Northern Water Mission

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

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

Our Priorities

- Deliver Water
- Conserve and protect water supplies
- Plan for future water supplies
- Cultivate organizational and operational excellence
- Strengthen and maintain positive relationships
As I reflect back on all that happened in 2016, I’m continually impressed and amazed by the outstanding Northern Water men and women, all who work day in and day out to do everything required to provide a high quality, reliable water supply to Northeastern Colorado.

A few of these remarkable employees are featured in this annual report. These individuals are representative of the team of many talented and dedicated employees who work hard to fulfill both the current and future obligations and responsibilities of Northern Water. I hope you enjoy these employee profiles as well as the big picture look at the financial resources that allow this organization to serve those within Northern Water’s boundaries.

The 2016 water year was the second consecutive above-average year for Northeastern Colorado. We are always grateful for above-average water years as they allow us to either build or maintain reserves for those future drought years that are sure to come. While the spill from our West Slope collection system did not approach the nearly 200,000 acre-feet experienced in 2015, we did spill 11,000 acre-feet to the Colorado River.

Good Colorado-Big Thompson Project reserves in early 2016 prompted the Board to make 15,000 acre-feet available through Northern Water’s Regional Pool Program. This allocation provided many farmers with additional supplies that proved useful as the summer turned drier than average.

The Colorado Water Plan continued to mature during the year as the basin roundtables began implementing some of the plan’s strategies. For Northern Water this meant a continued effort to: conserve water; develop storage options; and develop policies that will facilitate future implementation of alternative transfer methods, or ATMs, that may utilize C-BT Project water.

The Municipal Subdistrict’s Windy Gap Firming Project moved closer to reality in 2016. Because the C-BT Project again spilled in 2016, there was no unused capacity available within the C-BT Project to accommodate available Windy Gap Project water, once again emphasizing the critical need for Chimney Hollow Reservoir.

A significant milestone was reached in March 2016 when the Colorado Department of Public Health and Environment issued its 401 water quality certification for the WGFP. In April, with all state permits having been issued, Governor Hickenlooper endorsed the project. The Subdistrict was honored by his endorsement which was, to our knowledge, the first endorsement of a non-federal water project by a governor. While we await the final U.S. Army Corps of Engineers 404 permit, preliminary design work for Chimney Hollow Reservoir has already begun.

Northern Water staff also continued efforts to permit the Northern Integrated Supply Project, which includes Glade and Galeton reservoirs. Most satisfying has been the evolution of the mitigation and enhancement plan, which now includes a base level of flows for the Poudre River through Fort Collins, an enhancement that will be made possible only with the implementation of the project. A myriad of consultants and engineers continued working to complete the final Environmental Impact Statement in 2017.

For more information and updates on either of these projects please visit: www.chimneyhollowreservoir.com and www.gladereservoir.com.

The Northern Water and Subdistrict boards saw a significant change in 2016, as longtime Director Bill Brown, representing Larimer County, retired from his position. We’ll certainly miss Bill, but we also welcome his successor, Director Bill Fischer, who also has extensive knowledge and experience regarding water resources management and administration.

Growth continued in 2016 in most of Northern Water’s service area. The Northern Water Board and staff continue to plan for the future realities of rapidly-increasing populations and water demands within Northern Water boundaries.

Our mission is to provide water resources management, project operations, and water conservation services for our project beneficiaries. We hope this report provides some examples of the many talented and dedicated employees who help make this happen.

We hope you find this annual report informative and useful. As always, if you have comments or suggestions, please contact us at 800-369-7246, or visit us at www.northernwater.org.
our people

Directors and staff

Mike Applegate
Larimer Co.

Kenton Brunner
Weld Co.

Bill Emslie
Larimer Co.

William Fischer
Larimer Co.

Sue Ellen Harrison
Boulder Co.

Don Magnuson
Weld Co.

Rob McClary
Sedgwick Co.

John Rusch
Morgan/Washington Co.

Brad Stromberger
Logan Co.

Dale Trowbridge
Weld Co.

Les Williams
Boulder Co.

Dennis Yanchunas
Boulder Co.

