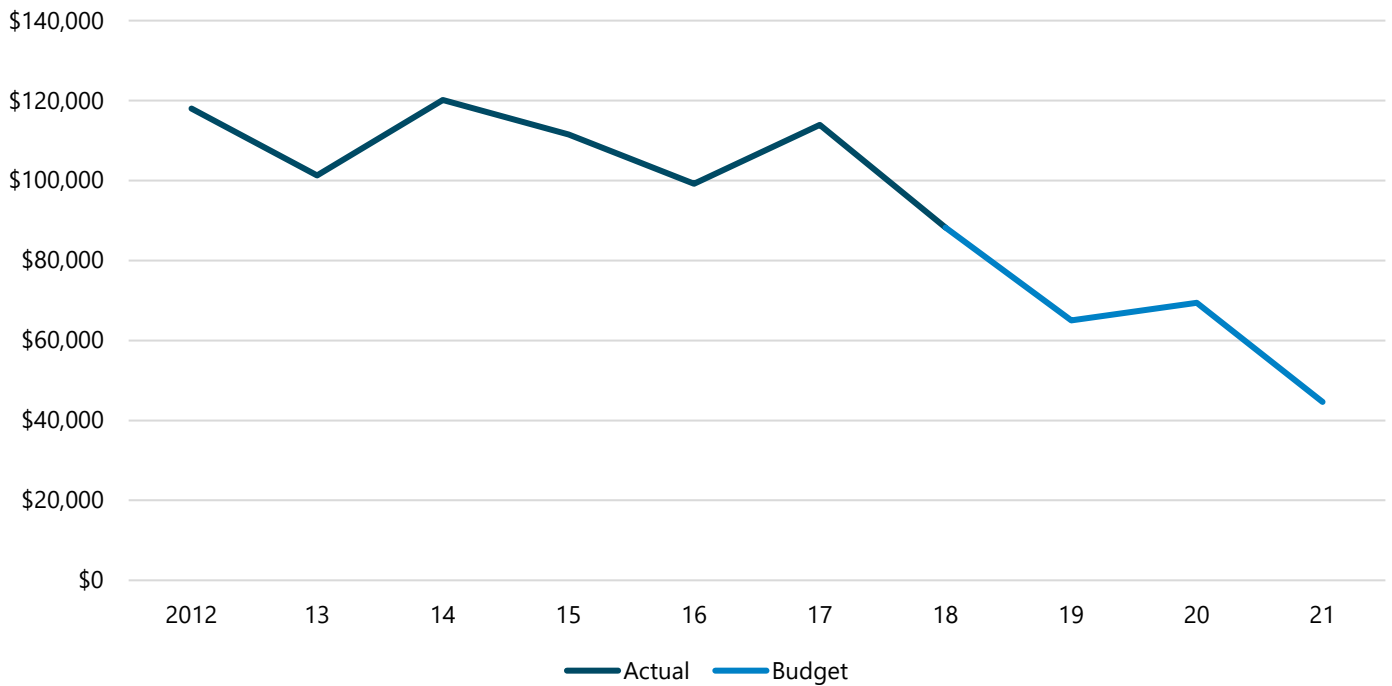
## Pleasant Valley Pipeline Project Water Activity Enterprise Fund Overview

The Pleasant Valley Pipeline Project Water Activity Enterprise Fund is self-supporting through pipeline assessments. The purpose of the Pleasant Valley Pipeline Project (PVP) 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 PVP.

### Revenues

Revenue from pipeline assessments is estimated at \$155,530, an increase of \$ 52,251 or 50.59 percent compared to the fiscal year 2021 budget. Pipeline assessments are expected to be the same as budgeted expenses. A summary is provided in the chart below.

### Pleasant Valley Pipeline Enterprise Cash and Reservers





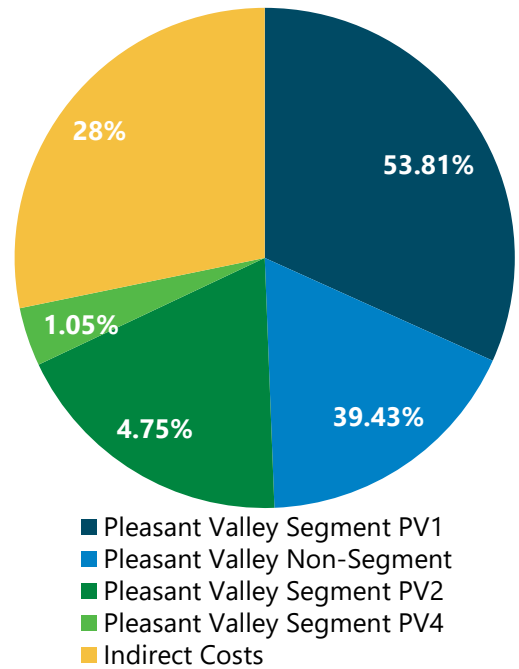
## Expenses

The fiscal year 2022 PVP Enterprise budgeted operating expenses are \$155,530. This represents an increase of \$52,251. The increase is due mostly to the indirect costs charged by Northern Water beginning in fiscal year 2022. A summary of operating expenses is provided in the table below.

