



# Annual Report





General Managers' Wholesale Member Service Area Message Agencies **Board of Trustees** Capital Projects Water Quality Update 13 Sources & Deliveries Repair & Conservation **Programs** Replacement 20 22 Financial **Executive Staff** Outstanding Stewardship **Employees** 26 27 24

#### Acronyms used in this publication:

AF: Acre-feet

AMI: Advanced Metering Infrastructure

ASR: Aquifer Storage & Recovery

JVWTP: Jordan Valley Water Treatment Plant

MGD: million gallons per day

SCADA: Supervisory Control and Data

Acquisition

SWA-1: Southwest Aqueduct Reach 1 UDOT: Utah Department of Transportation











# GENERAL MANAGERS



#### RESILIENCY IN A TIME OF CHANGE: A MESSAGE FROM OUR GENERAL MANAGER

There's a lot that goes into providing secure, safe drinking water. During these times of uncertainty, Jordan Valley Water is taking every precaution to keep its staff and the public safe. We have created and implemented a 4-level action plan in response to COVID-19, and our staff has been diligently carrying it out. At press time, we were at level 3 implementation, which requires much of our staff to work from home. Only those whose jobs require them to be in the field or at the office are allowed to do so, and even then they are required to social distance—a necessary step to continue providing this essential service.

Fortunately, our treatment processes remove any risk posed by viruses. And while we're glad people are storing water, pandemics aren't the reason to—safe water from the tap is one of the things you can count on.

Earthquakes, however, are another matter. Our recent 5.7 quake added to the pandemic stress, and water systems don't always withstand earthquakes as well as they do pandemics. Our crews were able to inspect our system within about 2.5 hours and found very little damage. It made us realize the importance of the ongoing earthquake preparedness planning efforts by Jordan Valley Water and the community.

With all of this, how do we plan for the future? Resiliency is key. Our 50-year planning horizon must account for an environment of constant change: natural disasters, climate variations, land development trends, population growth, and needed landscape changes for conservation.

Our promise to you is to continue meeting these challenges to provide an ongoing, reliable, adequate, safe, and high-quality drinking water supply.

# WHOLESALE Member Agencies

#### City of Bluffdale

Mark Reid, City Manager Trustee Representative: Sherrie L. Ohrn

### **Draper City**

David Dobbins, City Manager Trustee Representative: A. Reed Gibby

### Granger-Hunter Improvement District

Jason Helm, Interim General Manager Trustee Representatives: Corey L. Rushton & Karen D. Lang

### Herriman City

Brett Wood, City Manager Trustee Representative: Sherrie L. Ohrn

#### **Hexcel Corporation**

Jared Carling, 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: A. Reed Gibby