Assistant General Manager
Jeff Drager

Assistant General Manager
Don Carlson

Deputy Manager
Brad Wind

Operations Division

Engineering Division

Collection Systems
Distribution Systems
Facilities & Equipment
Information Technology
Instrumentation Control & Electrical Engineering
Water Records & Accounting

Human Resources & Administrative Services
Financial Services
Communications & Records

Project Management
Water Resources
Water Quality
Field Services
Irrigation Management
South Platte Special Projects
Emergency & Security / Real Estate

Administrative Division

General Manager
Eric Wilkinson

Board Reappointments & New Appointment

In September two directors were reappointed to 4-year terms on the Northern Water and Municipal Subdistrict Boards: Dennis Yanchunas (Boulder County), and Don Magnuson (Weld County). Director Yanchunas, Subdistrict Board President, was initially appointed in 2010, and is serving his second 4-year term. Director Magnuson, initially appointed in 2004, is serving his fourth 4-year term. In September one director was appointed to his first 4-year term: William Fischer (Larimer County).

Director Fisher was appointed following the retirement of former Director Bill Brown.

Director Yanchunas is retired from security sales, and served on the City of Longmont’s water board for more than 15 years. Director Magnuson worked for the Cache la Poudre Management Company for more than 25 years before becoming its superintendent. Director Fischer, a shareholder in the law firm of Fischer, Brown, Bartlett & Gunn, P.C., has practiced law since 1983 in Fort Collins.
Now in his 23rd year as a Northern Water director, Kenton Brunner still vividly recalls his inaugural board meeting.

““My first meeting in March 1994 was Eric Wilkinson’s third meeting as general manager,” said Kenton. “So, I guess you can say my tenure coincides with Eric’s, and we’ve accomplished so much during that time.”

Those accomplishments include adding several hundred-thousand residents to Northern Water’s service area, which currently totals more than 925,000 people. Kenton witnessed this type of growth firsthand in his hometown of Windsor, when the Eastman Kodak Company arrived in 1969.

“Windsor’s total population was 1,500 people in every year since about 1900,” said Kenton. “Then in 1969 with Kodak, it exploded and didn’t look back.”

Kenton, a native of Windsor, lived in the Brunner home on the family farm for 58 years until moving to the Water Valley area. His father farmed and fed cattle (mostly the latter) on land where the Pelican Lakes Golf Course now sits.

The family farm is also where Kenton learned about water and its importance to both agriculture and municipal growth. He listened closely to his father’s discussions, understanding early on that water was the lifeblood of the region, and that without it there was no economy.

When Kenton interviewed for a Northern Water director position representing Weld County in 1994, he was still actively farming 1,200 acres. Kenton recalled the judge asking him why he wanted to be a board member, to which Kenton replied, “Because I was born here, I still live here, and I want to have a say in Northern Colorado’s destiny. And that lies in water.” During what he recalled as a memorable first year on the Board, Kenton took a trip with U.S. Bureau of Reclamation officials to inspect the 13-mile-long Alva B. Adams Tunnel, which carries Colorado-Big Thompson Project water from West to East beneath the Continental Divide.

“It was interesting and fun. I even got to paint my name inside the tunnel near the middle as others who have ridden along have done. They used a 1947 Willy’s Jeep with diesel scrubbers, and when they turned the lights out in the middle, it was total darkness, truly pitch black.”

Kenton graduated from Colorado State University in 1969 with a Bachelor’s degree in business finance. He worked briefly for Shell Oil Company in Seattle before returning to Colorado in 1972 to farm and feed livestock with his father. Kenton raised sugar beets, pinto beans, corn and cucumbers, which he remembers selling to the Dreher Pickle Factory, located at the corner of Riverside and Mulberry in Fort Collins.

Kenton was no slouch in the business of farming, garnering the Colorado Jaycee Young Farmer of the Year award in 1978. He continued farming until 1997 when, he stated, “Building houses on the land became more profitable than growing corn.”

As a Northern Water director, Kenton believes he has been a good representative of irrigated agriculture, but also considerate of all water users when making important decisions. Kenton hopes that he has carried on what long-time Northern Water Board member W.D. Farr advised early on in his tenure, “Make sure you are never one-sided, and always look out for all water users.”

Kenton is a strong advocate for more water storage, and he uses a piggy bank analogy when talking about new reservoirs. “It’s like I tell my grandson. In order to have money down the road, you have to store money in the bank. Water is the same idea. You have to store water in reservoirs when it’s available, so you’ll have it when you need it.”

Kenton stays active in many local water-related organizations, serving on the Cache la Poudre Irrigating Company and Kern Reservoir and Ditch Company boards, and serving as vice-chairman of the Windsor Water and Sewer Board. He is also currently vice president of the Northern Water Board of Directors, and chairman of both the Northern Water and Municipal Subdistrict finance committees.

When asked about his tenure as a board member, Kenton says with pride that it has been a real pleasure working with Northern Water staff through the years. “We’ve got the best staff there is, they are knowledgeable and dedicated to our goals.”

