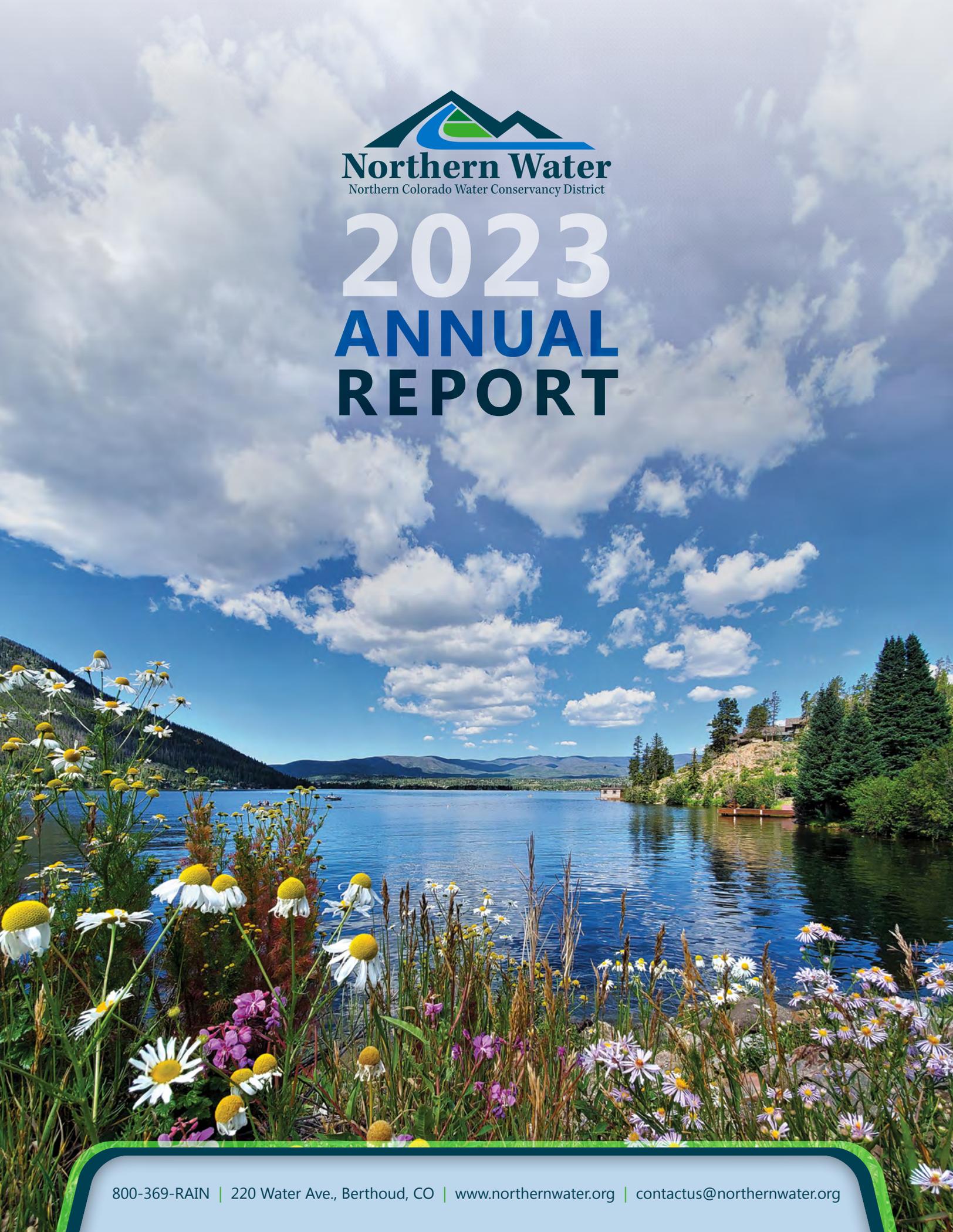




# 2023 ANNUAL REPORT



# President's Message

Welcome to Northern Water's review of fiscal year 2023 – a snapshot of important activities and accomplishments throughout our past operational year. Allow me to take a minute to add some historical perspective.