### Riverton City

Ryan Carter, Interim City Manager Trustee Representative: Sherrie L. Ohrn

### City of South Jordan

Gary Whatcott, City Manager Trustee Representative: Dawn R. Ramsey

#### City of South Salt Lake

Dennis Pay, Public Works Director Trustee Representative: Barbara L. Townsend

## Taylorsville-Bennion Improvement District

Mark Chalk, General Manager Trustee Representative: John H. Taylor

### **Utah Department of Corrections**

Greg Peay, Director of Facilities Trustee Representative: A. Reed Gibby

#### WaterPro, Inc.

Darrin Jensen-Peterson, General Manager Trustee Representative: A. Reed Gibby

#### City of West Jordan

Korban Lee, Chief Administrative Officer Trustee Representative: Lyle C. Summers

#### White City Water Improvement District

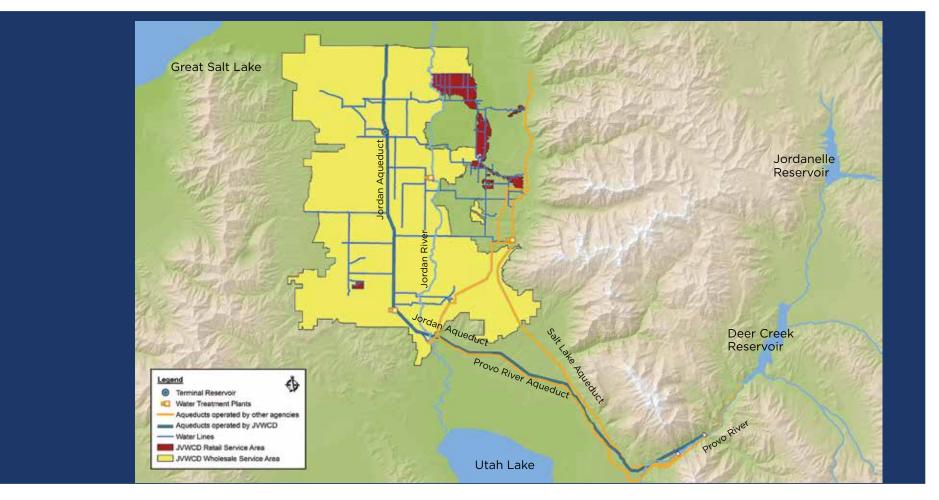
Paul Ashton, General Manager

Trustee Representative: Barbara L. Townsend

### Willow Creek Country Club

Alex Nicolaidis, General Manager Trustee Representative: Barbara L. Townsend





## JORDAN VALLEY WATER'S

## **SERVICE AREA**

ordan 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 20.





SHERRIE OHRN



**DAWN RAMSEY** 



Chair

A. Reed Gibby

Karen D. Lang

Corey L. Rushton

Sherrie L. Ohrn

Dawn R. Ramsey

Lyle C. Summers Conservation Committee Chair

John H. Taylor Finance Committee Chair

Barbara L. Townsend



LYLE SUMMERS











# THANK YOU, RICHARD.

Early in 2020 we said good-bye to Richard Bay, who was General Manager for nearly 13 years of his 38 years at Jordan Valley Water. Photos at right are of some of his projects. Highlights of his career include:

- Firming the District's water supply from 10,000 AF/year to 145,000 AF/year
- Water deliveries increasing from 40,000 AF/year to 100,000 AF/year
- Capital projects budget increasing from \$1.5 million/ year to \$40 million/year
- 11400 South Cross Valley Pipeline and 200 East Booster Pump Station
- Jordan Narrows Pump Station
- Artificial groundwater recharge facilities and research
- Well sites acquisition and drilling
- Lands acquisition for Jordan Valley Water Treatment Plant expansion and Bear River water treatment plant
- Aguifer storage and recovery project with 18 ASR wells
- More than 200,000 AF of annual water supplies developed or contracted
- Seven key agreements negotiated, including the Southwest Jordan Valley Groundwater Project
- Various personnel initiatives
- Many professional memberships, awards, and certifications

Richard inside a new section of the Southwest Aqueduct. Photo by Alan Packard.



