



**CENTRAL UTAH WATER
CONSERVANCY DISTRICT**



**ANNUAL
REPORT**

2021

2021

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MESSAGE FROM THE GENERAL MANAGER



GENE SHAWCROFT, P.E.
GENERAL MANAGER / CEO

Mega drought, heat dome, aridification—buzz words for drastic 2021 climate conditions. Pandemic, catastrophic wildfire, harmful algal blooms—leftovers from an equally dramatic 2020. A safe and secure water supply, wise use of our limited water resources, developing and conserving water for current and future Utah populations—the solid ethos of the Central Utah Water Conservancy District.

Our mission, vision, and values have not changed after all we have been through. In fact, they have been reinforced.

I admire staff and trustees for their continuing, exhaustive, exemplary efforts to keep Utah's waters flowing for its many needed purposes—be it for culinary, industrial, agricultural, power generation, environmental, and/or recreational usages. I respect water-worried officials at all levels—from small ditch companies and water conservancy districts to elected municipal, county, state, and federal government representatives—as they make difficult decisions and take difficult actions. I thank Utah's citizenry for using less water and for allowing lawns to be less green.

That said, please take courage in the pages of this annual report. And know that the Central Utah Water Conservancy District continues to deliver now and will also deliver, in all aspects, into the future.

BOARD OF TRUSTEES

DUCHESNE



Shelley Brennan



Kirk Christensen



JR Bird

JUAB



Byron Woodland

SANPETE



Edwin Sunderland

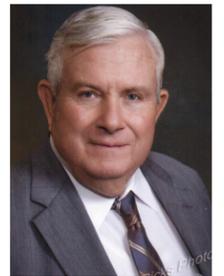
UINTAH



Steve Hanberg



Max Haslem



Boyd Workman

SALT LAKE



Jim Bradley



Max Burdick



Al Mansell



Jim Riding



Jennifer Scott

UTAH



G. Wayne Anderson



Nathan Ivie



Bill Lee



Steve Farrell



Greg McPhie

WASATCH/SUMMIT

BRIDAL VEIL FALLS FLOW RESTORATION

OVERVIEW

The Bridal Veil Falls Flow Restoration project began in 2021 with the purpose of upgrading and replacing the previously built diversion structure at the lower falls. The nearly 80-year old system was acquired with the water rights from PacifiCorp and diverts water from the falls into the Olmsted Flowline. Because of the location, the structure is hard to access, is difficult to maintain and often is blocked by debris. The District contracted with Jacobs Engineering to design a new system with the intake at the pond level of the falls. A new intake structure was constructed underneath the trail and a new concrete-encased pipeline was constructed underneath the river, to take water from the pond to a small pump station that will pump the water into the Olmsted Flowline.

PUBLIC INVOLVEMENT

With the popularity of Bridal Veil Falls, the District took great measures to minimize impacts to the public, keep the public informed of trail closures, and to mitigate potential impacts related to the project. A group of rafters and kayakers expressed concern that the project would alter some of the better parts of the Provo River for rafting. The District and the contractor decided to use Lidar imaging to document the location and elevation of each rock that would be removed by construction from the river. After construction, those rocks were placed as close to their original position as possible.

WATER RIGHT DESIGNATION

The state engineer granted the District's application to change its water rights for Bridal Veil and Lost Creek from power generation to consumptive use, meaning the water from Bridal Veil can now be treated and delivered as drinking water. The change application also combined the Bridal Veil right with Lost Creek, which will allow the District more flexibility between the two water sources.

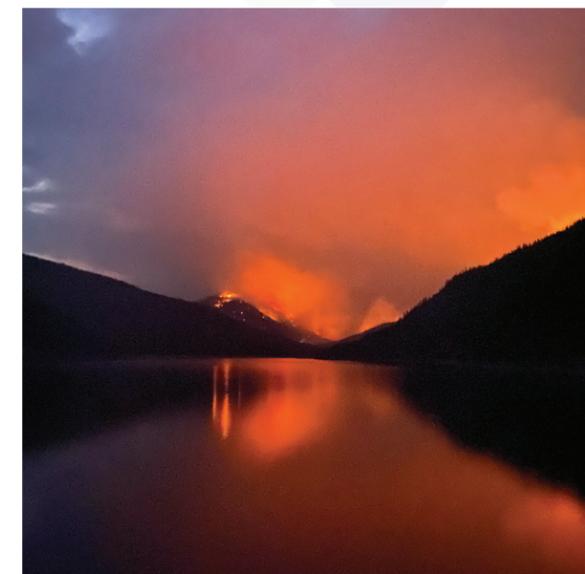


CATASTROPHIC WILDFIRE SHARED STEWARDSHIP

Catastrophic wildfires rage throughout Utah's forests and rangelands each year. Their immediate effects include extensive damage to landscapes, destruction of homes and buildings, and, tragically, loss of human and animal life. Some of their long-term effects include excessive sediment transport and water pollution in and along Utah's precious watersheds and water ways. Ultimately, these latter issues affect District reservoir and water treatment plant operations.

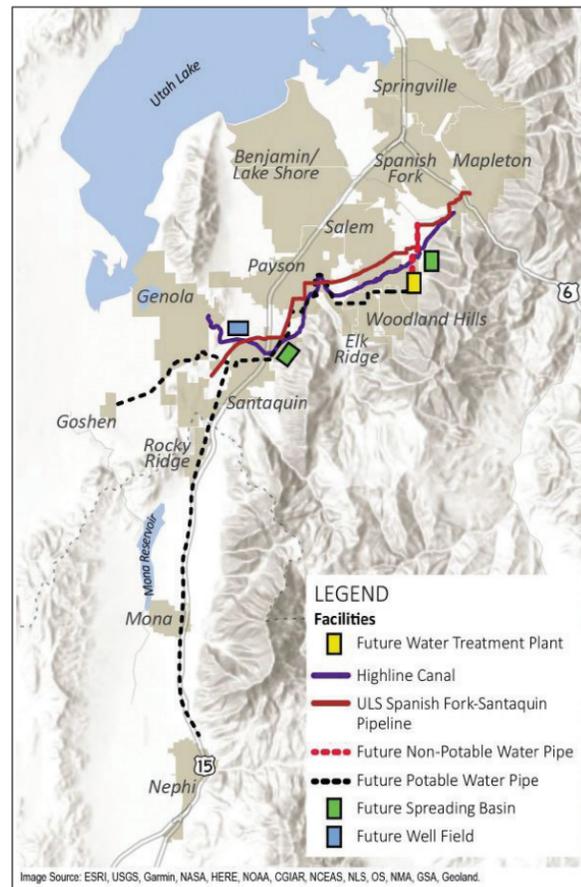
The District has taken a proactive and supporting role in mitigating catastrophic wildfire through the U.S. Forest Service's Shared Stewardship Strategy and Utah's Catastrophic Wildfire Reduction Strategy. These strategies work to build partnerships between federal, state, municipal, local, and private organizations to share information, prioritize high-risk wildfire areas, and provide resources to control excessive fire. A new District budget item, Catastrophic Wildfire Management, was created and funded to assist in these efforts.