Just over 70 years ago the Farr Pump Plant came online, with three General Electric 6,000 horsepower motors turning three massive stainless-steel shafts manufactured in the shipyards of Newport News, Va. Those were the "good old days," or "simpler times," or whatever you might think when you grow weary of the 21st century. When construction was completed on the Windy Gap Pump Plant in 1985, the four 12,000 horsepower motors were courtesy of Hitachi, Ltd. We should have seen the future coming.

Today, we await the arrival of several enormous valves for the Chimney Hollow Reservoir valve house. The steel is sourced from Ukraine. The valves were cast in India, and are now being precision machined, assembled and tested in Germany. Even the technology for the asphalt core dam and the specialized work force that places it are imported; WALO is a Swiss company, the crew is Portuguese, the superintendent Swiss. This extended and challenging worldwide supply chain impacts many of the important projects undertaken each year to maintain, repair and upgrade our aging infrastructure enjoyed by all of us in Northern Colorado.

Speaking of aging, Northern Water has lost, over the past five years, a combined 931 years of experience and knowledge due to employee retirements. Our workforce now is larger and younger, but highly skilled, dedicated and extremely innovative. The Board and senior management are committed to maintaining the culture of excellence that has been a hallmark of Northern Water for decades. It is that culture that provides the greatest defense against the unknown risks of the future.

I look forward to meeting you in the future.



*Dennis Yanchunas*

President  
Boulder County

## Board of Directors



**Bill Emslie**  
Larimer County



**Jennifer Gimbel**  
Larimer County



**Sue Ellen Harrison**  
Boulder County



**Don Magnuson**  
Weld County



**Gene Manuello**  
Logan County



**Rob McClary**  
Sedgwick County



**Dave Nettles**  
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**John Rusch**  
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Washington Counties



**Dave Stewart**  
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Learn More at

[www.northernwater.org](http://www.northernwater.org)

# 2023 Water Year in Review

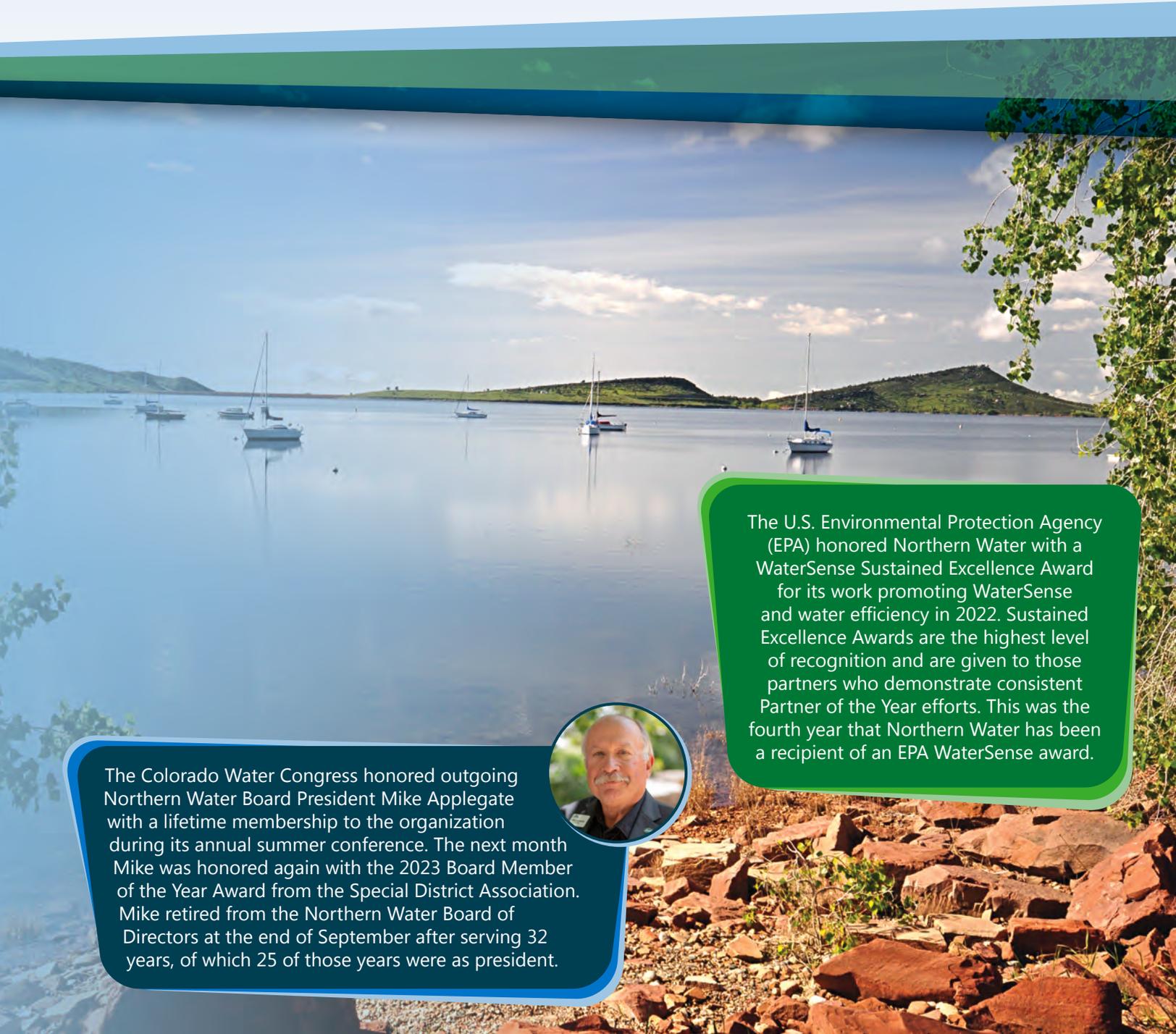
A year of above-average snowpack plus steady precipitation in spring and early summer led to gains in storage for Colorado-Big Thompson (C-BT) Project reservoirs, leaving them at 127 percent of average by the end of the 2023 water year.