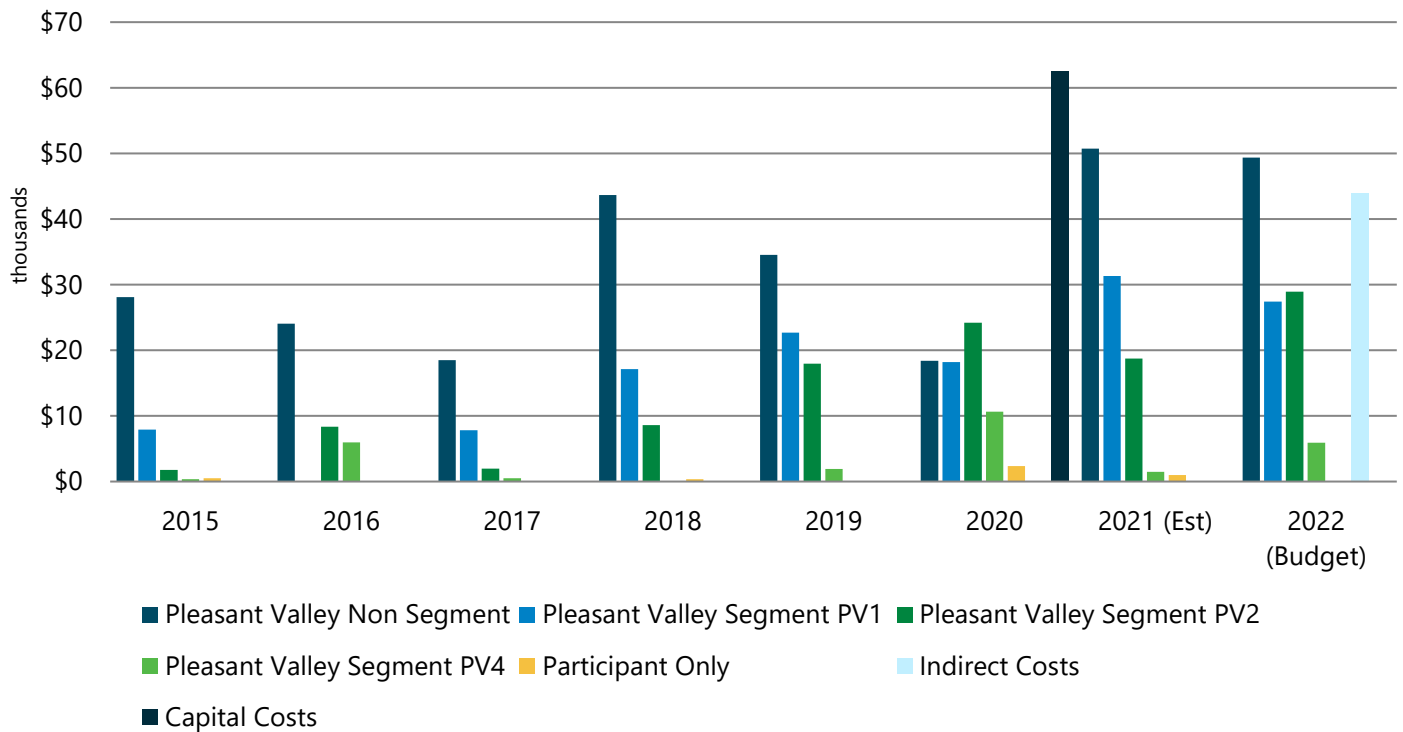
	<b>Budget</b>	<b>Percent</b>
Pleasant Valley Non-Segment	\$27,438	17.64%
Pleasant Valley Segment PV1	\$49,366	31.74%
Pleasant Valley Segment PV2	\$28,928	18.60%
Pleasant Valley Segment PV4	\$5,898	3.79%
Indirect Costs	\$43,900	28.23%
<b>Total</b>	<b>\$155,530</b>	<b>100.0%</b>