Kenton and his wife Sharon have been married for 44 years. The have two children, Marc and Amy, and two grandchildren, Nash and Bree.
Sarah Smith is a water resources engineer in Northern Water’s Water Resources Department. She joined Northern Water in 2012 after serving in a similar capacity for the City of Loveland’s water and power department.

A New Mexico native, Sarah came to Colorado in 1996 to attend Colorado State University. “After high school, I really wanted to move to Colorado, where I had a lot of extended family members I visited often growing up,” Sarah said.

After graduating from CSU in 2000 with a Bachelor of Science degree in bioresource and agricultural engineering, Sarah went on to receive a Master of Science degree in the same field, and later received her Professional Engineer license.

Sarah’s job responsibilities include monitoring snowpack and generating streamflow forecasts. Much of Colorado’s water supply originates as accumulated snowpack in the mountains, and the same snow that winter recreators enjoy is also the water supply for municipalities and agricultural users.

During winter months, Sarah monitors snowpack conditions for eight watersheds critical to Northern Water and its Municipal Subdistrict. She then uses this information, along with hydrologic models, to produce Northern Water’s streamflow forecasts. Finally, Sarah compares her streamflow projections to other federal and state entities’ forecasts to include in the water resources department’s Colorado-Big Thompson and Windy Gap project operational models.

In 2015 and 2016, Northern Water partnered with the Natural Resources Conservation Service’s Colorado Snow Survey Program to help gather snowpack data at two West Slope snow course sites associated with the Willow Creek watershed. Sarah snowshoed into the two sites (Park View and Granby) where she measured the water content of the snow. “Most of the NRCS sites are automated, so it was a great experience to get out and physically measure the snow and understand how the data are collected,” Sarah said.

Each month Sarah reports on the condition of the region’s water supply to help the Northern Water Board make water policy decisions, including C-BT Project quota and Regional Pool Program allocations. Sarah’s East Slope streamflow forecast, for example, helps determine the amount of C-BT Project water needed to supplement native supplies, while her West Slope streamflow forecast assists with C-BT and Windy Gap project runoff projections.

During summer months, Sarah monitors precipitation and drought conditions, C-BT Project reservoir storage and water deliveries. She also keeps a watchful eye on how the actual runoff is progressing compared to the forecast.

“Generally, our forecasts are on the conservative side (meaning lower than forecast), because of the importance of the water supply to all of our water users, and the always-finicky weather and climate conditions. You never want to be too optimistic in your water supply assessment.”

Since 2015, Sarah has also served as Northern Water’s point person for the Regional Pool Program. Adopted in 2005, the RPP provides Northern Colorado water users with another method to acquire C-BT Project water on a seasonal lease basis. In recent years RPP water has primarily been used as an additional water supply for agricultural water users.

Northern Water is also an active participant in water rights cases that may potentially affect C-BT, Windy Gap and Northern Integrated Supply Project water rights. Sarah, along with other Water Resources Department staff and legal counsel, monitor these cases. “As the state’s population continues to grow, there is continued pressure on the South Platte River to meet the increased demand,” Sarah commented. “It’s important to protect C-BT Project return flows for uses within Northern Water boundaries.”

When asked about what she likes most about her job at Northern Water, Sarah said, “Helping people understand the importance of water in Colorado. I also love the people I get to work with on a daily basis.”

In their spare time, Sarah and her husband Brian enjoy chasing their two young daughters, ages four and six, around. Their hobbies include snowshoeing, camping and hiking.
In a round-about way, the collapse of crude oil prices in the mid-1980s eventually led Mark Ziegler to his current position at Northern Water.

Mark grew up in Topeka, Kansas and attended Kansas State University. He graduated with a Bachelor of Science degree in physics, then took a job as a geophysicist in the oil and gas industry. After being laid off, Mark moved to Grand County, Colorado, where he began a 20-year stint at Winter Park Resort, working his way up from lift operator to foreman, and eventually to electronics technician. It was during this period that Mark earned an Associate Degree in electronics engineering technology from the Cleveland Institute of Technology.

Then in June 2007, Mark took a job as an electronics technician in Northern Water’s Instrumentation Control and Electrical Engineering Department on the West Slope. He worked there for five years before transferring to Northern Water’s Berthoud headquarters on the East Slope in 2012.

Mark's major job duties include maintaining electronic equipment on the Southern Water Supply Project pipeline and Colorado-Big Thompson Project water distribution facilities; installing new electronic control systems; and refurbishing, upgrading and replacing electronic equipment to provide remote operation and control.

