



2018 ANNUAL REPORT

Delivering Quality Every Day



JORDAN VALLEY WATER
CONSERVANCY DISTRICT

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Acronyms used in this publication:

- AF: Acre-feet
- AMI: Advanced Metering Infrastructure
- JVWTP: Jordan Valley Water Treatment Plant
- MG: Million gallons
- MGD: Million gallons per day
- SCADA: Supervisory Control and Data Acquisition



On the cover:

The Southwest Aqueduct Reach 1 parallels the Jordan Aqueduct and provides operational flexibility, additional water for future expansion, and serves as a redundant water supply to Jordan Valley Water Treatment Plant. Sixty-six inches in diameter, it runs two miles and cost \$16 million to construct over the course of 12 months. Photo by Travis Christensen.

This year's report focuses on some of the many benefits water provides to our businesses, communities, and health. We deliver life every day.



A foggy morning safety meeting. Photo by Chad Steadman.

We deliver **safety** every day.



Left to Right:

Barton A. Forsyth
Assistant General Manager

Richard P. Bay
General Manager

Alan E. Packard
Assistant General Manager



JORDAN VALLEY WATER
CONSERVANCY DISTRICT

Life requires water. To grow food, generate power, make essential products, provide jobs, attract businesses, support recreation and tourism, and to sustain the natural environment. As a water provider, our mission to deliver quality water and services every day provides a community impact that can't be measured by a meter.

This year's annual report highlights the important role of water in sustaining several vital aspects of life in Utah. Jordan Valley Water recognizes its enormous responsibility to provide water for current and future generations and plans 50 years into the future to meet community needs.

A LOT GOES INTO SUSTAINING LIFE.

WHOLESALE MEMBER AGENCIES

City of Bluffdale

Mark Reid, City Manager
Trustee Representative: Wm. Brent Johnson

Draper City

David Dobbins, City Manager
Trustee Representative: Ronald E. Sperry

Granger-Hunter Improvement District

Clint Jensen, General Manager
Trustee Representatives: Corey L. Rushton &
Karen D. Lang

Herriman City

Brett Wood, City Manager
Trustee Representative: Wm. Brent Johnson

Hexcel Corporation

Bryan Wheeler, Environmental Engineer
Trustee Representative: Gregory R. Christensen

Kearns Improvement District

Pam Gill, General Manager
Trustee Representative: Gregory R. Christensen

Magna Water District

Terry Pollock, General Manager
Trustee Representative: Gregory R. Christensen

Midvale City

Kane Loader, City Manager
Trustee Representative: Ronald E. Sperry

Riverton City

Lance Blackwood, City Manager
Trustee Representative: Wm. Brent Johnson

City of South Jordan

Gary Whatcott, City Manager
Trustee Representative: Scott L. Osborne

City of South Salt Lake

Dennis Pay, Public Works Director
Trustee Representative: Stephen W. Owens

Taylorsville-Bennion Improvement District

Keith Lord, General Manager
Trustee Representative: John H. Taylor

Utah Department of Corrections

Greg Peay, Director of Facilities
Trustee Representative: Ronald E. Sperry

WaterPro, Inc.