### Expenses by Category

Non-Labor	\$94,900
Labor	\$60,630
<b>Total</b>	<b>\$155,530</b>

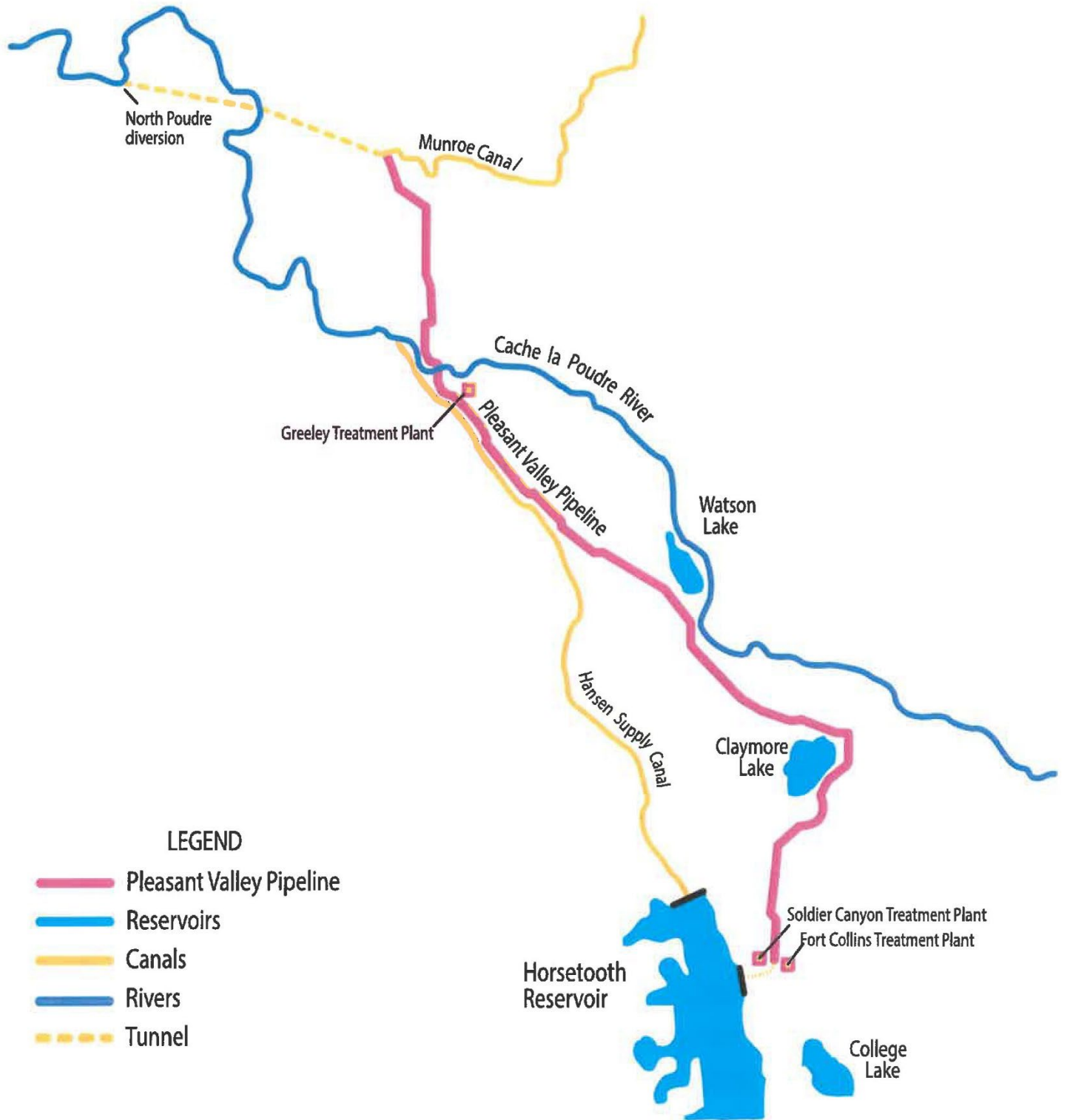


### Pleasant Valley Pipeline Enterprise Expense by Pipeline Segment



## Pleasant Valley Pipeline Project Pipeline Route

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.





## **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 stations and related conveyance pipelines.

## Budget Summary

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Beginning Cash &amp; Reserves</b>						
Unrestricted	4,438,665	6,450,005	6,450,005	<b>25,298,694</b>		
Restricted	-	18,637,811	18,637,811	-		
Beginning Cash Balance	4,438,665	25,087,816	25,087,816	<b>25,298,694</b>		
<b>SOURCES</b>						
Line of Credit	-	-	-	-	-	n/a
Contributions	30,000,000	14,600,000	14,600,000	<b>33,470,000</b>	18,870,000	129.25%
Earnings on investments	136,162	-	17,956	-	-	n/a
Other nonoperative revenue	12,464	-	-	-	-	n/a
Total Sources	30,148,626	14,600,000	14,617,956	<b>33,470,000</b>	18,870,000	129.25%
Balance Sheet Source (Use)	736,629	-	-	-		
Total Funds Available	35,323,920	39,687,816	39,705,772	<b>58,768,694</b>		
<b>USES</b>						
<b>Capital</b>						
Land Purchase	-	8,000,000	4,884,030	<b>6,000,000</b>	-2,000,000	-25.00%
Project Development	2,938,909	4,600,000	4,772,931	<b>9,700,000</b>	5,100,000	110.87%
Glade Reservoir	5,006,472	8,800,000	4,062,858	<b>12,000,000</b>	3,200,000	36.36%
Highway 287 Relocation	528,674	3,400,000	595,763	<b>1,000,000</b>	-2,400,000	-70.59%
Water Secure	1,559,648	7,000,000	38,545	<b>2,000,000</b>	-5,000,000	-71.43%
Pipeline Easements	-	1,000,000	45,769	<b>1,000,000</b>	-	0.00%
Early Pipeline Installation	-	-	-	<b>10,570,000</b>	10,570,000	n/a
South Platte Water Cons. Project	202,401	200,000	7,182	<b>200,000</b>	-	0.00%
Indirect Cost	-	-	-	<b>815,300</b>	815,300	n/a
Total Uses	10,236,104	33,000,000	14,407,079	<b>43,285,300</b>	10,285,300	31.17%
Unrestricted	6,450,005	6,687,816	25,298,694	<b>15,483,394</b>		
Restricted	18,637,811	-	-	-		
Ending Cash	25,087,816	6,687,816	25,298,694	<b>15,483,394</b>		
Total Funds Accounted For	35,323,920	39,687,816	39,705,772	<b>58,768,694</b>		

	Fiscal Year 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Beginning Cash &amp; Reserves</b>						
Unrestricted	4,438,665	6,450,005	6,450,005	<b>25,298,694</b>		
Restricted	-	18,637,811	18,637,811	-		
Beginning Cash Balance	4,438,665	25,087,816	25,087,816	<b>25,298,694</b>		
<b>SOURCES</b>						
Line of Credit	-	-	-	-	-	n/a
Contributions	30,000,000	14,600,000	14,600,000	<b>33,470,000</b>	18,870,000	129.25%
Earnings on investments	136,162	-	17,956	-	-	n/a
Other nonoperative revenue	12,464	-	-	-	-	n/a
Total Sources	30,148,626	14,600,000	14,617,956	<b>33,470,000</b>	18,870,000	129.25%
Balance Sheet Source (Use)	736,629	-	-	-		
Total Funds Available	35,323,920	39,687,816	39,705,772	<b>58,768,694</b>		
<b>USES</b>						
<b>Capital</b>						
Land Purchase	-	8,000,000	4,884,030	<b>6,000,000</b>	-2,000,000	-25.00%
Project Development	2,938,909	4,600,000	4,772,931	<b>9,700,000</b>	5,100,000	110.87%
Glade Reservoir	5,006,472	8,800,000	4,062,858	<b>12,000,000</b>	3,200,000	36.36%
Highway 287 Relocation	528,674	3,400,000	595,763	<b>1,000,000</b>	-2,400,000	-70.59%
Water Secure	1,559,648	7,000,000	38,545	<b>2,000,000</b>	-5,000,000	-71.43%
Pipeline Easements	-	1,000,000	45,769	<b>1,000,000</b>	-	0.00%
Early Pipeline Installation	-	-	-	<b>10,570,000</b>	10,570,000	n/a
South Platte Water Cons. Project	202,401	200,000	7,182	<b>200,000</b>	-	0.00%
Indirect Cost	-	-	-	<b>815,300</b>	815,300.00	n/a
Total Uses	10,236,104	33,000,000	14,407,079	<b>43,285,300</b>	10,285,300	31.17%
Unrestricted	6,450,005	6,687,816	25,298,694	<b>15,483,394</b>		
Restricted	18,637,811	-	-	-		
Ending Cash	25,087,816	6,687,816	25,298,694	<b>15,483,394</b>		
Total Funds Accounted For	35,323,920	39,687,816	39,705,772	<b>58,768,694</b>		