The District anticipates success in protecting Utah's valued lands and water ways through these mitigative efforts with costs being far less than those for fire suppression and post-fire rehabilitation.



JUAB & SOUTHERN UTAH COUNTIES WATER RESOURCES & INFRASTRUCTURE PLAN FORMULATION

The District has been dedicated to providing safe, reliable drinking water to Utahns since its formation. With the near completion of Central Utah Water (CUP) facilities in South Utah County, and the increasing population growth rate, the District has been working and coordinating with local south Utah County and North Juab County stakeholders to determine if and how regional potable water sources and infrastructure systems might assist local water systems to prepare for and handle the anticipated growth. This concentrated effort has been ongoing since 2019 and will continue to move forward to plan how the District can best assist the communities in the future.



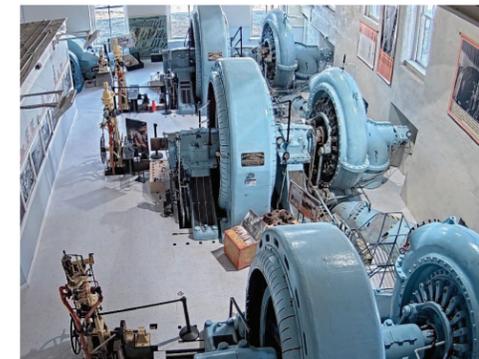
HISTORIC OLMSTED INTERPRETIVE CENTER

The Olmsted Campus has a rich and long history in the development of hydroelectric power. Construction of the original Olmsted Hydroelectric Powerhouse was completed in 1904 to generate electricity by utilizing the energy of falling water. The Historic Olmsted Powerhouse was listed on the National Register of Historic Places in 1972 and decommissioned in 2015 as part of an agreement between PacifiCorp and the federal government. Since that time, the District and the U.S. Department of the Interior, Central Utah Project Completion Act Office (CUPCA Office) constructed the new Olmsted Hydroelectric Power Plant located directly north and east of the Historic Olmsted Hydroelectric Powerhouse. In order to construct the new power plant, the District and the CUPCA Office entered into an agreement with the Utah State Historic Preservation Office (SHPO) to provide upgrades and seismic improvements to the Historic Olmsted structure. The District and CUPCA Office upgraded the historic plant into an interpretive center per the agreement with SHPO.

The District used the Construction Manager/General Contractor (CMGC) delivery method for this project. A general contractor was brought on-board at the 30% design phase of the project where they could assist with the design and construction methods. To improve the seismic and structural integrity of the Historic Olmsted Powerhouse, several components of the buildings required strengthening and improvements. A new roof with thicker underlayment angled at 45 degrees to the roofing trusses was needed to improve the strength of the roofing system. The roof also needed to be secured to the powerhouse's walls. Also, the gable end walls of the historic powerhouse required strengthening. This was accomplished by securing rebar on the inside surface of the wall and then applying structural shotcrete. Other improvements to the structure included:

- a drainage system on the lower floor to control groundwater that infiltrates through the walls
- structural reinforcement on the outside of the building
- structural reinforcement of the masonry
- interior painting that matched the historic building

With these improvements, the structural integrity of this historic building has been ensured for many years to come.



UTAH LAKE SYSTEMS (CUPCA)

Design and construction continued on approximately 16 miles of the Spanish Fork Santaquin Pipeline of the Utah Lake Drainage Basin Water Delivery System (ULS).

Construction was completed on approximately four miles of the Payson Spring Lake Reach Pipeline. It is scheduled to be completed in the spring of 2022.

Construction began on the 2.5-mile-long, South Fields Reach 2 Pipeline in 2021. Delivery of ULS water from the Spanish Fork Santaquin Pipeline continued in 2021.

Deliveries were made to Spanish Fork City from the Spanish Fork Reach Pipeline which was constructed in 2018.

Construction began on the Spanish Fork North Turnout in 2021. This turnout will add another location for Spanish Fork City to deliver water to their growing service area.

The extension of the ULS continues toward Santaquin. Once completed, this pipeline will deliver up to 30,000 acre-feet of CUP water from Strawberry Reservoir to District customers from the ULS South pipeline.



CENTRAL UTAH PROJECT (CUP) OPERATIONS

In 2021 the dams and reservoirs of the Bonneville Unit received less than 50% of average annual inflows. This continuation of low water supply is creating a heavy demand for CUP water, and though reservoir levels continue to fall, the CUP is functioning as planned and is stabilizing Utah's water supply during drought conditions. Several new water supply contracts with increased water deliveries to both Salt Lake and Utah County water users began this year.

The North Fork Siphon Replacement Project was completed, and water flowed through the new siphon in 2021. Strawberry Aqueduct Collection System (SACS) diversion structures, flow metering and piping at VAT and Hades diversions were improved. New fiber installation for communications and security improvements across SACS facilities continued. Significant efforts were made on corrosion, concrete repair, and condition assessments of CUP Bonneville Unit facilities.

The Sixth Water Flow Control Structure modification project is nearing completion but has seen delays due to supply issues. Once completed (now scheduled for fall of 2022) this facility will provide flows for stream enhancement of Sixth Water and Diamond Fork Creeks. New valves will be capable of controlled releases of 0-100 cubic feet per second where the existing valves are restricted to minimum releases of 70 cubic feet per second.

At Starvation Dam, investigative drilling for seismic risk analysis has been performed. A pilot repair project for the armoring and repairing the existing soil cement on the upstream face of the dam was completed. A bathometric survey of Stillwater Reservoir was

performed as part of investigative work on the impact of recent wildfires in the drainage above the reservoir.

At Jordanelle Dam, significant maintenance and corrosion protection work was completed on the outlet works, including repairs on the fixed cone valves, the energy dissipation chamber, and the selective level outlet work (SLOW) tower.

The Olmsted - Alpine system routine cleaning and maintenance is significant each year. Specific work related to design for a risk and resiliency relocation of the Alpine Aqueduct Reach 1 (to mitigate for earthquake fault and land slide crossing) is continuing in the form of frequent inclinometer readings, surveys, and inspections for monitoring slide movements.