Darrin Jensen-Peterson, General Manager
Trustee Representative: Ronald E. Sperry

City of West Jordan

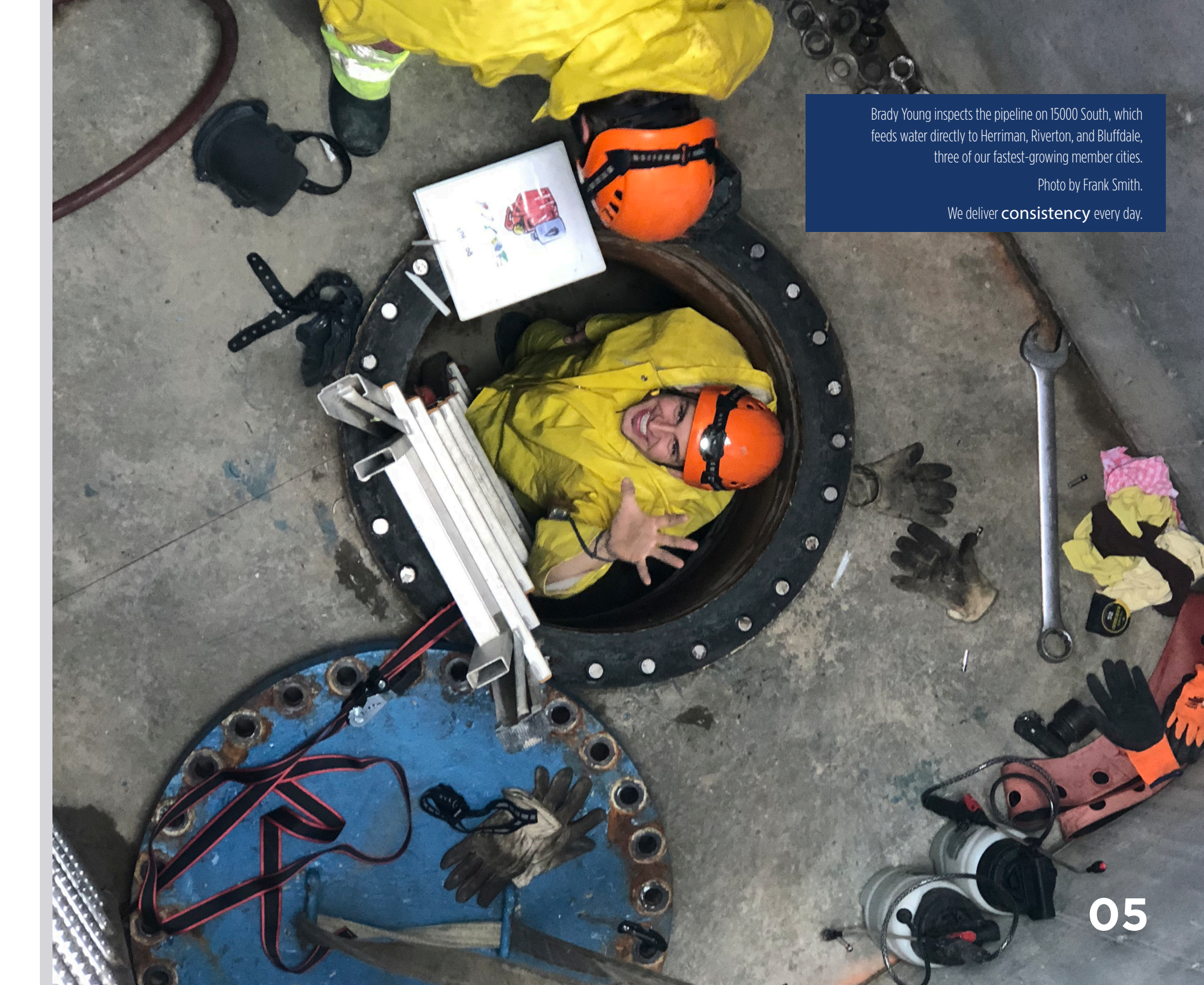
Tim Heyrend, City Manager
Trustee Representative: Lyle C. Summers