The C-BT Project started the year at 116 percent of long-term average storage, with average and near-average snow accumulation taking place until a significant storm occurred from Dec. 27, 2022, through Jan. 3, 2023, that boosted snowpack totals on both sides of the Continental Divide. By April 1, statewide snowpack was at 137 percent of average, with local snowpack readings of 116 percent of average in the South Platte River's northern tributaries and 114 percent of average in the Upper Colorado River Basin.

Lower soil moisture and reservoir storage conditions in Northeast Colorado prompted the Board of Directors to set the 2023 C-BT Project delivery quota at 70 percent, its most common quota throughout the history of project deliveries. However, spring and early summer brought below-average temperatures and above-average precipitation along and east of the Divide, which resulted in increased runoff efficiency and near-record-low water demands.

Statewide, water year 2023 total precipitation was above normal in most areas, but by the conclusion of the water year, south-central and southwestern Colorado had fallen into drought status.

Learn more at [www.northernwater.org/CBT](http://www.northernwater.org/CBT).



The Colorado Water Congress honored outgoing Northern Water Board President Mike Applegate with a lifetime membership to the organization during its annual summer conference. The next month Mike was honored again with the 2023 Board Member of the Year Award from the Special District Association. Mike retired from the Northern Water Board of Directors at the end of September after serving 32 years, of which 25 of those years were as president.



The U.S. Environmental Protection Agency (EPA) honored Northern Water with a WaterSense Sustained Excellence Award for its work promoting WaterSense and water efficiency in 2022. Sustained Excellence Awards are the highest level of recognition and are given to those partners who demonstrate consistent Partner of the Year efforts. This was the fourth year that Northern Water has been a recipient of an EPA WaterSense award.

# Colorado River Water

Like other states in the Colorado River Basin, Colorado was fortunate to receive above-average precipitation and water supplies in 2023.