“It’s great working for [department manager] Jim Nguyen,” Mark said. “He has a vast knowledge of electronics and electrical engineering. Jim is very committed to using the most current technology, and getting things installed and working correctly.”

Programmable Automation Controllers (PACs) and other electronic equipment that Mark installs out in the field gather water flow and other types of data, which is then transferred to Northern Water’s control rooms via a supervisory control and data acquisition (SCADA) system. Computer screens in both East Slope and West Slope control rooms serve as interfaces to organize and display the data.

Mark describes the PACs as somewhat analogous to a vehicle's cruise control, which is used to maintain a constant speed over a variety of terrain. Similarly, Northern Water’s PACs control water flow in a pipeline or canal, whether the flow is via gravity, or assisted by pumps or other mechanical means.

Northern Water collects and transmits a wide variety of data via its SCADA system, including water storage and volume data; electrical motor and pump data such as voltage and electrical current; hydropower data such as turbine speed, water flow and guide vane positions; and water control data such as flow rates, valve positions, and valve adjustments.

During 2016 the Instrumentation Control and Electrical Engineering Department:

• Installed SCADA for the first time at the "Snake Pit" near Lyons, a point of bifurcation, enabling remote control of water distribution from the St. Vrain Supply Canal to either the St. Vrain River and/or the Boulder Feeder Canal;
• Installed SCADA for the first time at the Lower Boulder Ditch headgate (also known as the South Platte Supply Canal) on Boulder Creek, enabling remote control of water distribution in that canal;
• Installed SCADA for the first time at the Granby Hydropower Plant on the Colorado River below Lake Granby Dam, enabling remote control of the hydro plant;
• Integrated real-time data from Boulder, Estes Park, Hudson and Superior for Windy Gap Project return flow water accounting;
• Upgraded Northern Water's SCADA system, including replacing the system's original programmable logic controllers (PLCs) and putting the entire SCADA system online for use by Northern Water's operators;
• Increased the bandwidth and reliability of Northern Water's network connections.

“I’ve learned a great deal about SCADA systems since coming to work for Northern Water,” Mark said. “We have more remote-controlled facilities and sites now than in 2007. It’s very interesting work, and we’re upgrading and improving the system constantly.”

Mark and his wife Katie live in Longmont. They are both avid recumbent cyclists, enjoying daily rides as well as longer bicycle tours, including trips across Idaho, Utah and Vermont. As of last August Mark and Katie were grandparents to a new granddaughter Marlo, and they are looking forward to the arrival of another grandchild this coming August.
Steve Anderson
Lead Operator

In July 1993, Steve Anderson began working for Northern Water as a janitor in the Collection Systems Department on the West Slope.

Three months earlier, following 10½ years of enlistment, Steve had left the U.S. Marine Corps to move with his wife Kathy to Granby, where she grew up. Steve had met Kathy, who served four years in the U.S. Navy, while they were both stationed overseas in Japan.

Within three months of joining Northern Water, Steve was promoted to an operator position at the Farr Pump Plant. In 1999 Steve became lead operator, a position he has held ever since.

The Collection Systems Department is responsible for operating and maintaining all Colorado-Big Thompson Project and Windy Gap Project West Slope facilities in Grand County.

Steve's job duties include supervising and training the Collection Systems Department's operators; helping review and update all standard operating procedures; overseeing safety-related issues; coordinating his department's Enterprise Asset System activities with the Facilities and Equipment Department; assisting with clearance preparations per the U.S. Bureau of Reclamation's Hazardous Energy Control Program; and performing water runner tasks and filling in for operators when needed.

Steve noted that he also took over many of the Collection System Department's administrative duties following the retirement of Carl Lockwood in 2013. “It's a great group of guys I work with over here on the West Slope,” Steve said. “It's rarely the same task or project two days in a row, and I really enjoy it.”

One major accomplishment the Farr Pump Plant operators finished in 2016 was a complete review of all Reclamation standard operating procedures. While Collection Systems Department staff typically review West Slope SOPs each year, the 2016 review included looking for procedural discrepancies that might exist due to past and recent modernization projects.

Some of these modernizations include recent hydraulic upgrades to the Willow Creek Dam, as well as review of the new Granby Hydropower Plant SOPs. Steve noted that results of the SOP reviews were forwarded to Reclamation for possible incorporation into the next SOP updates.

The Collection System Department's operators have the ability to control a number of C-BT and Northern Water East Slope facilities from the Farr Pump Plant, including the Southern Water Supply Project pipeline and the Trout Hydropower Plant at Carter Lake. Farr Pump Plant operators are now also able to monitor East Slope facilities through the use of security cameras. This is a relatively new and particularly beneficial addition, since at least one West Slope operator is on duty 24/7, year-round at the Farr Pump Plant control room.