White City Water Improvement District

Paul Ashton, General Manager
Trustee Representative: Stephen W. Owens

Willow Creek Country Club

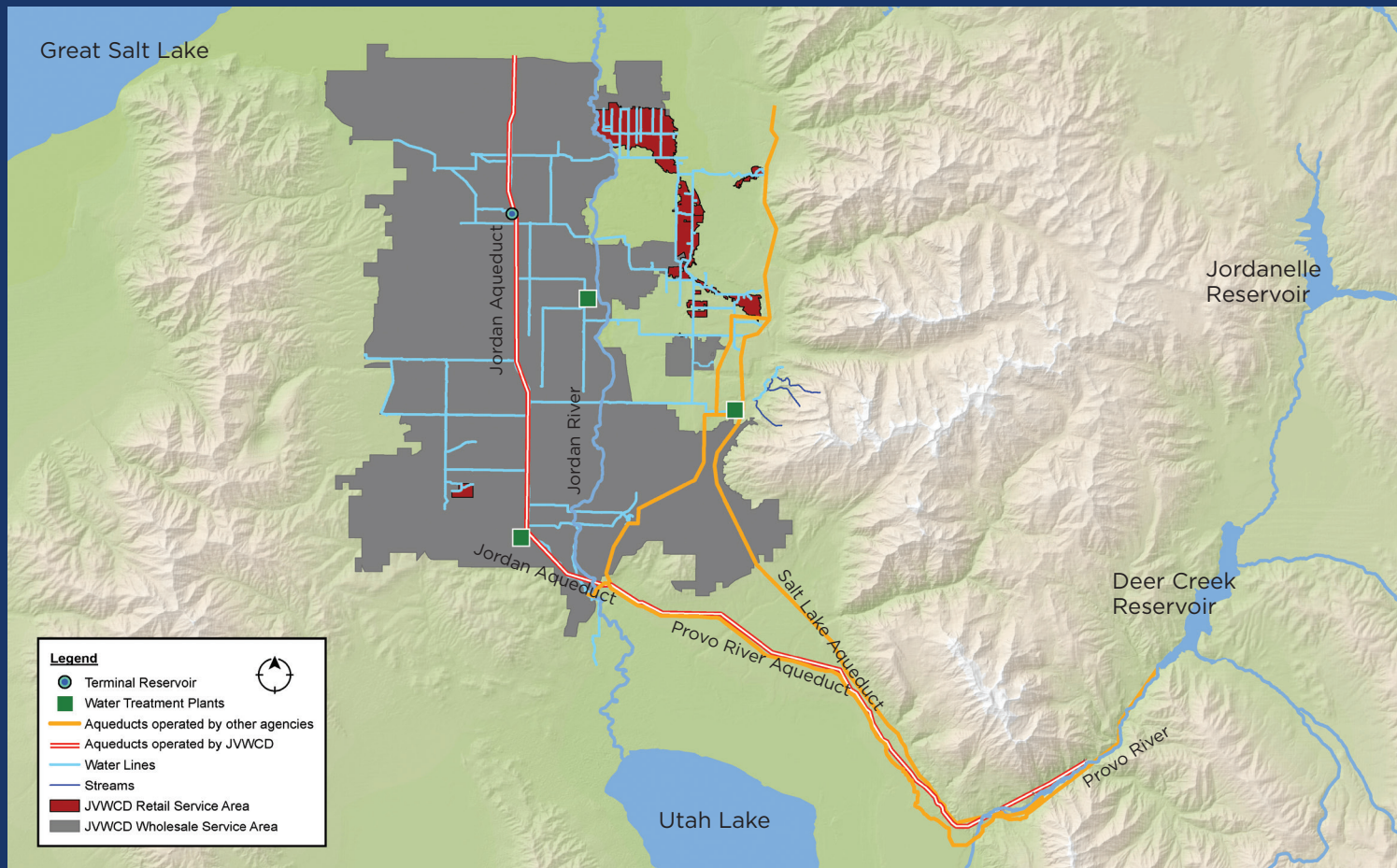
Alex Nicolaidis, General Manager
Trustee Representative: Stephen W. Owens



Brady Young inspects the pipeline on 15000 South, which feeds water directly to Herriman, Riverton, and Bluffdale, three of our fastest-growing member cities.

Photo by Frank Smith.

We deliver **consistency** every day.



JORDAN VALLEY WATER'S **SERVICE AREA**

Jordan Valley Water's service area encompasses much of the Salt Lake Valley, including the most rapidly-growing areas in the state. Sources of water include the Provo, Weber and Duchesne rivers, groundwater, and local mountain streams. More information about our sources can be found on page 16.

TRUSTEES



Left to right:

Corey L. Rushton
Chair

Lyle C. Summers

Karen D. Lang

W. Brent Johnson

Stephen W. Owens
Conservation Committee Chair

Gregory R. Christensen

John H. Taylor

Scott L. Osborne
Vice Chair

Ronald E. Sperry
Finance Committee Chair

OUR MISSION IS TO DELIVER **QUALITY** EVERY DAY.

At Jordan Valley Water Conservancy District, our mission is to deliver quality water and services every day. While most people don't give much thought to the water coming out of their tap, we think about it continually.

Our financial planning, extensive infrastructure, and state-of-the art treatment processes help us deliver on our promise to deliver quality right to your home, no matter the weather or time of day.

Whether you are at home, school, the park, a hospital, gym, or church, our crews work around the clock to get water to you right when you need it.

There's a lot that goes into sustaining life, but it's a service we're happy to provide.

WHAT DID **JORDAN VALLEY WATER**

DO FOR YOU IN 2018?



A LOT THAT GOES INTO SUSTAINING LIFE—

A SERVICE WE'RE HAPPY TO PROVIDE.



Our water conservation programs benefit our service area by decreasing the need to develop new water sources, which helps keep prices low.

This spruce is located in Conservation Garden Park, Utah's premier water conservation demonstration garden.

Photo by Sarah Halterman.

We deliver **value** every day.