## 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 fifteen northern Front Range water partners with 40,000 acre-feet of new, reliable water supplies.

In June 2015, an important milestone was accomplished with the Army Corps of Engineers (Corps) releasing 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 2021. 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 \$1.5 billion. The financing structure is currently being reviewed by a finance consultant to identify potential financing options. Following completion of construction, the projected operation and maintenance costs are currently forecasted to be approximately \$9 million annually.

Major initiatives for 2022 include:

- Perform ongoing permitting, design and pre-construction activities for the NISP.
- Continue advance development of water accounting algorithms for the NISP.
- Begin easement acquisition for the NISP Conveyance, which is approximately 250 permanent and temporary easements.
- Continue leading NISP participant operations committee to discuss details of future project operations.
- Provide support to legal counsel on NISP 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 for the NISP.
- Continue collection of water quality samples to support the ongoing permitting processes for the NISP.
- Develop NISP Adaptive Management and Poudre River Collaborative frameworks.
- Continue public outreach associated with the NISP.
- Relaunch public outreach associated with NISP WaterSecure program.

Initiatives completed in 2021 included:

- Continued the permitting, planning and design of all aspects of NISP.
- Hired an additional right-of-way agent to assist with the acquisition of easements and fee properties associated with NISP.
- Completed the property acquisition for the proposed Galeton Reservoir.
- Formed a NISP participant operations committee to discuss details of future project operations.
- Assisted legal counsel and made progress on NISP Protected Mitigation Release application.
- Filed statements of opposition to protect NISP water rights.
- Successful defense of the issuance of the 401-water quality certification for NISP.
- Worked with NISP Participants to increase presence of the project through website and social media updates.

## Contributions

Contributions from the fifteen project participants and line of credit proceeds are projected to be \$33,470,000 in fiscal year 2022.

## Capital Outlay

The fiscal year 2022 Northern Integrated Supply Project Water Activity Enterprise Fund capital outlay budget totals \$42,285,300. This represents an increase of \$10,825,300 from the fiscal year 2021 budget.



## **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 2020 Actual	Fiscal Year 2021 Budget	Fiscal Year 2021 Estimated Actual	Fiscal Year 2022 Budget	Dollar Change From Fiscal Year 2021 Budget	Percentage Change From Fiscal Year 2021 Budget
<b>Beginning Cash &amp; Reserves</b>						
Restricted	519,701	519,701	551,155	<b>551,155</b>		
Unrestricted	1,152,389	1,462,575	1,717,182	<b>2,041,092</b>		
Total	1,672,090	1,982,276	2,268,337	<b>2,592,247</b>		
<b>SOURCES</b>						
<b>Operating Revenues</b>						
Energy	1,301,644	1,368,000	1,286,000	<b>1,344,000</b>	(24,000)	-1.75%
Total Operating Revenues	1,301,644	1,368,000	1,286,000	<b>1,344,000</b>	(24,000)	-1.75%
<b>Other Revenues</b>						
Earnings on Investments	19,626	22,900	21,300	<b>20,000</b>	(2,900)	-12.66%
Intergovernmental grants	104,678	-	145,402	-	-	n/a
Other Nonoperating revenues	-	-	-	-	-	
Total Other Revenues	124,304	22,900	166,702	<b>20,000</b>	-	0.00%
Total Sources	1,425,948	1,390,900	1,452,702	<b>1,364,000</b>	(26,900)	-1.93%
Balance Sheet Source (Use)	203,727	-	-	-		
Total Funds Available	3,301,765	3,373,176	3,721,039	<b>3,956,247</b>		
<b>USES</b>						
<b>Operating Expenses</b>						
Operation and Maintenance	394,393	388,195	462,756	<b>408,232</b>	20,037	5.16%
Indirect Cost	-	-	-	<b>120,600</b>	120,600	n/a
Total Operating	394,393	388,195	462,756	<b>528,832</b>	140,637	36.23%
<b>Capital</b>						
Capital Projects	-	32,000	27,000	<b>47,281</b>	15,281	47.75%
Total Capital	-	32,000	27,000	<b>47,281</b>	15,281	n/a
<b>Debt Service</b>						
Debt Service-Granby Facility	229,284	229,286	229,286	<b>229,286</b>	-	n/a
Debt Service-R.V. Trout Facility	409,751	409,751	409,750	<b>409,751</b>	-	n/a
Total Debt Service	639,035	639,037	639,036	<b>639,037</b>	-	0.00%
Contingency Appropriation	-	50,000	-	<b>50,000</b>		n/a
Total Uses	1,033,428	1,109,232	1,128,792	<b>1,265,150</b>	155,918	14.06%
<b>Ending Cash &amp; Reserves</b>						
Restricted	551,155	519,701	551,155	<b>551,155</b>		
Unrestricted	1,717,182	1,744,243	2,041,092	<b>2,139,942</b>		
Total	2,268,337	2,263,944	2,592,247	<b>2,691,097</b>		
Total Funds Accounted For	3,301,765	3,373,176	3,721,039	<b>3,956,247</b>		