Steve is proud of the fact he pursued and completed his Associates degree in business administration from Colorado Technical University utilizing Northern Water's educational assistance and tuition reimbursement program.

“I really appreciated the tuition reimbursement and help Northern Water provided. It made a big difference in obtaining my business administration degree,” Steve noted.

Steve is a North Dakota native and graduated from Park River High School in 1982. He and his wife Kathy have been married for 26 years. They met while stationed at the U.S. Marine Corp Air Station Iwakuni, Japan, and their son Kyle was born at the Yokosuka Naval Base in Japan.

Kathy currently works for the U.S. Forest Service in Granby. Kyle graduated from Middle Park High School in 2010 and spent five years in the U.S. Marine Corp. He is now living and going to college in Portland, Oregon. In their spare time Steve and Kathy enjoy home remodel projects, biking, hiking and camping.
Thanks to the attention and care of Electronics Technician June Caves, Northern Water’s network of 21 weather stations is a reliable and important source of weather-related data in Northern Colorado.

June joined Northern Water in February 2003 as an electronics technician in the Irrigation Management Department. She was previously employed at Geotivity, working on flow monitoring and flood warning systems.

June’s current job duties include maintaining Northern Water’s weather station network; calibrating and, when necessary, replacing weather station sensors; monitoring incoming weather station data for accuracy; and occasionally relocating weather stations.

“We collect weather data every fifteen minutes, and provide ET on an hourly basis now,” she explained. “When I began working at Northern Water in 2003, ET was only available on a daily basis.”

Northern Water installed its first weather station in 1986 at its former headquarters in Loveland. Historically the weather station network was used most heavily by agricultural water users seeking accurate data to calculate reference ET. However, June noted that municipal and urban use of the weather station network is increasing.

Ten weather stations are sited in irrigated alfalfa fields and considered to be agricultural, while nine of the remaining stations are located in large urban turf areas such as golf courses or athletic fields. The two West Slope stations are located at high-elevation, one in an open area of native grass, and the other adjacent to a reservoir.

The weather station network’s purpose is to provide automated, accurate and representative crop and turf water use information to area residents. With proper maintenance, the weather stations provide accurate data to calculate reference evapotranspiration and help more efficiently use water in irrigated agriculture and the urban landscape.

ET is an important and fundamental tool to efficiently manage irrigation water. June noted that remote telemetry, as well as centralized data reception and processing has changed significantly over the years she has been with Northern Water.

During the past 12-18 months, June noted the following major accomplishments for the weather stations and the Irrigation Management Department:

- Relocation of the Fort Collins Central Weather Station from one softball field scoreboard to a new scoreboard;
- Relocation of the Fort Collins East Weather Station from Colorado State University’s horticulture farm to the nearby Kerb farm;
- Relocation of the Longmont South Weather Station from the Swalde Farm to the nearby Sombrero Ranch;
- Relocation of the Johnson’s Corner Weather Station from a horse boarding farm to the nearby Sanchez farm;
- Upgrade of 16 telemetry modems to keep up with ever-changing cellular technology;
- Installation of equipment to monitor Wi-Fi irrigation controller performance in Northern Water’s Conservation Gardens.

June noted that many of the landowners who host Northern Water’s weather stations on their land have been doing so for years – some as many as 25 years. Nearly all of them make use of the weather station data themselves, and are proud to cooperate with Northern Water.

“I’m honored to work on Northern Water’s weather station network,” said June. “We have the resources necessary to ensure the network is well-maintained and provides accurate, reliable data.”

June is a fifth-generation Coloradan. She was born in Denver, grew up in Aurora and graduated from Gateway High School. June also attended ITT Technical Institute in Seattle and graduated with a Bachelor of Applied Science degree in electronics engineering technology. June and her husband Paul live in Aurora. Their hobbies include gardening and home improvement projects.

2016 Annual Report
John Budde manages Northern Water’s Financial Services Department, which oversees finance, budgeting, auditing, and purchasing functions for Northern Water, the Municipal Subdistrict and both districts’ enterprise funds. Department functions include employee payroll, vendor compensation, budget preparation and annual audit preparation.

John joined Northern Water in 1986, during a time of rapid growth for the organization. In June of that year Northern Water assumed major operation and maintenance responsibilities from the U.S. Bureau of Reclamation for many of the Colorado-Big Thompson Project’s West Slope facilities.