SUSTAINING POPULATION NEEDS

Supporting the future of 1 million people is not an easy task. Utah is ranked third in the nation for job growth, top overall for employment¹, and is the third fastest growing state in the nation². With a growth rate of more than two percent, our population is expected to double in just a few decades. Here are some ways Jordan Valley Water has helped prepare its residents for growth during 2018:

¹ Business Insider, 2018

² US Census Bureau, 2018

UTAH WATER SAVERS

Utah Water Savers (UWS) is a unique program devised by Jordan Valley Water and the state Division of Water Resources. Homeowners can log into the website and see what rebates and other incentives are available to them. In 2018, we had 1600 participants in the various programs offered by UWS and distributed more than \$127,000 in incentives. The smart controller and landscape consultation programs have been the most popular, and our hope is that more agencies will be able to join us in offering incentives in the coming years.

LANDSCAPE LEADERSHIP GRANTS

Three grant projects were completed in 2018 and five more are under construction. More than \$200,000 will be distributed in 2018 and 2019 to program participants. Projects include a model home, parking lot, residential community, demonstration garden, condo entrance, park, dog park, and office building landscape renovation. The model home landscape is pictured here.

We deliver **ingenuity** every day.





PLANNING CHALLENGES

One of the most-talked-about but least understood impacts on water development is climate change. Studies show that as temperatures continue to rise, Utahns can expect more rain, less snow, and an earlier snowmelt. This could create a run-off cycle that no longer coincides with normal irrigation seasons or water demand. Climate change likely means greater water demand and potentially less water supply.

Another trend that impacts water providers is land use density. Increasing density will change the way water is used in Utah and impact what needs to be delivered. While smaller yards may decrease per capita water use, the increased number of people living in the same footprint will likely increase total water demand.

By understanding and tracking the way water is used, Jordan Valley Water is better prepared to provide an adequate water supply for future generations.



Left: Wade Tuft operates the Jordan Narrows Pump station.

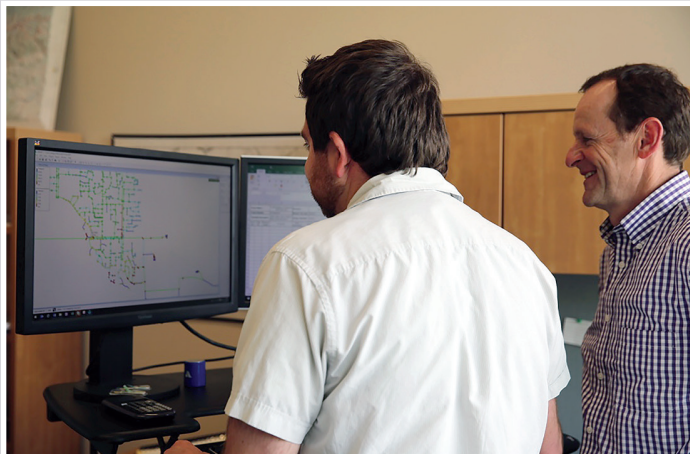
Center: Alan Packard and Travis Christensen evaluate Jordan Valley Water's hydraulic model to determine the most efficient way to distribute water.

Right: Matt Hinckley and Todd Schultz strategize opportunities for energy savings.

Photos by Linda Townes

Water is one of the most energy-intensive utilities there is. Jordan Valley Water has partnered with Rocky Mountain Power and PacifiCorp to streamline much of its water delivery system to its most efficient electric energy use. Since our partnership began in 2014, we have saved more than 17 million kilowatt-hours and realize an ongoing annual savings of \$797,800 in energy costs. To date, we have received more than \$754,000 in incentives from Rocky Mountain Power. Because of this program, we are able to deliver more water using less energy. Decreased pumping costs and improved operations have led to direct benefits for our member agencies and retail customers.

We deliver **efficiency** every day.





CAPITAL PROJECTS

A lot goes into sustaining infrastructure and ensuring water availability for generations to come. Each year, our staff undertakes capital projects to build and maintain the infrastructure necessary to meet our communities' growing water needs. Below are major projects from 2018:

11800 SOUTH U-111 PIPELINE PROJECT

Design and construction of 48" and 36" diameter pipelines, including easements and property purchases for the pipeline alignment and locations for a future pump station and reservoirs.

1453 EAST 9400 SOUTH WELL AND 8518 SOUTH 960 EAST WELL PUMP REPLACEMENTS

Replacement of pumping equipment and well rehabilitation. The mechanical and chemical development resulted in 12.9 and 6.3 percent increases in specific capacity, respectively.