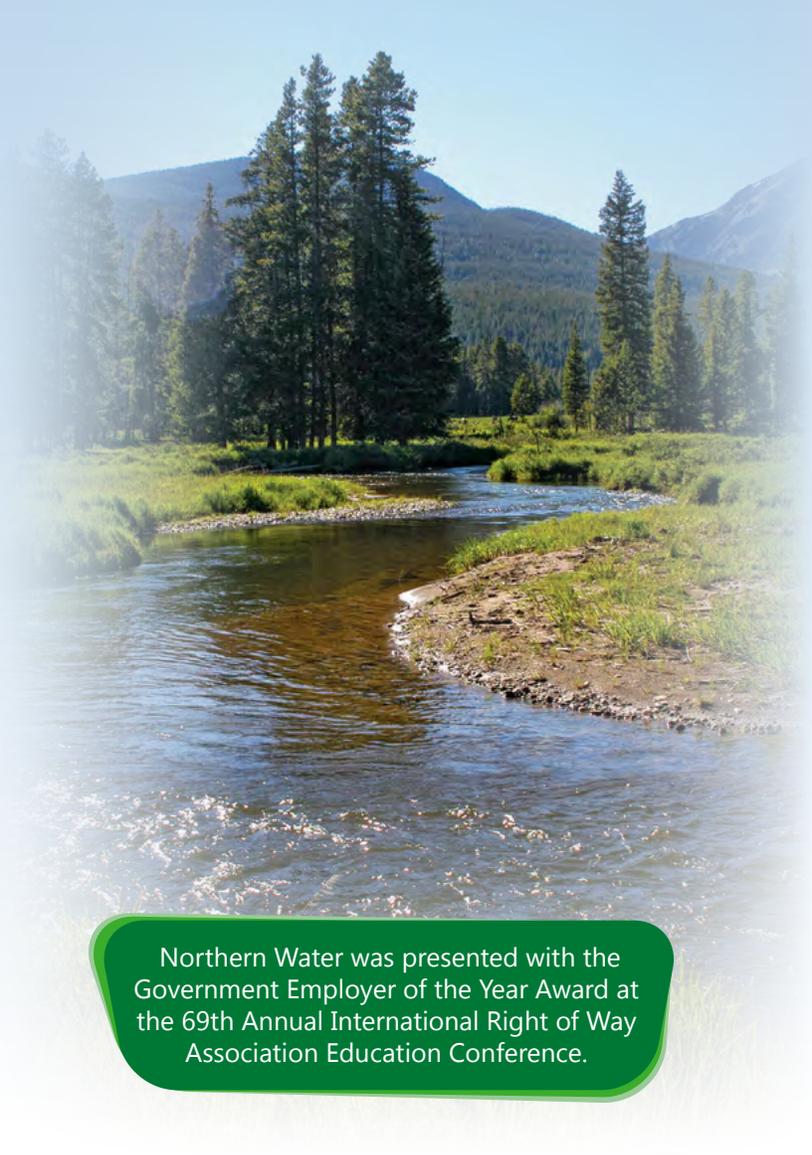
A string of winter storms brought much-needed moisture to locations throughout the Colorado River Basin and its tributaries, providing the region with a reprieve after three years of below-normal conditions and allowing key reservoirs to recover marginally from lower levels in 2021 and 2022. Perhaps more important, a wet spring and early summer in Northeastern Colorado suppressed some demand for supplemental water from the Colorado-Big Thompson Project and filled local reservoirs. This culminated with the highest recorded level of water storage in the project's history on July 10, 2023. A record 803,291 acre-feet of water was stored in the project's reservoirs.

On the policy front, Colorado was active in 2023.

The Colorado General Assembly passed legislation to create a Colorado River Drought Task Force. The task force met starting in July to provide recommendations to the General Assembly for "programs to assist in addressing drought in the Colorado River Basin and the state's interstate commitments related to the Colorado River and its tributaries."

Kyle Whitaker of Northern Water was appointed by the Northern Water Board of Directors to fill a statutorily designated position on the task force representing the organization.

Recommendations from the task force were provided in a report to the Colorado General Assembly late in 2023.



Northern Water was presented with the Government Employer of the Year Award at the 69th Annual International Right of Way Association Education Conference.



## Maintenance Keeps Projects in Operation

Before the Colorado-Big Thompson Project's supplemental water supplies can be delivered to the 1 million-plus residents and 615,000 irrigated acres within our boundaries, a major effort occurs behind the scenes to maintain the C-BT Project's West Slope infrastructure that collects each winter's snowmelt for delivery to water users by the project's East Slope distribution system.