Less than a year later, Northern Water also undertook greater O&M responsibility for several East Slope C-BT Project facilities, including Horsetooth Reservoir and Carter Lake. Northern Water also hired additional staff during this period due to the organization’s expanding responsibilities.

John, a certified public accountant, became Finance Department Manager in 2010.

Before joining Northern Water, John worked for an accounting firm that audited the Northern Water and Subdistrict financial statements. At that firm John managed the audit and did the accounting service work, including preparing the annual financial statements for both districts. When he began working for Northern Water, John already had financial and accounting knowledge about Northern Water and its operations.

The Windy Gap Project, a new water supply for East Slope water users, was dedicated in 1985, a year before John joined Northern Water. The Series B bonds for Windy Gap Project construction were issued in June 1981, a period of very high interest.

“As interest rates decreased, we would refund bonds to get a lower interest rate and reduce the debt service payments,” John explained. In 2016, when the Windy Gap Project Series H bonds were defeased, all outstanding water revenue bonds were discharged.

With assistance from the financial consulting firm First SouthWest, John is heading the financial planning effort for the Windy Gap Firming Project and the Northern Integrated Supply Project. These two proposed projects, in combination, have anticipated design and construction costs surpassing $1 billion.

Many of the Windy Gap Project participants are also WGFP participants. With the original Windy Gap Project’s debt paid in full, competitive financing for WGFP construction appears even more promising. “It’s a good story to tell the bond rating agencies that many of the same participants have made timely payments and paid off the original project debt early,” John explained.

The WGFP received some additional good news in 2016 when the Colorado Water Conservation Board offered the Subdistrict a $90 million subordinate loan to help finance the construction of Chimney Hollow Reservoir. The loan, part of the CWCB’s construction fund project bill, must pass the 2016 Colorado legislature, then receive Governor Hickenlooper’s signature and final CWCB board approval.

Each year John’s department prepares, and makes available to the public, a Comprehensive Annual Financial Report for both Northern Water and the Subdistrict.

“With the first Northern Water CAFR, I went department to department and asked what information had been requested, or was being provided, to water users and the public, to create the CAFR statistical section,” said John. “That is still the case today. Not only does the CAFR show the financial results, it also has valuable information for a wide variety of uses.”

Looking back on his 31 years at Northern Water, John said, “This has been my career. I previously worked for an accounting firm, but really this has been my entire career.”

During college, John also worked for Reclamation as a summer laborer at the Flatiron Power Plant. “I never knew I’d work for Northern Water and on the C-BT Project as my career,” John said. “And when I was in high school I would see the Northern Water office in Loveland and always wonder what they did there.”

John has lived in Northern Colorado since 1970. He and his wife Sandy currently live in north Severance with their two chocolate labs. They have two adult children and two grandchildren, one of which is learning to drive.
Dave Anderson began his career at Northern Water in 2002 as a summer intern in the Irrigation Management Services Department, helping conduct a salinity study on a demonstration farm in Larimer County.

Earlier that spring Dave graduated from the University of Northern Colorado with a Bachelor of Science degree in earth sciences.

"After Northern Water hired me permanently, I spent the next four years in the IMS Department before transitioning to the Field Services Department and water quality-related work in 2006," Dave stated.

Dave is currently an Engineering Technician III in Field Services, where he helps supervise and oversee Northern Water’s water quality data collection efforts.

Dave and the rest of the Field Services Department staff are an integral part of that effort, collecting Colorado-Big Thompson Project and Windy Gap Project water quality samples year-round on both the East Slope and the West Slope. Two of the department’s employees are stationed on the West Slope in Grand County.

While the actual water quality lab analysis work is outsourced, the Field Services Department has a state-of-the-art, in-house laboratory to decontaminate sampling equipment and calibrate the instruments used to collect water quality samples.

Dave is responsible for maintaining Northern Water’s in-house lab, the sampling equipment, and overseeing the associated operating, quality assurance and quality control procedures.

His additional job duties include ordering lab supplies, providing the Water Quality Department with the water quality data collected by Field Services staff, miscellaneous administrative tasks, and operating and maintaining two vertical profile buoys used for water quality sampling.

“The vertical profile buoys are pontoon-mounted and work like submarines,” explained Dave. “Each buoy samples every half-meter vertically between the surface and the bottom of the reservoir.” Currently both buoys are being used to collect samples in Shadow Mountain Reservoir.

Dave and the other Field Services Department staff collect water quality samples for a range of parameters, including water temperature, specific conductance, pH, dissolved oxygen and turbidity.