2017 DISTRIBUTION PIPELINES REPLACEMENT

Design and replacement of cast iron distribution pipelines installed in the 1960s located in the Granite Park retail system near 4500 South 700 East.

Left: Pulling main line valve on JA-4 for repairs. We deliver reliability. Photo by: Chad Steadman
Right: New pipeline along 11800 South will provide new demand capacity to the growing communities in southwest Salt Lake County.

We deliver **reliability** every day.

2400 CREEK ROAD AND 1300 EAST PRESSURE REDUCING VALVE STATIONS IMPROVEMENT

Replacement of piping and valves. This vault provides two critical functions in the District's system: 1) reduce water pressure from the upper 1300 East system to the Fort Union system, and 2) reduce water pressure from the upper 1300 East system to the Creek Road pipeline.

BCWTP MANGANESE FILTERS

The manganese concentration in one of the wells feeding the Kennecott Bingham Canyon Water Treatment Plant (BCWTP) increased significantly since original plant start-up. JWCD and Kennecott contracted to jointly fund a manganese filter to alleviate this problem. JWCD engineering provided technical assistance, submittals review, and final project inspection. Manganese concentrations are tested monthly and have been "non-detectable" since the installation.

DEEP WELL #6 AND DEEP WELL #7 PUMPS REPLACEMENT

High-salinity feed water caused corrosion of the vertical turbine pumps in these wells, which were replaced.

FLOW CONTROL AND METER STATION AT 7800 SOUTH 1000 EAST

Design and construction of a wholesale meter station for Midvale City will allow the city to take over part of the District's retail service area within Midvale. The project included piping improvements at the site and a pressure-sustaining valve that will save energy.

JA-4 STATION 308 GATE VALVE REPAIR

Removed and repaired a damaged gate valve.

JVWTP FILTER WASHWATER PRE-DESIGN UPGRADE

As summer peak production at JVWTP has increased in recent years, carry-over of solids from the JVWTP washwater management system have been an increasing problem. This project completed a pre-design study to identify ways to optimize the handling of solids from filter backwash water and settled water.

NANILOA RESERVOIR IMPROVEMENTS

Modifications isolated the spring water and rehabilitated the 2 MG Naniloa Reservoir.

RETAIL METER REPLACEMENT AND ADVANCED METERING INFRASTRUCTURE UPGRADES

Included supply of a new Advanced Metering Infrastructure system for the District's approximately 8,600 retail customers. This included installation of new meter interface units and other necessary physical infrastructure to collect and store the data, a meter data management system, and a customer portal.





SOURCES

Municipal & Industrial Water Sources	2018 (AF)	2017 (AF)
Jordanelle Reservoir (Central Utah Project) ^a	52,760	31,098
Deer Creek Reservoir (Provo River Project) ^b	8,858	26,218
Upper Provo River reservoirs ^c	0	2,597
Echo Reservoir	3,225	2,809
Provo River (unstored flows)	13,272	16,777
Weber River (unstored flows)	2,260	0
Central Water Project	10,896	5,746
Salt Lake County mountain streams	938	3,077
Salt Lake County groundwater (wells)	10,459	10,013
Southwest Groundwater Treatment Plant	3,103	2,671
Bingham Canyon Water Treatment Plant ^d	1,060	0
<i>Subtotal for Municipal & Industrial sources</i>	<i>106,831</i>	<i>101,006</i>
Irrigation Water Sources		
Jordanelle Reservoir (Central Utah Project) ^a	0	0
Deer Creek Reservoir (Provo River Project) ^b	0	0
Upper Provo River reservoirs ^c	0	0
Echo Reservoir	0	0
Provo River (unstored flows)	1,286	12,195
Weber River (unstored flows)	0	0
Utah Lake	28,089	15,372
<i>Subtotal for irrigation sources</i>	<i>29,375</i>	<i>27,567</i>
TOTAL ALL SOURCES	136,206	128,573
Total water treated or transported for other agencies	14,232	9,591
<i>Total all water sources & transport</i>	150,438	138,164

A) Provo River Sources
C) Stored in Jordanelle Reservoir

B) Weber, Duchesne, and Provo River sources
D) Treats southwest Salt Lake County groundwater