Northern Water's operations and maintenance staff once again took on a slew of projects throughout the year to protect this critical infrastructure. Projects included concrete replacement, silt and debris removal, application of sealant and other seepage- and corrosion-prevention measures, and access road maintenance. Crews also repaired and upgraded pumps, valves, flowmeters and actuators, and checked structures, programmable logic controllers, manual transfer switches, transformers and other elements throughout the system.

To prioritize which projects take place in a given year, extensive testing and inspections are regularly conducted. Many of these projects require close coordination between Northern Water, the U.S. Bureau of Reclamation and other partners. These collaborations, established procedures, and ongoing training help ensure crew safety and that all tasks are performed properly and in an environmentally responsible manner.



# Environmental Initiatives Run Strong in 2023

Northern Water is actively engaged in numerous stakeholder-centric initiatives that address a spectrum of environmental functions.

## East Troublesome Fire Recovery

Northern Water, Grand County and numerous other partners continued implementing projects in the aftermath of the 2020 East Troublesome Fire. These efforts are aimed at helping with the recovery of the local watersheds, and also protecting private property and water infrastructure, such as the Colorado-Big Thompson Project's collection systems. Projects on private lands – supported by the Natural Resources Conservation Service's Emergency Watershed Protection program – mostly wrapped up in 2023, and much of the work going forward will take place on U.S. Forest Service lands. The protection of "green infrastructure" is essential to the future resilience of Northern Colorado's water supply and a high priority for Northern Water.

Learn more at [www.northernwater.org/watershedrecovery](http://www.northernwater.org/watershedrecovery).



## Kawuneeche Valley Restoration Collaborative

The Kawuneeche Valley Restoration Collaborative (KVRC) is a group of agencies and organizations focused on ecosystem restoration of the Kawuneeche Valley to support its ecological, economic and community well-being. Situated in the watershed of the upper Colorado River, the valley flows into Shadow Mountain Reservoir. The objective of the collaborative is to re-establish vigorous riparian vegetation and functioning wetlands lost over the decades from overgrazing by abundant populations of moose and elk, and the consequential disappearance of beaver colonies from the landscape. KVRC actively started a long-term restoration project in 2023 that will establish a new enclosure in Rocky Mountain National Park to protect vegetation from overbrowsing and allow regrowth of critical willows and other riparian vegetation.



## Source Water Protection Program

Northern Water initiated a new Source Water Protection Program to further safeguard the high-quality water that comes from the watersheds that supply water to the Colorado-Big Thompson and Windy Gap projects, as well as the Northern Integrated Supply Project. This will be part of a state and nationwide effort to protect water sources, designed to help public water systems take preventative measures to keep their sources of drinking water free from potential contaminants.

## Water Quality Monitoring

Northern Water continued its extensive monitoring program in 2023. Hundreds of samples were collected at 55 baseline sites, as well as through Northern Water's additional programs that monitor temperature, salinity, macroinvertebrates and aquatic plants. Northern Water also once again collaborated with numerous partners on efforts such as monitoring compounds of emerging concern, post-East Troublesome Fire impacts and clarity in Grand Lake, as well as commitments related to the future operation of the Northern Integrated Supply Project.

Northern Water was among the partners recognized when the Chief's Honor Award from USDA Forest Service Chief Randy Moore was given to the Arapaho and Roosevelt National Forests and Pawnee National Grassland for its response to the 2020 East Troublesome and Cameron Peak fires. The Chief's Honor Award is the highest recognition the Forest Service chief bestows each year.

# 2023 NISP Year in Review

On Jan. 5, 2023, the Northern Water Board of Directors accepted the Section 404 Permit proffered by the U.S. Army Corps of Engineers for the long-awaited Northern Integrated Supply Project (NISP).

The federal permit for the project was 20 years in the making, and it includes the mitigation measures and enhancements that will be required as the project gets built and operations are under way. These measures are being incorporated into the final design of project components such as Glade Reservoir, the pipeline conveyance system, river diversions and the relocation of U.S. Highway 287.

With the permit in possession, final design, field investigations, land acquisitions and environmental compliance work progressed throughout 2023, and will continue into 2024.



The NISP Team conducted an "Industry Day" in October to bring contractors from across the region and the country to Northern Water to learn more about the project and the procurement process. That process will be in full swing in 2024, as the NISP team readies for anticipated construction.