“We sample year-round in all kinds of weather conditions,” Dave noted. “It can be challenging, but it’s also interesting and rewarding work.”

In addition to C-BT water supplies, Northern Water’s water quality sampling and monitoring programs also support:

- Ongoing efforts to permit and construct the Northern Water Municipal Subdistrict’s Windy Gap Firming Project;
- Ongoing efforts to permit and construct the Northern Integrated Supply Project;
- A cooperative effort between Northern Water and the Grand County Water Information Network to manage clarity data for Grand Lake and Shadow Mountain Reservoir, and to find water clarity solutions for Grand Lake.

Dave is a Nebraska native, but moved to Loveland when his father took a job with Hewlett-Packard. He graduated from Thompson Valley High School in 1996. It’s no exaggeration to say that Dave is a huge sports fan, particularly when it comes to baseball and golf. He grew up playing baseball and participated in it as a club sport while attending UNC in Greeley. Dave currently lives in Loveland.
Welcome to Northern Water
New Employees Hired in 2016

James Bickel
Engineering Technician I
James joined Northern Water in May as an engineering technician I in the Field Services Department. James provides engineering support for the Water Quality and Water Resources departments. He also performs laboratory work such as collecting, analyzing and logging numerical and visual observations; preparing and packing samples; recording test results; and performing other types of documentation. James graduated from Colorado State University with a Bachelor of Science degree in watershed science.

Stephanie Cecil
Water Resources Project Engineer
Stephanie joined Northern Water in December as a water resources project engineer in the Project Management Department. She previously worked for Freese & Nichols, Inc. in Texas. Stephanie graduated from Texas A&M University with a Bachelor of Science degree in civil engineering. Her primary responsibilities include design and construction oversight for the Southern Water Supply Project II; conveyance, pump station, and hydraulic structure planning and design oversight for the Northern Integrated Supply Project; and conveyance development for the Windy Gap Firming Project.

Bob Davis
Plant Electrician
Bob joined Northern Water in July as a plant electrician in the Collection Systems Department. He works out of the Farr Pump Plant on the West Slope. Bob came to Northern Water with 16 years of experience as a journeyman electrician. He previously worked as a diagnostic electrician for Freeport-McMoRan Inc. at its Henderson Mine operations. As a plant electrician, Bob installs, tests, repairs, and maintains the electrical equipment in Northern Water’s pump plants; operates high-voltage switches and related devices; takes daily pump plant performance readings; and inspects electrical and mechanical systems.
Joe Donnelly
Project Manager/Water Resources Engineer
Joe joined Northern Water in December as a project manager and water resources engineer in the Project Management Department. Joe has 16-years of experience in dam and hydraulic structure planning, design and construction oversight. His duties and responsibilities at Northern Water include assisting with project administration, design review and construction oversight of the Windy Gap Firming Project and the Northern Integrated Supply Project.

Matthew Gloe
Water Quality Engineer
Matt joined Northern Water in August as a water quality engineer in the Water Quality Department. Previously Matt was a biological system engineer at Waterborne Environmental in Virginia. He graduated from Virginia Tech University with a Master of Science degree in biological systems engineering. Matt’s responsibilities at Northern Water include helping manage water quality data, preparing and analyzing water quality data, and conducting water quality modeling.

Liz Larmon
Administrative Support Specialist/Contract Coordinator
Liz joined Northern Water in June as an administrative support specialist and contracts coordinator in the Human Resources and Administrative Services Department. Liz previously worked for the 19th Judicial District Court in Weld County. She holds a Bachelor of Science degree in business administration from the University of Northern Colorado. Liz’s responsibilities at Northern Water include a variety of word processing and office duties; coordinating, preparing and finalizing consulting services agreements; providing support to Northern Water’s directors; and maintaining the Board’s SharePoint website.

Jake Weimer
O&M Fieldman
Jake joined Northern Water in February as an operation & maintenance fieldman in the Distribution Systems Department. Jake is responsible for operations and maintenance work on the C-BT Project distribution system, including monitoring canal outlet works, reservoirs, dams and pipelines. Jake previously worked as a tailings operator for Freeport-McMoRan Inc. at its Henderson Mine operations.
Money management

As this 2016 Annual Report clearly demonstrates, Northern Water is involved in a variety of projects and activities.

To manage its finances, Northern Water uses a business enterprise framework. Each enterprise is usually focused on a single objective and comprises a unique enterprise fund to account for its revenues, expenses and other financial transactions. Each enterprise is managed to ensure that its long-term revenues sustain its long-term activities.