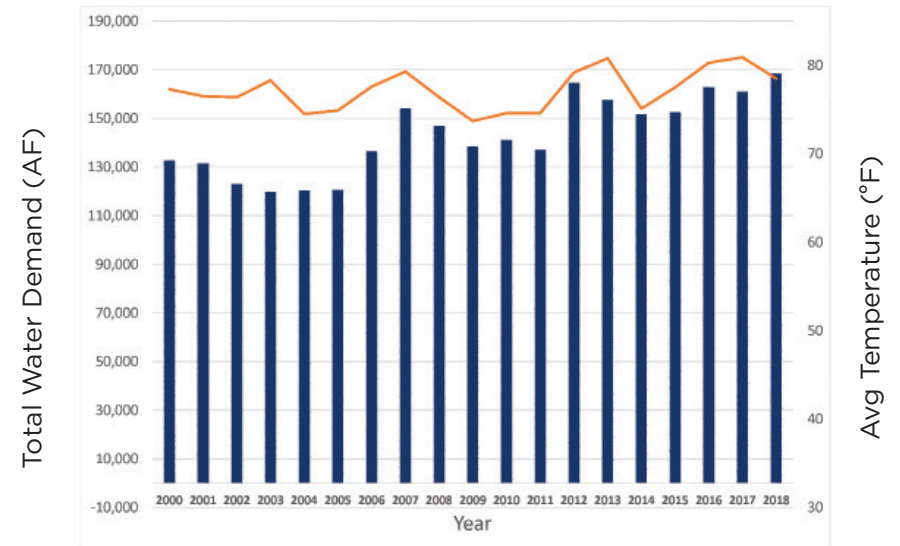
Delivering Quality Every Day

Left: Runoff from Naniiloa Reservoir Springs. Photo by Steve Beck

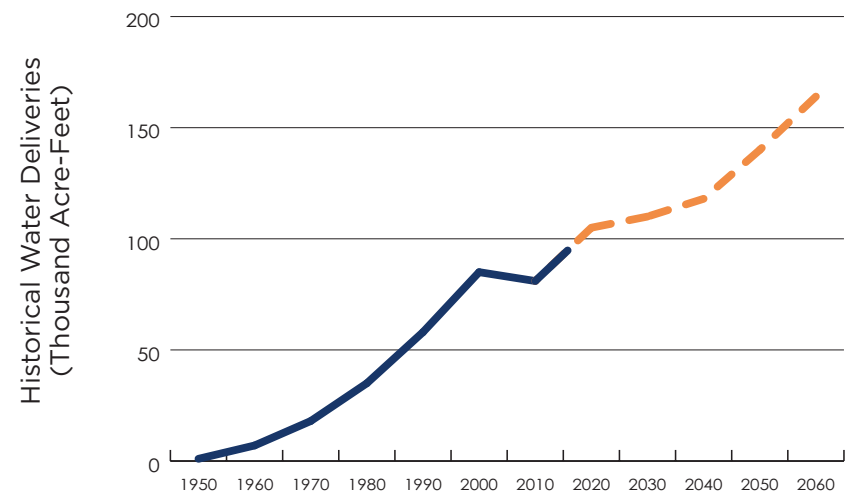
DELIVERIES

Municipal & Industrial (M&I) Water Deliveries	2018 (AF)	2017 (AF)
City of Bluffdale	2,894	2,374
Copperton Improvement District	5	2
Draper City	4,371	4,051
Granger-Hunter Improvement District	19,152	17,838
Herriman City	4,011	3,719
Hexcel Corporation	897	864
Kearns Improvement District	8,116	8,010
Magna Water District	767	786
Midvale City	390	165
Riverton City	4,547	4,764
City of South Jordan	16,729	15,157
City of South Salt Lake	1,774	1,057
Taylorville-Bennion Improvement District	4,701	4,700
Utah Department of Corrections	603	534
WaterPro, Inc. (treated)	951	952
WaterPro, Inc. (raw)	0	0
City of West Jordan	21,173	19,653
White City Water Improvement District	0	0
Willow Creek Country Club	372	338
<i>Subtotal for member agency deliveries</i>	<i>91,453</i>	<i>84,964</i>
JVWCD retail service areas (Holladay, Murray, Sandy, South Salt Lake and unincorporated county)	9,336	8,780
JVWCD system non-revenue water (use & loss)	6,042	7,262
<i>Subtotal for deliveries, use and loss</i>	<i>106,831</i>	<i>101,006</i>
Irrigation and raw water	2018	2017
Utah Dept. of Public Safety	0	15
Welby Jacob Water Users Co. ^a	28,305	27,552
<i>Subtotal for irrigation & raw water</i>	<i>29,375</i>	<i>27,567</i>
Total delivered water	136,206	128,573
M&I Water treated or transported for other agencies	2018	2017
Metropolitan Water District of SL & Sandy	14,232	9,591
<i>Subtotal for treated or transported water</i>	<i>14,232</i>	<i>9,591</i>
Total water delivered, treated or transported	150,438	138,164