Learn more at [www.NISPwater.org](http://www.NISPwater.org).

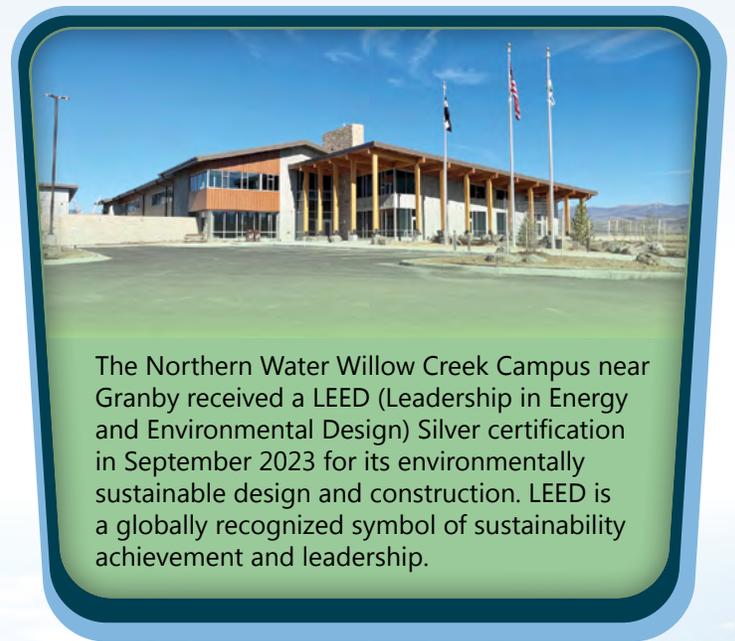
## Campus Development

Northern Water's ongoing Campus Development Project continued to transform the Berthoud headquarters in 2023. Phase II of the project progressed with the expansion of Building A, the main administration building. Considerable progress was made on the new wing which will be the future home to departments within the Environmental Services division and the Finance and Administration divisions.

To tie in the existing 20-year-old building to the new wing, crews worked to renovate and rebuild offices, conference rooms, the board room and the main entrance. The main entrance to Northern Water also temporarily shifted to Building F for the duration of Phase II. Building F was added during Phase I of the multi-year effort and was completed in 2022.

Phase II is anticipated to be completed in June 2024. The new campus buildings will allow Northern Water to have all of its workforce in one place, while also continuing to provide important public education about water.

Learn more at [www.northernwater.org/campusdevelopment](http://www.northernwater.org/campusdevelopment).



The Northern Water Willow Creek Campus near Granby received a LEED (Leadership in Energy and Environmental Design) Silver certification in September 2023 for its environmentally sustainable design and construction. LEED is a globally recognized symbol of sustainability achievement and leadership.

Northern Water awarded approximately \$275,000 in grants to 16 new water-saving projects through its Water-Efficient Landscape Grant Program. With the 2023 funding, Northern Water has now contributed nearly \$850,000 in grants over the past five years to 63 projects.

A crowd of 388 people at Northern Water's 2023 Spring Water Symposium set an all-time attendance record for the organization's bi-annual spring and fall events.



# 2023 Budget Summary – Northern Water

Northern Water maintains a strong financial position while continuing its commitment to provide a reliable and high-quality water supply. Northern Water’s sound fiscal health is backed by the highest credit rating attainable (Aaa) from Moody’s Investor Service, and second highest (AA+) rating from Standard & Poor’s (S&P) Global. These high ratings demonstrate the sound financial health and creditworthiness of Northern Water and show that its obligations are judged to be of the highest quality with low credit risk.

Revenues to Northern Water come from a variety of sources, with the main component being a 1 mil ad valorem tax levied on property within Northern Water’s boundaries. In addition, Colorado-Big Thompson Project allottees pay assessments annually to offset certain maintenance projects and for water management and water delivery services. In total, project assessments comprise more than one-fourth of Northern Water’s overall revenue. Revenues in excess of expenses help Northern Water continue to build additional reserves for future operating and capital requirements. Of the expenditures, 61.4 percent are attributed to operating costs, initiatives and programs. The 2023 budget numbers below reflect the Northern Water budget only during the fiscal year, from Oct. 1, 2022 to Sept. 30, 2023. Learn more and view Northern Water’s 2023 budget report at [www.northernwater.org/finance](http://www.northernwater.org/finance).