Northern Water consists of five enterprise funds: Northern Water District, Southern Water Supply Project, Pleasant Valley Pipeline, Northern Integrated Supply Project and Northern Water Hydropower.

The Municipal Subdistrict, which was formed in 1970, is a separate, independent water conservancy district with powers similar to Northern Water, its parent district. The Subdistrict has two enterprise funds: Windy Gap and Windy Gap Firming Project.

These financial highlights answer the most commonly asked questions about Northern Water and the Municipal Subdistrict finances: Where does the money come from? Where does it go?

Visit www.northernwater.org/FinancialReports to view our 2016 Comprehensive Annual Financial Reports, which have detailed information about each enterprise and its respective financial position. Members of our financial services staff are also available to answer your questions.

Revenues

The Northern Water District fund receives about 50 percent of its revenues from property and specific ownership tax collections, which it collects from a voter-approved 1 mill levy. Northern Water has maintained the same mill rate since 1957. These monies, along with annual allotment contract assessments and revenues from service charges, are used to operate and maintain Colorado-Big Thompson Project facilities, and for other activities that conserve and protect Northeastern Colorado’s water supplies.

For the other Northern Water and Municipal Subdistrict enterprise funds (Southern Water Supply Project, Pleasant Valley Pipeline, Northern Water Hydropower and Windy Gap), the primary sources of revenue are assessments or power revenue.

Enterprise funds that support the proposed Northern Integrated Supply Project and the Windy Gap Firming Project are fully funded by their respective project participants.

Expenses

Expenses primarily include costs associated with project operations, maintenance, engineering, administration and debt service.

The Northern Water District fund’s largest expense is labor. Operating and maintaining the C-BT Project and other project facilities requires a great deal of employee time and effort. All of the other enterprise funds reimburse the Northern Water District fund for costs incurred on their behalf.

In addition, Northern Water frequently hires outside firms to conduct engineering and other studies, especially when specific expertise is necessary.

Northern Water shares some C-BT Project operations and maintenance costs with the U.S. Bureau of Reclamation.
financial highlights

Northern Water enterprises

Northern Water District
Northern Water, acting through its District enterprise, operates and maintains the C-BT Project and also engages in weather data monitoring, water quality studies, snowpack and streamflow forecasting, water conservation and other activities.

Southern Water Supply Project
The Southern Water Supply Project, a 110-mile pipeline and related facilities originating at Carter Lake, serves 12 water providers in the southern and eastern portions of Northern Water’s service area.

Pleasant Valley Pipeline
The 9-mile-long Pleasant Valley Pipeline operates between Horsetooth Reservoir and the Munroe Gravity Canal to serve five water providers in the northern portion of Northern Water’s service area.

Northern Integrated Supply Project
The proposed Northern Integrated Supply Project will add approximately 200,000 acre-feet of new storage, three pump stations and related infrastructure to supply 40,000 acre-feet of water annually to 15 participants in Northern Colorado.

Northern Water Hydropower
Northern Water’s two hydropower facilities are the Robert V. Trout Hydropower Plant at Carter Lake, and the Granby Hydropower Plant at Lake Granby. The two plants, combined, generate approximately 12 million kwh of power annually.

Revenues/Capital Contributions*
- Northern Water District $35,421,759
- Southern Water Supply Project $1,901,598
- Pleasant Valley Pipeline $28,467
- Northern Integrated Supply Project $3,600,000
- Northern Water Hydropower $1,015,214

Expenses/Capital Expenditures*
- Northern Water District $27,655,802
- Southern Water Supply Project $3,078,790
- Pleasant Valley Pipeline $781,735
- Northern Integrated Supply Project $3,401,766
- Northern Water Hydropower $2,981,646

*Fiscal year ended September 30, 2016

Municipal Subdistrict enterprises

Windy Gap
The Subdistrict, acting through its Windy Gap enterprise, operates the Windy Gap Project, which includes a diversion structure on the Colorado River, a pump plant and a 6-mile pipeline to Lake Granby.

Windy Gap Firming Project
The proposed Windy Gap Firming Project will consist of a 90,000 acre-feet reservoir and related facilities to serve 13 participants in Northern Colorado. The project’s design is underway, and approval of the final necessary permit is anticipated in 2017.

Revenues/Capital Contributions*
- Windy Gap $13,710,610
- Windy Gap Firming Project $13,775,950

Expenses/Capital Expenditures*
- Windy Gap $5,876,688
- Windy Gap Firming Project $1,443,083

*Fiscal year ended September 30, 2016

*Artist rendering of Glade Reservoir and its 290-foot-high dam.

Windy Gap Reservoir