The Wasatch County Water Efficiency Project (WCWEP) continues to work cohesively with cities and service districts within Wasatch County to adjust to rapid population growth and the conversion of water use from agriculture to secondary water systems and municipal and industrial uses. Addressing issues associated with the relocation and installation of miles of new distribution pipelines, dozens of canal roadway and utility crossings, hundreds of new secondary water services, and support for local planning efforts consume significant efforts of Heber area staff.

In cooperation with Jordanelle Special Service District, a new piped diversion from the Provo River was added adjacent to the Timpanogos Canal diversion to divert and deliver water year-round to a new water treatment plant and pump station to meet growing municipal and industrial water needs.

CENTRAL WATER PROJECT (CWP) OPERATIONS

In 2021, startup and commissioning of new pump houses at Wells 8, 9, and 10 was conducted in addition to the completion of punch list and warranty items. System deliveries from these new wells commenced in July 2021. Well 8, with a capacity of 6,000 gpm, and Wells 9 and 10, each with a capacity of 5,500 gpm, increase the total number of finished wells to eight throughout the CWP Vineyard Wellfield. As the wells started to function, some possible water aesthetic issues arose prompting additional water quality evaluation and testing by District staff. The District began investigating methods for removing iron and manganese which appear to be the cause of the aesthetic issues. Drilling began on Wells 16 & 17 and zonal testing was performed to assess water quality throughout the aquifer. Well 16 was completed to a final total depth of 1550 ft with 560 ft of wire wrap well screen.



Also in 2021, the Pony Express Pump Station was expanded to four pumps. Staff were very busy throughout the year coordinating with developers, contractors, and cities as the District's pipeline went in before much of the development in Utah County was taking place. Staff also provided ongoing preventative maintenance for the system and continued to keep up their certifications with various trainings throughout the year.



WATER DELIVERIES

CUSTOMER AGENCY	WATER DELIVERED (ACRE-FEET)
Vineyard Town	608
Vineyard Town Non-CWP	61
PacifiCorp	2,299
Lehi City	2,212
Saratoga Springs	990
Eagle Mountain City	2,385
Alpine School District	21
Jordan Valley Water Conservancy District	12,374
Jordan Valley Water Conservancy District Non-CWP	0
CWP Use	100
Orem Non-CWP	190
Utah Lake (Artesian Flow)	627
Total CWP Contract Water	20,889
Total Non-CWP Contract Water	251
Total CWP Use	100
Total Utah Lake (Artesian Flow)	627
Total CWP System Deliveries	21,867
Sources	(ACRE-FEET)
CWP System Storage	39
CWP Well 8	311
CWP Well 9	170
CWP Well 10	1,652
CWP Well 11	2,719
CWP Well 12	3,176
CWP Well 13	4,337
CWP Well 14	128
CWP Well 15	506
DACRWTP	9,030

HYDROPOWER

OLMSTED HYDRO

The Olmsted Hydroelectric Power Plant, again for the 2021 year, saw very few tours because of the restriction due to COVID-19. Warranty work was scheduled and completed for a few maintenance issues. The plant continues to be dependable and produce power incidental to water deliveries. Drought conditions had a significant impact on power generation resulting in lower-than-average power production.

JORDANELLE HYDRO

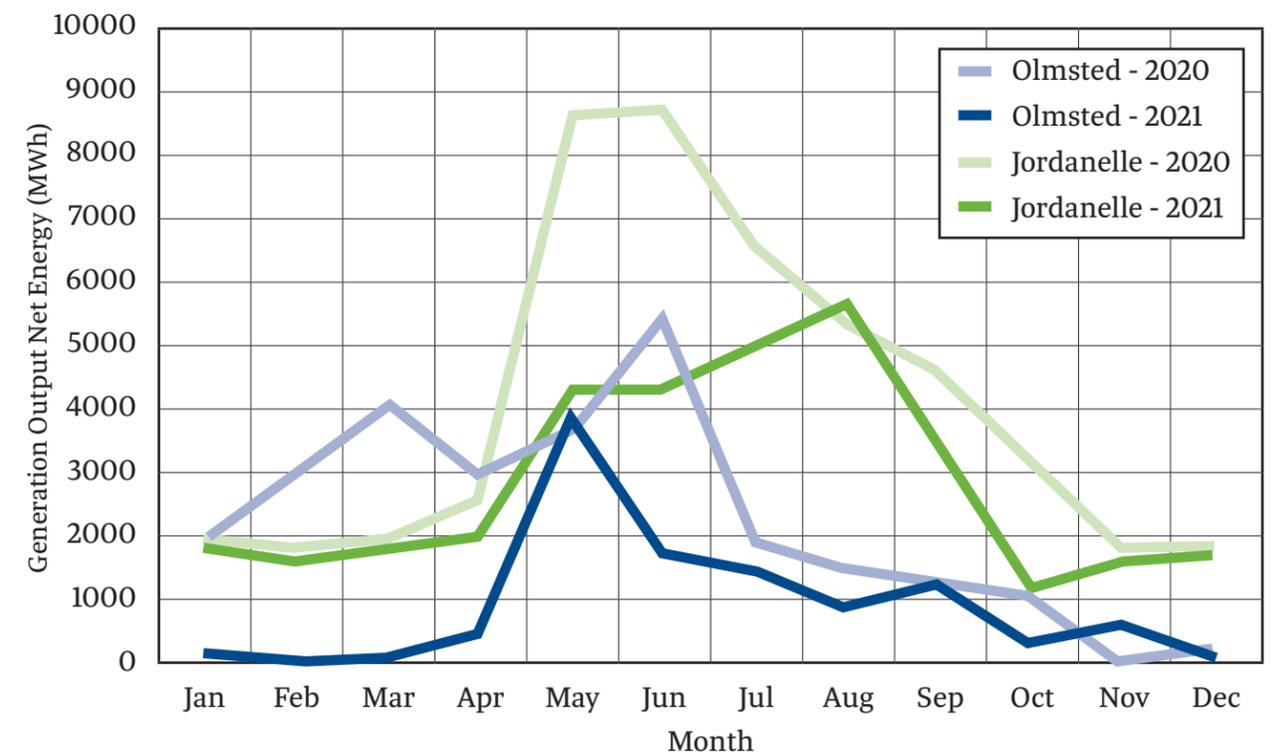
The Jordanelle Hydroelectric Power Plant continued to operate smoothly in 2021. The plant was offline for a few weeks to permit a coating project in the dam's outlet works. Several other maintenance needs and upgrades took place during the year. A significant replacement project in 2021 included an upgrade to a second outdated flow meter and a new plant production power meter. Annual meetings with Heber Light & Power who purchases the power produced, also continued. The plant power generation was reduced due to the ongoing drought conditions.