Northern Water and the Municipal Subdistrict were awarded the Government Finance Officers Association’s Distinguished Budget Presentation Awards for 2022 for meeting the highest principles in budgeting, as well as the Certificate of Achievement for Excellence in Financial Reporting for its Annual Comprehensive Financial Reports.

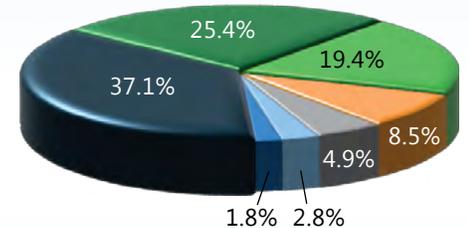


## Fiscal Year 2023 Budget

Cash/Bond Proceeds	\$36,006,934
Intergovernmental Grants and Initiatives (incl. fire recovery)	\$19,348,000
Property and Specific Ownership Tax	\$30,006,934
Other Revenues (incl. revenue from enterprise funds)	\$15,444,388
Water Assessments	\$12,383,949
<b>TOTAL SOURCES</b>	<b>\$113,205,393</b>



Capital Assets and Projects (incl. Campus Development)	\$41,958,441
Administrative, Environmental and Engineering Programs	\$28,793,029
Other Initiatives (incl. fire recovery)	\$21,957,736
Operation and Maintenance	\$9,668,885
Debt Service	\$5,578,229
Fleet and Facilities	\$3,191,407
Operating Reserve Funding	\$2,057,666
<b>TOTAL USES</b>	<b>\$113,205,393</b>

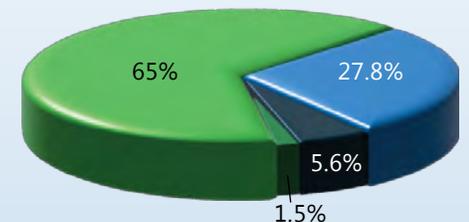


# 2023 Budget Summary – Municipal Subdistrict

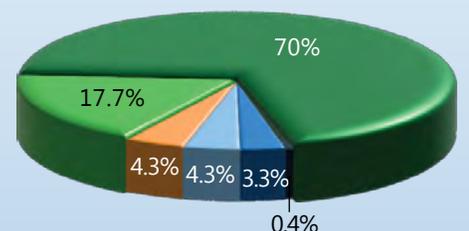
Northern Water’s Municipal Subdistrict is a separate and independent district initially formed by six municipalities in 1970 to build and operate the Windy Gap Project. The annual budget is one part of a long-term commitment to provide quality services while preserving long-term financial viability of the Municipal Subdistrict.

## Fiscal Year 2023 Budget

Intergovernmental Grants (Connectivity Channel)	\$14,820,000
Water Assessments and Contributions (incl. Connectivity Channel)	\$6,333,050
Cash / Bond Proceeds	\$1,283,577
Other Revenues	\$351,427
<b>TOTAL SOURCES</b>	<b>\$22,788,054</b>



Capital Assets & Projects (incl. Connectivity Channel)	\$15,954,355
Carriage Delivery Programs	\$4,027,850
Pumping Energy and Wheeling	\$968,698
Other Operating Expenses	\$990,000
Pump Plant, Pipeline, Reservoir, Dam	\$100,050
<b>TOTAL USES</b>	<b>\$22,788,054</b>



# 2023 In Review: Halfway Through Construction at Chimney Hollow Reservoir

Chimney Hollow Reservoir construction crews made significant progress in 2023, hitting the halfway mark in August. Here are some highlights from this year's work:

**Saddle Dam:** The foundation work for the saddle dam is complete. This includes the excavation, grout cap and grouting. Crews also completed the test fill for the saddle dam, which will be a clay-core rockfill embankment dam. The saddle dam foundation was winterized, and the embankment work will begin next summer.

**Chimney Hollow Conduit:** Crews placed the final section of the Chimney Hollow Conduit in fall of 2023. The conduit runs about a mile from the Colorado-Big Thompson's Project Bald Mountain Interconnect to the newly constructed Chimney Hollow valve house.