## 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 2022 budget for expenses and capital outlay totals \$1,265,150.

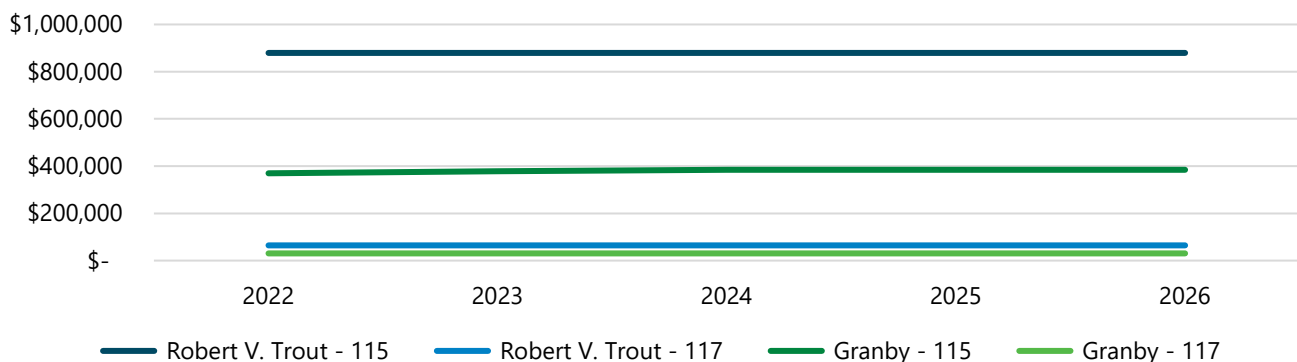
Major initiatives for 2022 including painting generators and turbines, while 2021 initiatives completed included painting the penstocks and valves at Trout Hydropower Plant.

## Revenues

Hydropower Water Activity Enterprise Fund available resources are projected at \$1,364,000 or 1.93 percent lower than the fiscal year 2021 budget. Revenue from the sale of energy from the Robert V. Trout Hydropower facility is estimated to decrease by \$53,900 or 5 percent compared to the fiscal year 2021 budget. The energy revenues for the Granby Hydropower facility are projected to be \$40,100 or \$7,000 higher. 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 will decrease 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.

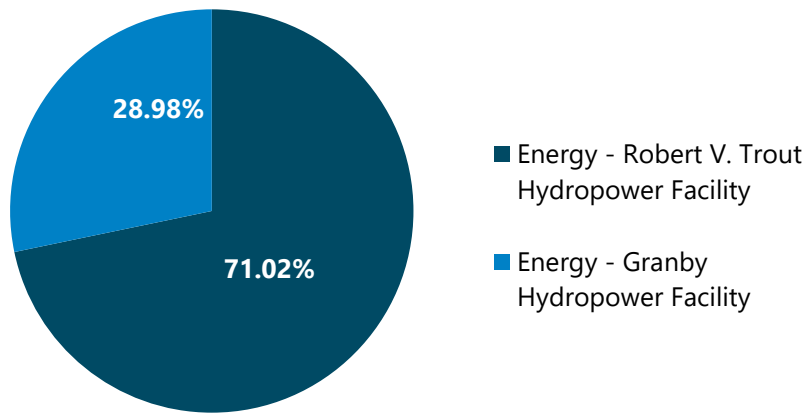
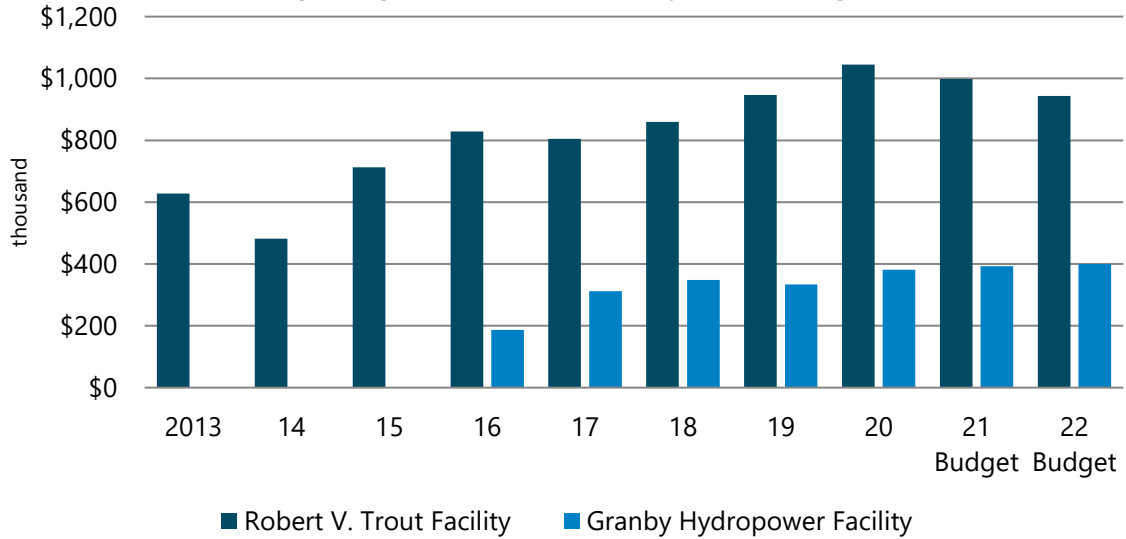
	<b>Budget</b>	<b>Percent</b>
Energy – Robert V. Trout Hydropower Facility	\$943,900	69.2%
Energy – Granby Hydropower Facility	\$400,100	29.3%
Earnings on Investments	\$20,000	1.5%
<b>Total</b>	<b>\$1,364,000</b>	<b>100%</b>