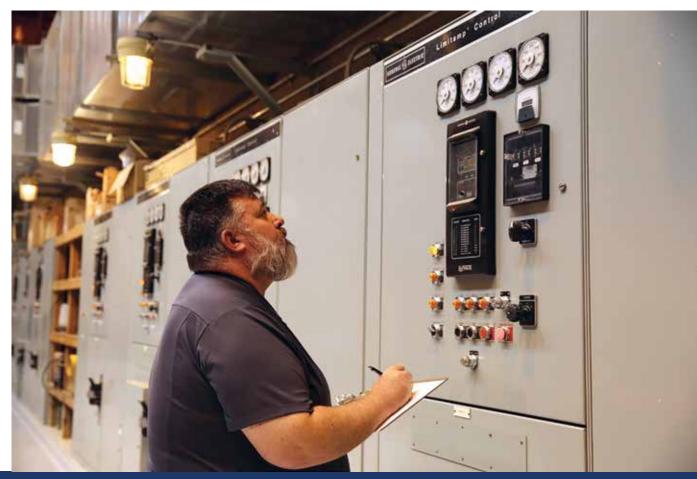




# SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM REPLACEMENT

One of the important tools used by Jordan Valley Water to efficiently operate its water facilities is the Supervisory Control and Data Acquisition (SCADA) system. This system includes a wide variety of devices that measure important operating parameters (e.g. water level, flow rate, equipment on/off status, etc.), and communication equipment. The SCADA system allows Jordan Valley Water staff to monitor and operate all of its raw and finished water distribution facilities, which serve about 1 million people every day. Operators can monitor tank levels, metered flows, and facility pressures as well as remotely actuate valves, pumps and wells.

In 2015 we began a project for complete replacement of the SCADA system, and it is now substantially complete. The original system was installed in 1992 and worked well for almost 25 years; this project came about as support for the original system



# SCADA UPDATE PROJECT

# CAPITAL PROJECTS

was being discontinued. In order to expand the functionality of the existing system and to increase the pool of expertise that would be capable of supporting unique customization, the old system was replaced with GE® Proficy iFix—one of the industry standards for SCADA software systems. The completion of this project wraps up a five-year combined effort by the Jordan Valley Water's Operations, Information Systems and Engineering departments.

## 11800 SOUTH ZONE C PUMP STATION

This project added a new 900 horse-power pump and variable speed drive to the 11800 South Zone C pump station. This will provide new capacity and flexibility to provide for demands in the growing southwest part of the valley.



# JVWTP WELBY CANAL BRIDGE REPLACEMENT

The original entrance bridge to Jordan Valley Water Treatment Plant over the Welby Canal was showing its age and required replacement. This project replaced the bridge with a new box culvert structure that will provide continued safe access to the plant

# 2019 DISTRIBUTION PIPELINE REPLACEMENT



Many of the distribution pipelines in Jordan Valley Water's retail service were installed in the 1960s and are breaking at increased rates. Replacements in 2019 took place in Millcreek and Murray.

# 7271 WEST 11800 SOUTH PIPELINE EXTENSION

This project was a joint venture between
Herriman City and Jordan Valley Water. Although
Herriman only needed an 18-inch diameter
pipeline, a 48-inch diameter pipeline was installed
to provide for future needs in southwest Salt Lake
County. This project exemplifies the cooperative
efforts between Jordan Valley Water and its
member agencies to the benefit of the public.

# JA-4 SLEEVE VALVES REPAIR

The majority of our water supply has been passing through these valves for nearly 40 years. Preventive maintenance was performed on the JA-4 sleeve valves to ensure many more years of reliable service.





# PIPELINE CONDITION ASSESSMENT

Assessment and classification of Jordan Valley Water's piping network was completed for all transmission pipes in 2019. The information from this assessment considered break history, installation date, soil conditions, pipe type, and several other factors to determine which pipelines are more susceptible to failure. The assessment data will be rolled into the Demand, Supply and Major Conveyance Study which is currently being prepared. The assessment of existing infrastructure will help identify future capital replacement projects.

# JA-2 BANGERTER HIGHWAY RELOCATION

UDOT is building grade-separated interchanges at all intersections on the Bangerter Highway. It is currently working on the 6200 South interchange which also required relocation of a large section of the Jordan Aqueduct Reach 2. In order to protect this important facility, more than 2,000 feet of the 78-inch diameter aqueduct was relocated farther west. Jordan Valley Water staff worked with UDOT, consultants, and contractors to accomplish this project.

# SERWTP FILTER BUILDING IMPROVEMENTS

Southeast Regional Water Treatment Plant was constructed in 1982 and required some rehabilitation and upgrades. The scope of work included repairs to existing glue-lam beams,

gypsum board, tile, clerestory windows replacement, kitchen remodeling, pipe repainting, installation of a fire sprinkler system in the filter building, and other miscellaneous improvements.