Water Demand vs. Average Temperature

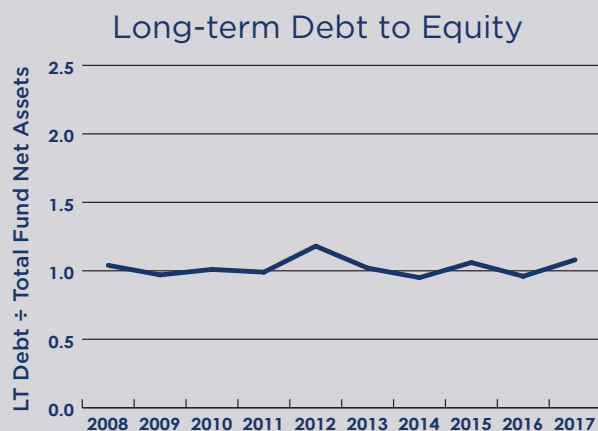
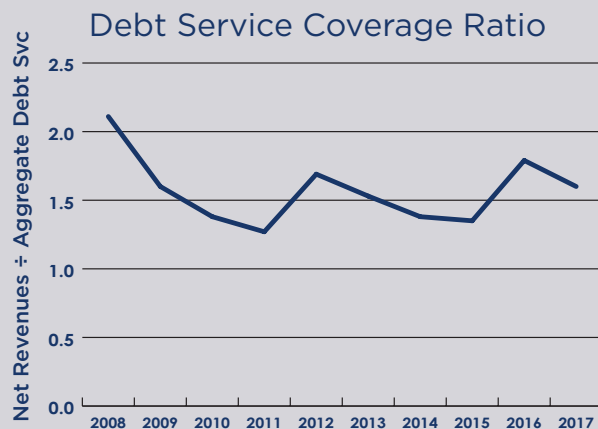


Historical & Projected JVWCD Water Deliveries



a) Sources from Utah Lake, Provo River, Weber River and Duchesne River, used to accomplish the water sources exchange agreement known as the Welby Jacob Exchange.

FINANCIAL STEWARDSHIP



Balance Sheet Summary as of June 30th:

	2018	2017	2016	2015	2014
Assets:					
Current	\$54,213,600	\$54,849,313	\$44,819,066	\$51,431,109	\$47,651,918
Restricted	57,497,690	49,792,125	15,032,770	28,903,249	19,310,145
Capital	497,515,098	471,724,593	448,122,214	424,407,003	392,264,182
Other	19,136,178	15,429,418	16,903,556	16,295,945	17,783,520
Total Assets	\$628,362,566	\$591,498,449	\$524,877,606	\$521,037,306	\$479,009,765
Liabilities:					
Current	\$16,676,945	\$17,229,860	\$14,175,112	\$16,718,015	\$11,676,949
Long-term	333,001,188	306,036,114	249,625,637	257,251,372	221,024,301
Total Liabilities	349,678,133	323,265,974	263,800,749	273,969,387	232,701,250
Total Fund Net Assets	278,684,433	268,232,475	261,076,857	247,067,919	246,308,515
Total Liabilities & Fund Net Assets	\$628,362,566	\$591,498,449	\$524,877,606	\$521,037,306	\$479,009,765

Income Statement Summary for fiscal years ended June 30th:

	2018	2017	2016	2015	2014
Revenues:					
Operating (water sales)	\$53,670,981	\$52,108,797	\$47,830,269	\$40,674,455	\$42,081,690
Property taxes	18,203,887	14,954,597	14,915,457	13,831,898	13,622,517
Interest	1,651,609	1,109,313	370,002	564,331	562,292
Intergovernmental	2,737	29,835	584,285	88,996	26,141
Non-operating	0	45,805	72,265	137,774	6,761
Total Revenues	73,529,214	68,248,347	63,772,278	55,297,454	56,299,401
Expenses:					
Operating	48,251,373	47,608,657	45,332,249	42,387,394	42,789,061
Interest	11,399,419	10,578,867	7,787,165	8,346,776	6,956,471
Non-Operating	1,182,207	588,989			
Total Expenses	60,832,999	58,776,513	53,119,414	50,725,170	49,745,532
Approximate Contribution to Capital Expenses^a	\$12,696,215	\$9,471,834	\$10,652,864	\$4,572,284	\$6,553,869