## Hydropower 5-Year Revenue Forecast



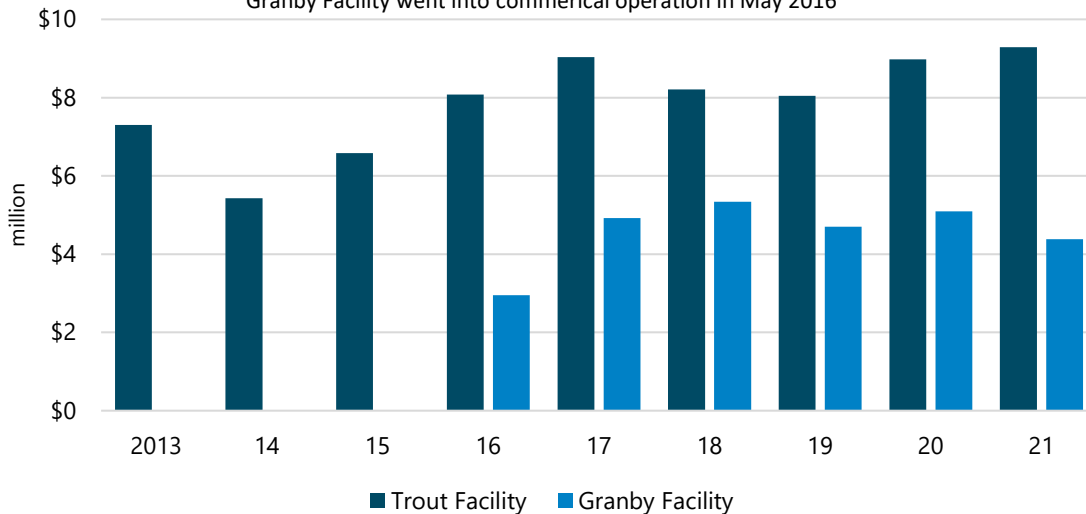
### Energy Revenues by Facility

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 2022 Hydropower Water Activity Enterprise Fund expenses total \$576,113, which includes capital expenses totaling \$47,281. Operating expenses for the Robert V. Trout Hydropower facility are budgeted at \$376,452. Granby Hydropower facility operating costs are projected to be \$152,380. 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.

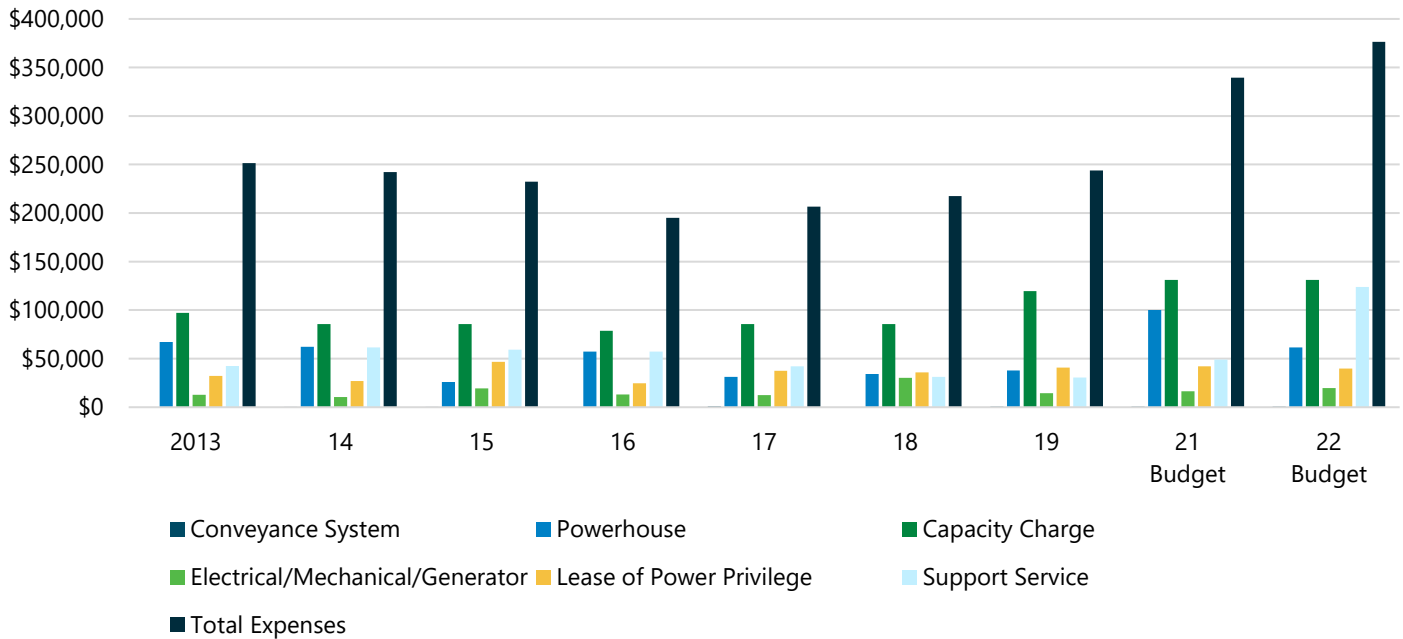
A summary of the Hydropower Water Activity Enterprise Fund major operating expenses by facility are provided in the tables and chart below.