**Main Dam and Quarry:** In April, crews started full production on site, including the start of double shifts to ramp-up production. The quarry produces 62,000 tons of material daily which is placed on the main dam. At the end of 2023, the main dam was nearly 160 feet tall. This year, crews completed the excavation, cleaning and plinth construction, and the grouting is almost complete.

**Valve House:** The concrete foundation and walls of the reservoir's valve house were completed. The main header pipes were installed, and it is ready to have 43 valves installed in 2024, ranging in size from 6-inch to 72-inch diameters.

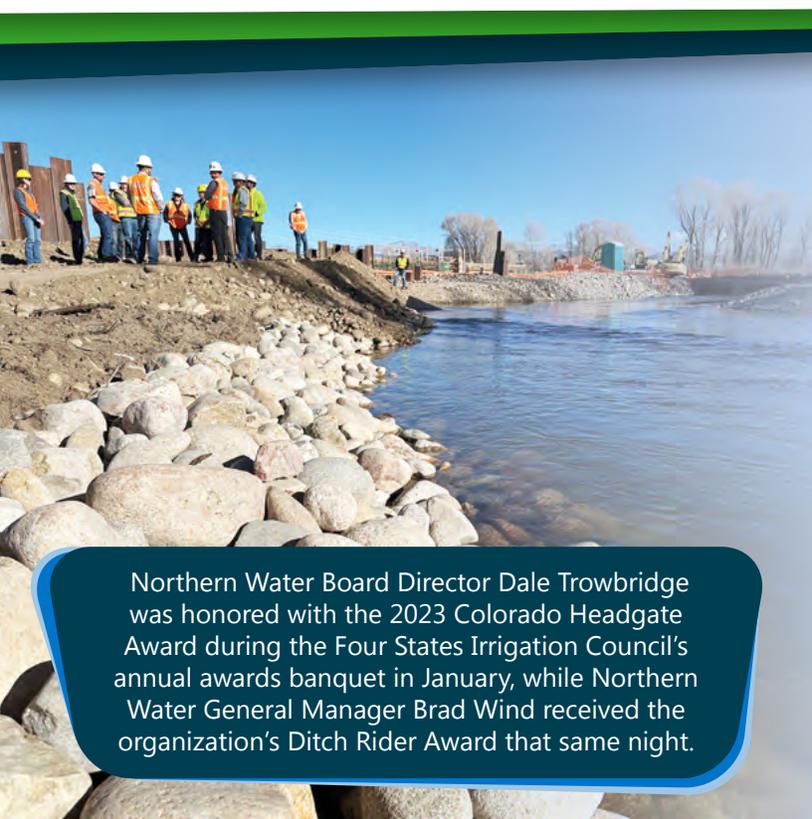
**Tunnel:** Crews continued to make great progress on the 2,000-foot-long inlet/outlet tunnel. The excavation



and ground support of the downstream, 26-foot diameter tunnel, was completed and a concrete lining is underway. The upstream 11-foot diameter horseshoe-shaped tunnel is approximately 60 percent complete.

**Spillway:** Construction of the spillway kicked off in 2023 and is now about 40 percent complete. The spillway consists of a broadcrested weir, a 10-foot by 10-foot chute and box culvert that is 3,800 feet long and is adjoined to a stilling basin.

Learn more at [www.chimneyhollow.org](http://www.chimneyhollow.org).



## Colorado River Connectivity Channel

Crews successfully tested the new Colorado River Connectivity Channel (CRCC) around Windy Gap Reservoir on Oct. 25, 2023, hydrologically reconnecting two segments of the Colorado River for the first time in about 40 years. This achievement followed a full 2023 construction season, with work dating back to the project's groundbreaking in August 2022. CRCC construction is expected to wrap up in 2024, with vegetation establishment along the new channel continuing into 2025 and 2026. The area is expected to be open to the public around 2027. Learn more at [www.northernwater.org/CRCC](http://www.northernwater.org/CRCC).

Northern Water Board Director Dale Trowbridge was honored with the 2023 Colorado Headgate Award during the Four States Irrigation Council's annual awards banquet in January, while Northern Water General Manager Brad Wind received the organization's Ditch Rider Award that same night.