Other Cash Flow Information for fiscal years ended June 30th:

	2018	2017	2016	2015	2014
Capital Improvements	\$36,367,448	\$31,731,635	\$31,801,417	\$35,310,360	\$8,878,526
Debt Service Payments	\$20,437,815	\$19,188,677	\$15,291,092	\$15,621,788	\$15,982,634

a) Also includes capital projects fund, development fee fund, general equipment needs, emergency reserves, and self-insurance fund.



Looking at valves leading into Jordan Valley Water's 12.5 mg reservoir.
Photo by Leonard Mascher.
We deliver **security** every day.

EXECUTIVE STAFF



Brian McCleary
Controller

Linda Townes
Public Information Manager

Jessica Morgan
Administrative Assistant

Brian Callister
Maintenance Manager

Beverly Parry
Executive Assistant

Michele Guy
Administrative Assistant

Matt Olsen
Communications Manager

Dave Martin
CFO/Treasurer

Reid Lewis
General Counsel

Kurt Ashworth
Human Resources Manager

Shane Swensen
Engineering Manager

Shazelle Terry
Operations Manager

Jason Brown
Information Systems Manager

Staff at press time:

Alan Thackeray	Danny Ernest	Gene Stott	Karen Karriker	Mike Lorenc	Steve Blake
Alex Mitchell	Danny Siaperas	Glen McIntyre	Keenan Robertson	Mike Rasmussen	Steve Crawford
Allen Curtis	Danny White	Gordon Batt	Ken Butterfield	Mindy Obert	Steve Hansen
Amanda Strack	Dave Beratto	Hayley Shaffer	Kevin Crane	Natalie Boyack	Steve Minch
Andy Adams	Dave Hyde	Heidi Nilsson	Kevin Rubow	Nathan Talbot	Steve Schmidt
Ann Mecham	Dave Mecham	Jackie Buhler	Kim Castelan	Nick Bradshaw	Teresa Atkinson
Blake Mousley	Dave Spackman	Jared Brace	Kirk Oman	Nick McDonald	Tim Rainbolt
Brad Boren	David Garcia	Jared Vigil	Kolby Parman	Paul Mattinson	Todd Peterson
Brad Perez	David McLean	Jay Frandsen	Kyle Chapman	Quintin Rubio	Todd Schultz
Brady Young	Debbie Gates	Jeanette Perry	Kyle Kennedy	Ray Stokes	Travis Christensen
Brayden Cluff	Denise Goodwin	Jeff Betton	Leonard Mascher	Robert Squire	Troy Tucker
Bryan Smith	Dustin Bruschi	Jeff King	Lisa Kasteler	Ryan Forsyth	Twila Brantley
Calin Perry	Eddie Ojeda	Jeff Small	Lorena Purissimo	Rylan Walker	Val Eteaki
Cary Shaw	Eduardo Cracchiolo	Jeremy Toone	Lorrie Cowles	Sam Fonua	Val Cossey
Casey Cannon	Ellen Bolliger	Jim Bogenschutz	Marcelo Anglade	Sam Kaumatule	Wade Tuft
Chad Steadman	Ellisa Demetsky	Jon Hilbert	Marcelo Del Rio	Savidtri Thanasilp	Wayne Sims, II
Clifton Smith	Emilie Bashore	Jordan Richards	Margaret Dea	Sharon Smith	Yvette
Clint Thurgood	Eppie Trujillo	Josh Ashcroft	Martin Feil	Shaun Moser	Amparo-Espinoza
Cory Collins	Eric Poulsen	Josh Shrewsbury	Matt Hinckley	Shaun Proctor	
Courtney Brown	Frank Montoya	Joshua McDougall	Megan Hatch	Shayla Moyer	
Cynthia Bee	Frank Smith	JT Cracraft	Mike Axelgard	Stan Grundy	
Dan Claypool	Gage Stewart	Justin Spainhower	Mike Gonzales	Steve Beck	

OUTSTANDING EMPLOYEES

A LOT GOES INTO SUSTAINING

ECONOMY
COMMUNITY
CHANGE
HEALTH
BUSINESS
DEVELOPMENT
LIFE.

JORDAN VALLEY WATER
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www.jvwcd.org
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West Jordan, UT 84088