HYDROELECTRIC ENERGY SUMMARY FOR 2021

MONTH	OLMSTED	JORDANELLE
January	164.67	1,808.74
February	67.80	1,644.40
March	89.06	1,804.51
April	475.20	2,021.03
May	3,917.38	4,317.98
June	1,714.21	4,324.75
July	1,498.14	5,018.74
August	921.32	5,660.53
September	1,254.87	3,434.19
October	378.08	1,211.21
November	584.61	1,665.33
December	134.87	1,738.66
TOTAL	11,200.21	34,650.07

Hydropower Generation 2020 vs 2021



TREATMENT PLANTS

The Ashley Valley Water Treatment Plant (AVWTP) delivered 3,475 acre-feet of drinking water in the calendar year. Plant staff continue to prioritize efficient operations and implement optimization measures to assure cost-effective, high-quality drinking water. The AVWTP met all operational goals and the more stringent water quality goals of the Partnership for Safe Water Program.

The Duchesne Valley Water Treatment Plant (DVWTP) delivered 3,791 acre-feet of drinking water and met all its water quality goals, despite adverse water quality challenges, resulting from ongoing algae blooms. The construction of a new flocculation-sedimentation process at the facility is nearing completion, and plant staff looks forward to incorporating this additional treatment process, which will improve their ability to effectively treat and deliver high-quality drinking water, even when source water quality is diminished.

The Don A. Christiansen Regional Water Treatment Plant (DACRWTP) delivered 29,443

acre-feet of drinking water and met all regulatory limits and the more stringent water quality goals of the Partnership for Safe Water Program. The DACRWTP continues to be recognized for exceptional finished water quality, which is attributed to well-trained and dedicated staff.

Each treatment plant has experienced a concern with both supply limitations and the cost of treating water. Generally, the costs for most plant supplies and services are significantly increasing, but the limited supply of chlorine gas has caused the cost to more than double in price. Additionally, the nationwide shortage of ferric chloride caused us to accelerate the approval process to add a new primary coagulant (ferric sulfate) at the AVWTP. Overall, the treatment plants are in very good operational condition, each supplied with sufficient resources and the necessary technical expertise to ensure a reliable supply of high-quality drinking water.



WATER QUALITY REPORT

Quagga and Zebra mussels are invasive (non-native) organisms and are known for their ability to easily colonize new water bodies and ravage ecosystems. These invasive mussel species can also wreak havoc on water infrastructure by attaching to surfaces and clogging pipes, valves and other important assets that transmit raw water. In 2012, the presence of Quagga mussel veligers was confirmed in Lake Powell which presents a chronic risk for transmission of these mussels to other bodies of water throughout Utah. Current Quagga and Zebra mussel detection methods have limitations that require several steps for detection and species differentiation and can be prone to false positive or false negative results.

In 2021, our Water Quality Staff at the District wanted to create an in-house method for early detection of Quagga and Zebra Mussels. Staff designed a new test that utilizes a new molecular technique to detect Zebra and Quagga mussels in a single test while simultaneously differentiating between the two. Quantitative PCR (qPCR) is the technique used to detect mussel DNA and high-resolution melt analysis (HRMA), at the end of the qPCR run, is used to differentiate mussel species. Additionally, staff have built unique controls to reduce the potential for false positive and false negative results.

Piloting the new test began with samples taken from Jordanelle and Deer Creek Reservoirs. The sampling team collected samples near the boat ramps of each reservoir and delivered the samples back to the lab. Those samples were filtered and analyzed by qPCR for the presence of mussel DNA.

Fortunately, no mussel DNA was detected in any of the samples from 2021. Going forward, in addition to coordination efforts with other agencies, this DNA monitoring technique will provide advanced early warning of mussel presence in critical waterbodies and will be an important part of the District's efforts to mitigate impacts from aquatic invasive species.



STARVATION DAM 50TH ANNIVERSARY CELEBRATION

On September 22nd, 2021 the District held a celebration of the 50th anniversary completion of Starvation Dam. Those involved in design, construction, operation, and maintenance of the dam attended along with partnering agencies, which included the US Department of the Interior, US Bureau of Reclamation,

Central Utah Water Conservancy District, Utah Reclamation Mitigation and Conservation Commission, Utah State Parks, Utah Division of Wildlife Services, Duchesne County (Commissioners), Duchesne & Strawberry River Water Users & Commissioner, and many of the local stakeholders.

Starvation Dam began construction in March of 1967 and was constructed by Goodfellow Brothers of Wenatchee, Washington. The dam took 3 years to construct and was completed in March of 1970. Starvation was the first reservoir constructed in the Bonneville Unit, Central Utah Project and delivers an annual average of 130,000 acre-feet of water to Uintah Basin users, providing flood control, recreation, fish and wildlife habitats, culinary, agricultural, and livestock water needs. Starvation is constructed on the Strawberry

River and utilizes excess winter and Duchesne River flows to fill the reservoir most years.

Keynote speakers for the celebration included Wayne Pullan (USBR), Al Mansell, Shelly Brennen, and Gene Shawcroft (CUWCD), and Greg Todd and Irene Hansen (Duchesne County Commission). The commissioners spoke about the year-round benefits the dam has provided to the area which makes Duchesne County and the Uintah Basin such a wonderful place to live, work, and recreate.



50th ANNIVERSARY



During the celebration, lunch was provided and gave time to visit with others that were involved with the project and remember the efforts that took place to conceptualize and implement such a project that would benefit the future of the Uintah Basin, Duchesne County, and the State of Utah. Following lunch, tours of the dam and Duchesne Valley Water Treatment Plant took place to allow everyone a chance to see the facilities and how well they are functioning to serve the community. We look forward to the next 50 years of Starvation Dam and Reservoir safely fulfilling the needs of our people and community.

ENGINEERING & TECHNICAL SERVICES

VAT DIVERSION STRUCTURE IMPROVEMENTS PROJECT

The improvements at the Vat Diversion occurred in the fall of 2021 and consisted of replacement of a 78-inch venturi meter in the West Fork Flow Measuring Structure, a 66-inch venturi meter in Vat Flow Control Structure, and a 66-inch and 20-inch butterfly valve in the Vat Flow Control Structure. The venturi meters were replaced with ultrasonic meters. The project also consisted of building entrance structures over the top of the vaults down for the West Fork Flow Measuring Structure and the Vat Flow Control Structure, which significantly improved safety, especially during the winter months.