### Robert V. Trout Hydropower Facility Operating Expenses

	<b>Budget</b>	<b>Percent</b>	<b>Expenses by Category</b>	
Capacity Charge	\$131,040	34.81%	Non-Labor	\$278,588
Powerhouse	\$61,450	16.32%	Labor	\$97,864
Lease of Power Privilege	\$40,000	10.63%		
Support Services	\$123,811	32.89%	Total	\$376,452
Electrical/Mechanical/Generator	\$19,651	5.22%		
Conveyance System	\$500	0.13%		
<b>Total</b>	<b>\$376,452</b>	<b>100%</b>		

### Robert V. Trout Hydropower Facility Operating Expenses

Capacity charge leading operating expense





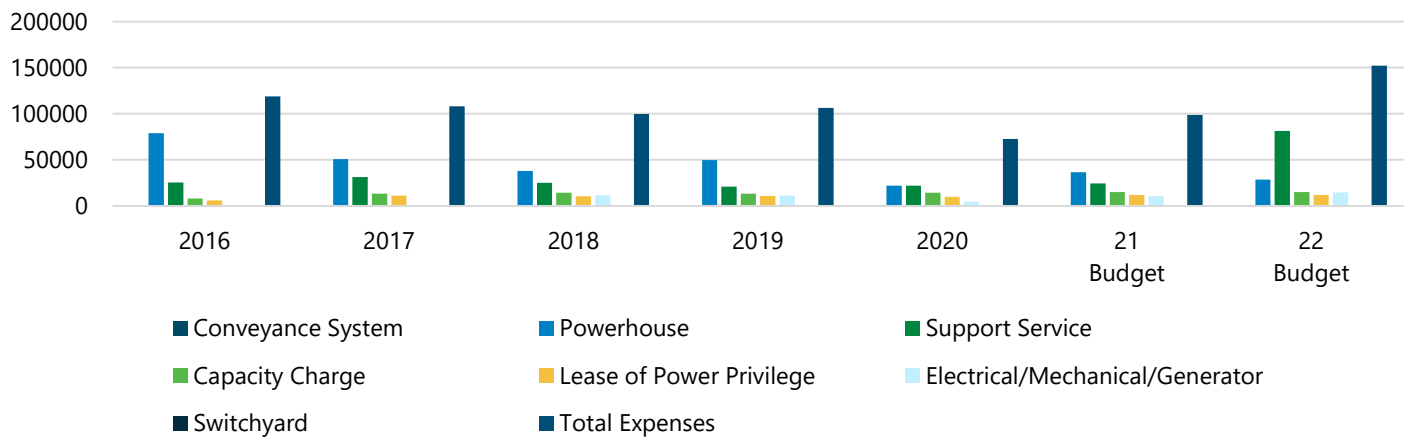
Granby Hydropower

### Granby Hydropower Facility Operating Expenses

	<b>Budget</b>	<b>Percent</b>	<b>Expenses by Category</b>	
Powerhouse	\$28,773	18.88%	Non-Labor	\$86,352
Support Services	\$81,541	53.51%	Labor	\$66,028
Capacity Charge	\$15,000	9.84%	Total	\$152,380
Lease of Power Privilege	\$12,000	7.88%		
Electrical/Mechanical/Generator	\$14,816	9.72%		
Switchyard	\$250	0.17%		
<b>Total</b>	<b>\$152,380</b>	<b>100.0%</b>		

### Granby Hydropower Facility Operating Expenses

Powerhouse leading operating expense



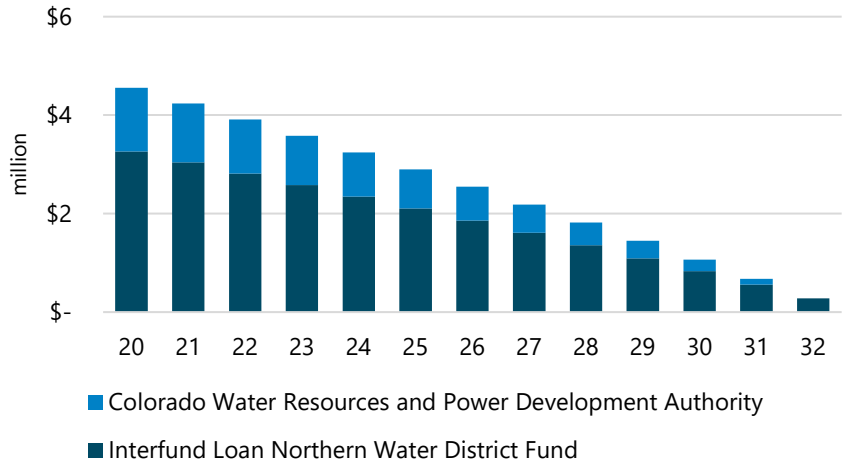
## Debt Service

The fiscal year 2022 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, 2021, 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 \$1,197,063 is outstanding
- Interfund Loan - Northern Water District Fund \$4,700,000, February 15, 2014, of which \$3,039,740 is outstanding

**Robert V. Trout Hydropower Facility**  
Outstanding Debt



### Granby Hydropower Facility

- Colorado Water Conservation Board \$5,135,183, July 1, 2017 of which \$4,476,446 is outstanding