DACRWTP 15MG RESERVOIR IMPROVEMENT PROJECT

Initial design for improvements associated with the 15 million-gallon tank at the Don A. Christiansen Regional Water Treatment Plant started late 2021. Improvements will consist of replacing the effluent butterfly valve, baffle wall curtains, and caulking throughout the inside of the tank.

CWP WELLS 8-10

Wellhouse construction for Wells 8-10 was completed in the summer time frame of 2021. These three wells increase the total number of completed wells to eight throughout the CWP Vineyard Wellfield.



ENGINEERING & TECHNICAL SERVICES

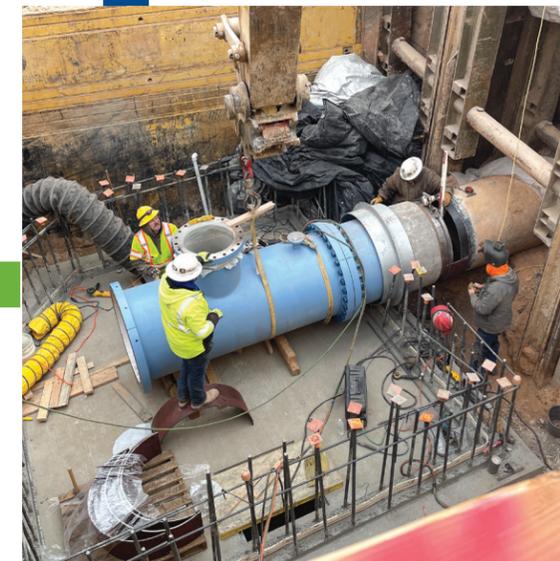
DUCHESNE VALLEY WATER TREATMENT PLANT (DVWTP) PROCESS IMPROVEMENT PROJECT (PIP)

The DVWTP PIP will provide the DVWTP with the processes necessary to address the impaired water quality in Starvation Reservoir that resulted from the aftermath of the 2018 Dollar Ridge Fire. The PIP will convert the plant from direct filtration to conventional treatment by adding sedimentation as a pre-treatment process. This process will remove the increased suspended sediment, turbidity and organic carbon in the reservoir water prior to ozonation and filtration to produce high quality potable water for the residents and commercial and industrial users in Duchesne County. Bodell Construction made significant progress during 2021. Two new settling lagoons have been constructed as well as a new lagoon pump station. Structural work on the new chemical feed and storage building has been completed. Mechanical, electrical, plumbing and HVAC crews are working hard to complete installation of the systems inside the building. Structural work on the Flocculation

and Sedimentation Building is near completion as reinforced concrete work is complete and the masonry superstructure work progresses. We anticipate that the PIP will be substantially complete by mid-July 2022 and will reach final completion by September 2022.

OTHER PROJECTS

The CWP wellfield in Vineyard continued to grow with the drilling of Wells 16 and 17. The North Branch Connection to Alpine Project was completed, which included a pump station and pipeline that will send water from the North Branch Pipeline to a connection near the Healey Well in Alpine. The Ashley Valley Water Treatment Plant (AVWTP) Tyzack Vault Capital Replacement Project was also finished. This project improved safety and operations at the plant by constructing a new vault to house two previously buried valves and upgrading valves and piping in two existing vaults. Design for the AVWTP Ashley Springs Vault Capital Replacement took place and a construction contract was awarded for work to begin in 2022.



NORTH UTAH COUNTY AQUIFER COMMISSION GROUND WATER

In coordination with municipalities throughout Northern Utah County, the District is facilitating the creation of a database of aquifer conditions throughout the area. This database will be instrumental in allowing for informed decision making and cooperation by all involved parties as continued development increases the strain on our shared groundwater resources.

NORTH FORK SIPHON REPLACEMENT PROJECT

The North Fork Siphon Replacement Project reached substantial completion in April 2021. Strawberry Aqueduct and Collection System water was then successfully conveyed through the replacement siphon without issue. Final completion of the project will occur in June 2022 when minor tasks associated with the Vat Diversion Structure Improvements Project change order can be successfully addressed. The project has also received a number of additional recognitions and awards since 2020. (See the Awards & Recognition page for more details.)



DROUGHT 2021

The disastrously dry summer and fall of 2020 proved to be a foreboding of what lay ahead in 2021. Soil saturation levels of the major river systems were near or below all-time lows as the 2020 water year ended. Hope was high that a generous snowpack would not only cure the soil saturation level deficit, but provide abundant, much-needed runoff for diversion and storage.

It didn't happen.

As the snow accumulation season (October through March) drew to a close, cumulative precipitation was 71% and 67% of normal in the Provo River and Duchesne River drainages, respectively. Snowpack totals on April 1, 2021, were only 77% and 72%, respectively for the same drainages.

And the melting snowpack went straight into the soil profile with little significant increase to streamflow during the runoff season. Reservoir peaks were early with some peaks, such as at Strawberry Reservoir, beginning to decline during the first weeks of April.

Fortunately, carry-over storage in the large, Central Utah Project reservoirs allowed for full allocations of project water supplies to contract holders, but the contract holders were strongly encouraged to wisely use these supplies in compliance with state-mandated, drought-contingency plans.



CONSERVATION PROGRAMS

2021 was a busy year for conservation staff as they launched two new pilot programs designed around residential landscape conversion from turf to water efficient landscapes. Flip Your Strip and Locascapes Rewards both started in August and took off as some of our most popular programs. Within the first few months of the program, we had 386 applications submitted to the Flip Your Strip Program and 26 projects completed. The average park strip size was 393 sq ft and overall, an estimated 10,218 sq ft of lawn was removed. Through these projects, an estimated 227,788 gallons will be saved annually. These programs also work in conjunction with our existing Home Builder

Rewards Program and Landscape Leadership grants. We anticipate steady growth with these programs and expect significant water savings.

In addition to the many conservation programs for cities, businesses, and homeowners, the District is also developing agricultural water efficiency programs. As drought conditions persist in the West it is imperative that we continue to support local agriculture and provide drought resilience and opportunities for improved efficiency. The District is also actively engaged in creating programs with other districts and at a state level to ensure wider adoption.



Before



Before



Before



After



After



After

CONSERVATION EDUCATION

2021 provided an opportunity for the District's Conservation Education Program to focus on virtual education classes. Thirty-four online Landscape classes were held, with an average attendance of 90 and a total attendance of 3,075, far surpassing the previous year's numbers. Nine outreach events were held that reached over 600 people. In addition to classes, the Conservation Education team prepared 3 kids' class kits for 200 children, and 3 youth class kits where 87 youth participated.

A project for the Conservation team this year was converting some of the parking lot islands at the District HQ from lawn and overhead sprinklers to water-efficient plants and drip irrigation. This project is estimated to save more than 70,000 gallons of water a year. More island conversions will take place this upcoming year.

CONSERVATION EDUCATION

Online Landscape Classes Held: 34

Total Attendance: 3,075

Average Attendance: 90

9 Outreach Events: 601 People Reached

3 Kids' Class Kits: 202+ Kids Participated

3 Youth Class Kits: 87+ Youth Participated

LANDSCAPE CONSERVATION

Parking Lot Islands at HQ Office

- Approx. 3,165 sq. ft. converted from lawn and sprinklers to water-efficient plants and drip irrigation
- Estimated savings of 70,734 gallons a year

CONSERVATION PROGRAMS

- 167 properties submitted to Home Builders Rewards Program
- 8 Landscape Leadership Grants Submitted



3,165
Square Feet
Converted to
Water
Efficient

3,075
People Reached
Through Online
Classes
Held

9
Outreach
Events

ENVIRONMENTAL PROGRAM

DIAMOND FORK ENVIRONMENTAL UPDATE PROJECT EA

The Draft Environmental Assessment (EA) for the Diamond Fork System Environmental Update Project was released to the public and agencies for their review and comment in the fall. The Final EA is anticipated to be complete in early 2022. The needs for the EA are to:

- Adjust instream flows for Sixth Water and Diamond Fork Creeks to flows that support and sustain functional fluvial, geomorphic, and ecological processes
- Prevent the continuous corrosion of the Upper Diamond Fork Flow Control Structure from nearby hydrogen sulfide springs.
- Allow the District to conduct annual inspections, and maintenance as needed, on the Strawberry Tunnel and the valving, flow meter, and appurtenances inside the Strawberry Tunnel Turnout, and conduct annual inspections and maintenance of the Sixth Water Flow Control Structure.

TEMPORARY USE OF BLOCK NOTICE 7A-2 IN NORTH UTAH COUNTY EA

The EA for Block Notice 7A-2 temporary use in North Utah County was completed in August. It allows for the temporarily use of up to 18,900 AF of Block Notice 7A-2 water in north Utah County for a period of up to 10 years (beginning in October 2020) or until Jordan Valley Water Conservancy District and/or the Metropolitan Water District of Salt Lake and Sandy request all or a portion of their Block 7A-2 allotment.

The EA authorizes the District to temporarily use up to 18,900 AF for the following purposes in North Utah County:

- To meet the municipal and industrial (M&I) needs of CUWCD customers.
- As a supply of water for a potential managed aquifer recharge pilot study.
- Potential use as instream flow in the lower Provo River.



ALPINE AQUEDUCT REACH 1 REPLACEMENT AND RESILIENCY PROJECT EA

In December, the environmental team completed the scoping process for the Alpine Aqueduct Reach 1 Replacement and Resiliency Project (AA-1) EA. The AA-1 pipeline is part of the regional water delivery systems that traverse the mouth of Provo Canyon. It is an integral part of the water delivery systems for Utah and Salt Lake counties, delivering M&I water to approximately 1.6 million people. The AA-1 pipeline crosses through a landslide complex that has seen continued and recent slippage activity resulting in the rupture and failure of the pipeline multiple times since its construction. AA-1 also crosses the Wasatch Fault Zone which is the largest seismic fault in northern Utah and the most likely fault in the area to rupture during a moderate-to-large magnitude earthquake. Failure of AA-1 would cause significant economic impact to the communities it supports and poses a substantial hazard to human life and property located below it.

Due to the critical nature of AA-1, it has been determined that it is susceptible to failure from both seismic and landslide activity. Therefore, there is a need to evaluate alternatives to increase AA-1's resiliency and reliability.

The analysis for the EA will occur during 2022 with a Draft EA being released for review and comment during the summer of 2022. It is anticipated that the EA will be completed by the end of the year.