	2020 Actual	2021 Budget	2022 Budget
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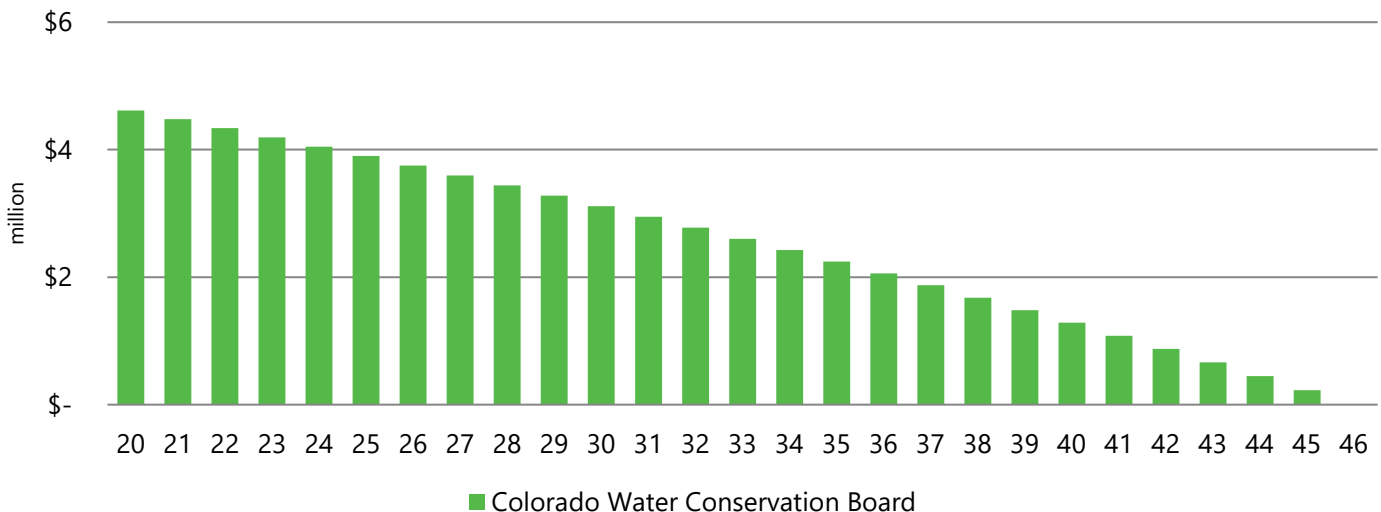
#### Robert V. Trout Hydropower Facility

Principal	\$312,393	\$318,641	\$325,014
Interest	\$97,358	\$91,109	\$84,736
<b>Total</b>	<b>\$409,751</b>	<b>\$409,750</b>	<b>\$409,750</b>

#### Granby Hydropower Facility

Principal	\$134,330	\$137,016	\$137,016
Interest	\$94,956	\$92,269	\$92,269
<b>Total</b>	<b>\$229,286</b>	<b>\$229,285</b>	<b>\$229,286</b>

**Granby Hydropower Facility**  
Outstanding Debt



## **ACRONYMS**

### **AF**

Acre-foot or Acre-feet

### **CAFR**

Comprehensive Annual Financial Report

### **C-BT**

Colorado-Big Thompson Project

### **CIP**

Capital Improvement Plan

### **COE**

U.S. Army Corps of Engineers

### **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 12-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.

**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 Stations**

A pump station 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-1363-08-21**

#### **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;

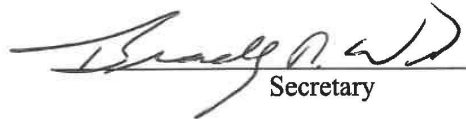
NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Northern Water does now estimate the amount of money to be raised by ad valorem taxation for the year of 2021, to be collected in the calendar year of 2022, is approximately \$25,317,999.00; and said Board of Directors does hereby fix the 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 2021; 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 5, 2021.

  
Secretary

# COLLECTION OF CLASS D SPECIAL ASSESSMENTS

## NORTHERN COLORADO WATER CONSERVANCY DISTRICT

### RESOLUTION D-1364-08-21

#### 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	\$165,000.00
LOGAN	\$ 1,500.00
MORGAN	\$ 15,000.00
WELD	\$460,000.00

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 2021 and collect such special assessments in the year 2022 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 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 5, 2021.

  
Secretary



# COLLECTION OF ALL SOURCES OF REVENUE

## NORTHERN COLORADO WATER CONSERVANCY DISTRICT

### RESOLUTION

D-1361-08-21

### 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 2021 collectable in 2022 in the estimated amount of \$25,317,999 and has levied the Class "D" special assessments for 2021, also collectable in 2022 in the estimated sum of \$736,500; and

WHEREAS, said Board has adopted its budget for all funds and appropriated the aggregate sum of \$176,787,579 for the Fiscal Year 2022.

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 2022.

### 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 Session meeting of said Board held in Berthoud, Colorado, on August 5, 2021.

  
Secretary

## **APPROPRIATION**

### **NORTHERN COLORADO WATER CONSERVANCY DISTRICT**

#### **RESOLUTION D-1362-08-21**

#### **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; Kristyn Unrein, Financial Services Department Manager; and Fahim Ghafoori, Senior Financial Analyst; of said District to prepare a Budget for Fiscal Year 2022; 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 \$128,936,157 for Fiscal Year 2022, 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 \$3,145,442 for the purpose of paying the Fiscal Year 2022 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 \$155,530 for the purpose of paying the Fiscal Year 2022 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 \$43,285,300 for the purpose of paying the Fiscal Year 2022 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 \$1,265,150 for the purpose of paying the Fiscal Year 2022 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.

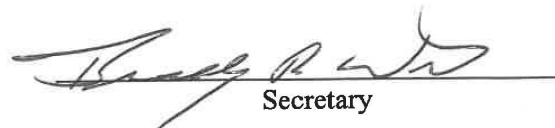
BE IT FURTHER RESOLVED, that the funds required for the sums so appropriated shall be provided in the manner and by the means set forth in those certain Resolutions of even date in which the Board of Directors of said District exercises the authority given by C.R.S. §§ 37-45-101 et seq. for the levying 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 2022 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 unanimously 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 5, 2021.

  
Secretary