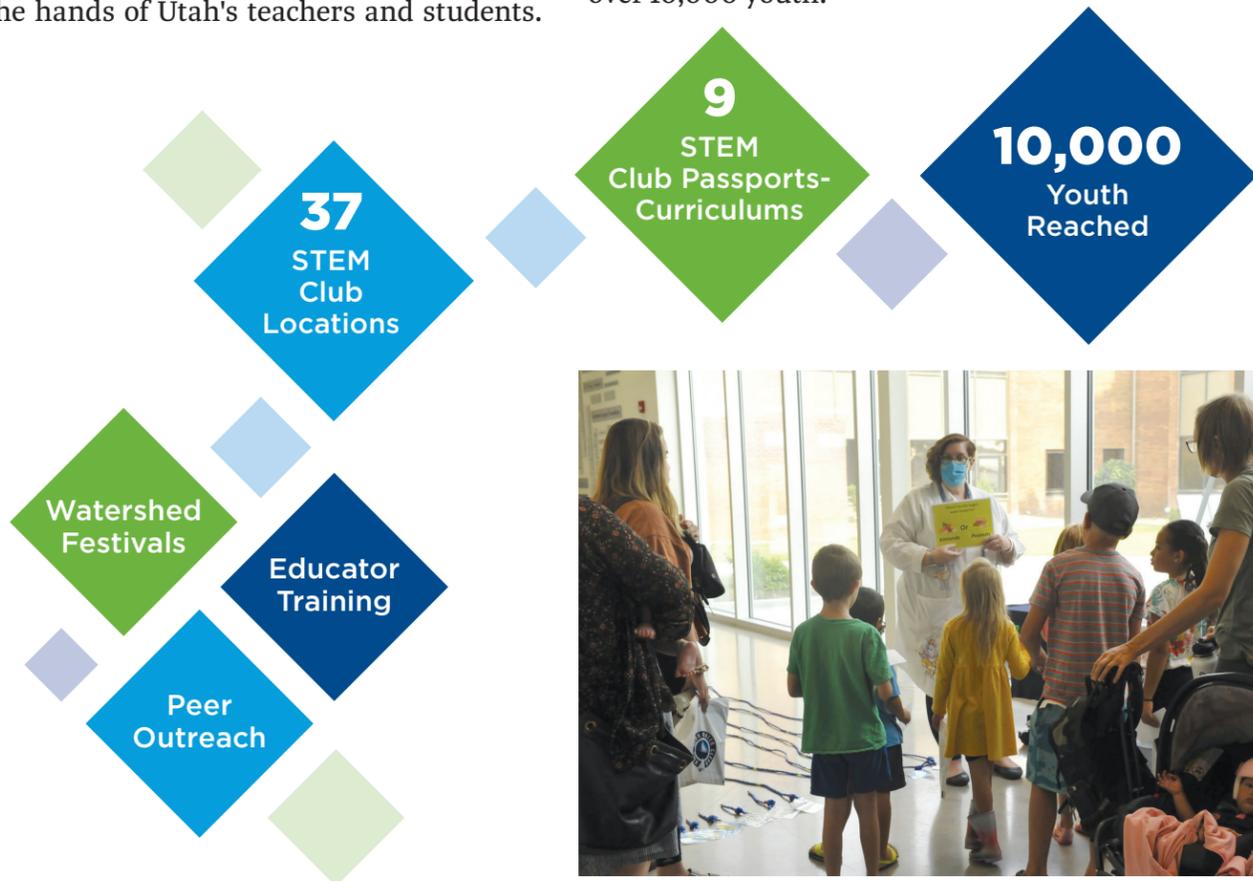


EDUCATION OUTREACH

Central Utah Water's Education Team delivers learning opportunities that are tailored to the needs of each community. These programs include watershed festivals celebrating rivers and reservoirs in different regions of the District, educator trainings that provide local teachers with hands-on science and engineering knowledge and resources, and peer outreach through professional organizations, trade shows, and conferences. Water education is much like building infrastructure; we build it today for future generations to use. By implementing water education Central Utah Water is working to ensure that there will be water-literate taxpayers and voters in the future.

Central Utah Water's Education Program works hard to get high quality STEM resources in the hands of Utah's teachers and students.

Many of the District's most successful educational programs are built around developed curriculum. In 2021 we launched two new types of curriculum resources. In fall 2021, the District partnered with the Utah STEM Action Center to create a pair of STEM in Motion Kits about environmental science. The Story of Utah's Waterways - Colorado River Edition celebrates the Colorado River watershed and is designed to meet the needs of middle school students. The Story of Utah's Waterways - Utah Lake Edition focuses on the recovery of the June Sucker and is designed to meet the needs of elementary students. During the 2020 to 2021 school year, Central Utah Water launched nine STEM Club Passports/Curriculums. So far, these clubs have been implemented in 37 locations across the state and have reached over 10,000 youth.



COLORADO RIVER

2021 was an historic year on the Colorado River in Utah, and throughout the basin. Utah's state legislature passed the "Colorado River Authority of Utah Act" (HB 297) which was co-sponsored by Brad Wilson, Speaker of the Utah House of Representatives, and Stuart Adams, President of the Utah Senate. This Act created the Colorado River Authority of Utah (Authority) whose mission is to "protect,

conserve, use and develop Utah's waters of the Colorado River System". The Act empowered the Central Utah Water Conservancy District Board of Trustees to appoint a representative of the Central Utah area to the Authority Board. Central Utah Water applauds the emphasis the State of Utah has given the Colorado River and its acknowledgment of the critical role the river plays in sustaining the state's population, economy and growth.

The Colorado River Basin continues to be gripped by the worst drought in recorded history, driving Lakes Powell and Mead to their lowest levels since they were first filled. These conditions have resulted in similarly historic responses by both the Lower and Upper Division Colorado River Basin States. The Lower Division States, under the terms of the 2007 Interim Guidelines and the 2019 Drought Contingency Plans, are experiencing the first federally declared water shortage condition on the Colorado River and have developed a plan to further reduce depletions by over 500,000 acre-feet. During this time, the District's Colorado River Program, through our Interlocal Agreement with the Colorado River Authority, has been anxiously engaged in development of the Drought Response Operating Agreement Plan, which will allow for the release of water stored in Flaming Gorge, the Aspinall Unit, and the Navajo reservoir to bolster water surface elevations in Lake Powell. This will be done to protect critical infrastructure, power production and public health and safety.

The Colorado River Program has made significant strides in evaluating water supply risks and potential mitigation measures for increased confidence in accessing that supply under increasing stressed conditions.



WINTER SNOWPACK

SNOTEL SITE	% of Peak Normal Value ¹
Provo River / Utah Lake / Jordan River	
Trial Lake	75%
Snowbird	77%
Clear Creek #1.....	82%
Beaver Divide	63%
Lookout Peak.....	90%
Timpanogos Divide	72%
Duchesne River	
Lakefork Basin	86%
Brown Duck.....	76%
Chepeta.....	75%
Strawberry Divide.....	70%
Indian Canyon	85%
Daniels - Strawberry	84%
Wolf Creek.....	92%
Sevier River	
Box Creek	No Values, damaged by fire
Pickle Keg	97%
Mammoth - Cottonwood.....	78%
Seeley Creek.....	77%
Green River	
Trout Creek	85%
King's Cabin	67%

RESERVOIR STATUS

AT PEAK STORAGE	% of Peak Normal Value ¹
Starvation Reservoir.....	100%
Upper Stillwater Reservoir.....	92%
Currant Creek Reservoir	100%
Strawberry Reservoir	85%
Trial Lake	100%
Washington Lake.....	100%
Lost Lake	100%
Jordanelle Reservoir	76%
Deer Creek Reservoir ²	87%
Utah Lake	78%

1. This value represents the peak annual snowpack amount of the 30-year median snowpack value for each respective Snotel Site.

2. Provo River Water Users Association Facility.

WATER DELIVERIES

(all values shown in acre-feet)

STARVATION RESERVOIR		BIG SAND WASH RESERVOIR	
CUP Project Water (M&I)		CUP Project Water (M&I)	
Uinta Basin Exchange Contracts	89	Duchesne County Water Conservancy District (Notice of Water Availability)	1,545
Duchesne City	27	DOI Water Management Improvement Program (Section 207)	0
East Duchesne Culinary Water Improvement District	10	CUP Project Water (Irrigation)	
Duchesne County Upper Country Water Improvement District	3	Duchesne County Water Conservancy District	0
Johnson Water Improvement District	0	DEER CREEK RESERVOIR	
Camperworld	5	Non-Project Water (M&I)	
DOI Water Management Improvement Program (Sec. 207)	2,900	Wasatch, Summit, and Utah Counties Exchange Contracts	99
DOI Water Management Improvement Program (Rediverted "44,400")	810	JORDANELLE RESERVOIR	
Non-Project Water (M&I)		CUP Project Water (M&I)	
Duchesne City	542	Jordan Valley Water Conservancy District	43,425
Johnson Water Improvement District	287	Metropolitan Water District of Salt Lake & Sandy	20,000
Myton City	0	Metropolitan Water District of Orem	6,671
Duchesne County Water Conservancy District	2,121	Lehi City	1,005
East Duchesne Culinary Water Improvement District	794	IM Flash Technologies	550
CUP Project Water (Irrigation)		Cedar Hills	415
Block Notice No. 1	15,548	Lindon City	484
Duchesne County Water Conservancy District	3,000	Highland City	466
Midview Exchange	10,463	American Fork City	2,058
CUP Project Water (Replacement)		Pleasant Grove City	620
Replacement Water for Project Operations	27,673	Vineyard Town	35
		DOI Water Management Improvement Program (Section 207)	22,267

Non-Project Water (M&I)		Deer Creek Reservoir Exchanges	761
Jordan Valley Water Conservancy District	15,369	Exchange 400	1,218
Jordan Valley Water Conservancy District (Transfer)	1,340	Wasatch County Water Efficiency Project (WCWEP)	
Metropolitan Water District of Salt Lake & Sandy	4,655	CUP Project Water (M&I)	1,574
Metropolitan Water District of Salt Lake & Sandy (Transfer)	4,548	CUP Project Water (Irrigation)	2,970
Metropolitan Water District of Orem	9,616	Non-Project Water (Irrigation)	16,293
Provo City	3,899	Daniels Replacement Project	2,756
CUWCD - CWP	7,401	STRAWBERRY RESERVOIR	
Non-Project Water (Irrigation)		CUP Project Water (M&I)	
Upper Provo Lakes (Exchanges)	761	Uinta Basin Exchange Contracts	1
Non-Project Water (Secondary Irrigation Systems)		ULS South SUVMWA	1,000
Lehi City (Temporary)	0	ULS North MWDSLs	3,100
Lehi City	245	ULS North JVWCD	0
Lindon City	291	CUP Project Water (Irrigation)	
Highland City	724	South Utah County (Temporary Contracts)	17,258
Pleasant Grove City	2,912	Upper Strawberry Flows (DRP)	2,900
Power		CUP Project Water (Utah Lake/Other)	
Olmsted Hydropower Plant	38,779	Exchange Water to Utah Lake	27,074
Jordanelle Hydropower Plant	171,568	Other Trans-Mountain Diversions	0
Upper Provo Lakes (Trial, Washington, Lost)		CUP Project Water (Instream Flows)	
CUP Project Water (Irrigation)		2019 Carry-Over Releases	0
Summit County Irrigation Companies	1,351	2020 Carry-Over Releases	26,283
Non-Project Water (Irrigation)		2021 Allocation Releases	20,497
Washington Irrigation Company	610	Dedicated Storage Releases	0
		Non-Project Water (Irrigation)	
		Strawberry Water Users Association	65,755

AWARDS

- Finished Water Lead Operator Program – Nationally Recognized

NORTH FORK SIPHON

- 2020 Overall Utility Infrastructure Project of the Year from Associated General Contractors of Utah
- North Fork Siphon – 2020 Most Outstanding Water Project from Utah Construction & Design
- North Fork Siphon – 2021 Finalist for ENR’s Intermountain Project of the Year
- ENR 2021 Intermountain Best Projects: Water/Environment (winner)
- ENR 2021 Intermountain Project of the Year (top 4 finalist)
- Procore 2021 Project Excellence: Owner (top 3 finalist)
- 2022 Construction Risk Partners Build America Award: Utility Infrastructure Renovation category (winner)



Bill Peatross
Intermountain Section AWWA Utah Operator of the Year



Lisa Anderson
Intermountain Section AWWA Outstanding Service Award

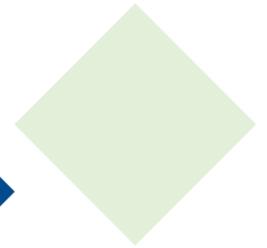


YEARS OF SERVICE



30 YEAR
Gene Shawcroft

35 YEAR
Daryl Devey
Terrill Hunting



20 YEAR
Mark Sutherland
Devin McKrola

15 YEAR
Amanda McClellan
KC Shaw

10 YEAR
Shawn Lambert
David Lupold
Sacha Butler-Gomez
Chris Hansen
Chris Elison
Dave Nedesky

5 YEAR
Matt Oakey
Brett Taylor
Travis Nielson
Tony Bradford
Brandon Rogers
Nick Bennett



RETIREMENTS



LINDA IVIE

Linda retired in 2021 after working 26 years at the District. Linda started as the O&M Administrative Assistant and, with a lot of hard work, dedication, and optimism, she became the Duchesne Area Manager, which she held for 9 years. Her areas of responsibility included the Lower Strawberry Aqueduct and Collection System and the Starvation Collection System. Linda plans to travel, spend time with family and ride horses every chance she gets.



SUSAN CORSON

Susan was an administrative assistant with the District for five years. She assisted with many contractual duties, including Reclamation Reformation Act compliance, as well as other report and data compilation duties involving raw-water facility operations. Susan loves Disneyland and looks forward to spending more time with her family and friends.



LAJEAN BROBERG

The District appreciates LaJean's dedication and contributions to the District over the past seven years working as our receptionist and office assistant at District Headquarters in Orem. She has indicated spending time with family will be a top priority for her and while it has been a difficult decision to leave the District, she looks forward to being with family.



DARYL DEVEY

Daryl has worked for the District for over 35 years with more than 8,800,000 acre-feet of water delivered and accounted for during his career. He has been an integral part of the District's growth with involvement in many District and federal projects. In retirement, Daryl plans to stay active biking and pursuing other interests.



RICH TULLIS

Rich retired in December of this year as Assistant General Manager. Rich has served the District for over three decades. During this time, he has had a major influence over the Operations and Maintenance of the Bonneville Unit of the Central Utah Project. Construction of Jordanelle Dam, the Diamond Fork System, and the majority of the Utah Lake System was completed during this time. Rich was also instrumental in the acquisition of the water rights that have become the CWP water supply. In supervising the Operations and Maintenance department, Rich diligently worked with his team teaching them how to operate and maintain a complex water project. His influence was felt throughout the District and the water community, and will benefit the citizens of Utah for generations to come.

CONGRATULATIONS
ON YOUR RETIREMENT
and all of your new
OPPORTUNITIES IN LIFE!



CENTRAL UTAH WATER
CONSERVANCY DISTRICT

MISSION

To responsibly plan for the future by developing, delivering, and efficiently using our limited water resources.

VISION

To provide a safe and secure water supply, to empower and challenge employees, and to be a leader in the water industry.

VALUES

We value people, safety, integrity, and quality.