## 2018 STEEL RESERVOIR COATING AND REPAIRS PROJECT

Jordan Valley Water has many steel reservoirs that require periodic coating and repairs to extend their life. The work included abrasive blasting, coating, repairs, lead coating removal, and miscellaneous tank modifications to five welded steel water storage tanks: 9400 South 2800 East 1 million gallon (MG) roof and 2 MG exterior, 6200 South 3200 West 1 MG exterior, 6000 West 4700 South 1 MG interior, and JVWTP 1 MG backwash tank interior and exterior. Also included in the project were the vehicular and pedestrian bridges on the North Jordan Canal at Jordan Valley Water's headquarters site.





# SOUTHWEST AQUEDUCT REACH 1

Southwest Aqueduct Reach 1 (SWA-1) is a new 66-inch pipeline which runs parallel to Jordan Aqueduct Reach 1 (JA-1). It provides important back-up capacity to convey raw water to Jordan Valley Water Treatment Plant (JVWTP). Previously, JVWTP relied solely on JA-1 for water supply and was vulnerable to possible failure of JA-1, which was installed in 1972. SWA-1 now provides the redundancy needed and additional conveyance capacity when operated together with JA-1 to support future expansion of JVWTP.

# HEADQUARTERS LOWER CAMPUS PAVING PROJECT

The lower campus site paving and storm drainage requires repair after many years of service. The project includes improvements to the site drainage, repaving of the lower campus asphalt, slurry and crack sealing of the asphalt pavement around the Southwest Groundwater Treatment Plant, and construction of covered aggregate storage bins for maintenance purposes.

# WATER QUALITY UPDATE Jordan Valley Water Treatment Plant (sedimentation bays shown in this picture) has a new pilot treatment plant described on this page. Piloting new processes ensures the District is getting improved water quality and a more reliable operation. Photo by H. Nilsson.

A new pilot plant is being installed at Jordan Valley Water Treatment Plant, which is a small version of the actual plant. It includes the four primary treatment stages: coagulation, flocculation, sedimentation, and filtration; the only stage not included is disinfection. The pilot plant simulates treatment processes at the actual plant without the expense, labor, and risk associated with a full-scale test.

Plans for the new pilot plant are to test sedimentation and filtration improvements, which if successful, will allow expansion of JVWTP without expanding its footprint. These improvements will Increase flows and improve water quality, and bring the 45-year-old plant up to today's technological standards.

All data collection, backwash testing, and other processes will happen automatically in the pilot plant, with only a little help from the operations staff—all possible through their laptops.

Jordan Valley Water has used pilot testing in the past to improve coagulation and flocculation processes and to test disinfectants, like chlorine dioxide. The testing for chlorine dioxide was so successful that it has been used in the full-scale plant for many years now.

For the new pilot plant, all the connections have been made except the plumbing, which will be completed in the coming months.







# LOCALSCAPES REWARDS

In 2019 significant progress was made with Localscapes Rewards. Four different types of Localscapes Rewards are now offered: Homeowner Rewards, Contractor Rewards, Designer Rewards, and Homebuilder Rewards. All four can receive a reward for designing and/or installing a Localscape.

Localscapes Rewards

## UTAH WATER SAVERS

Through Utah Water Savers, homeowners are also eligible for Flip Your Strip, Landscape Consultations, Toilet Rebates, and Smart Controller Rebates.



# CONSERVATION PROGRAMS

# CONSERVATION PLAN UPDATE

Jordan Valley Water's Conservation Plan was updated in 2019. It defines a new water conservation goal and outlines the costs, strategies, and programs needed to achieve that goal. Chief among the priorities is the wide-scale adoption of indoor and outdoor water efficiency standards for all new construction. This will ensure plumbing fixtures and landscapes are installed the right way from the beginning, and will be a hedge against future drought periods, water shortages, water supply costs, and conservation expenses.





# LANDSCAPE LEADERSHIP GRANTS

Landscape Leadership Grants provide funding for commercial landscape projects including parks, street frontage, businesses, or any nonresidential landscape that meets water efficiency standards.

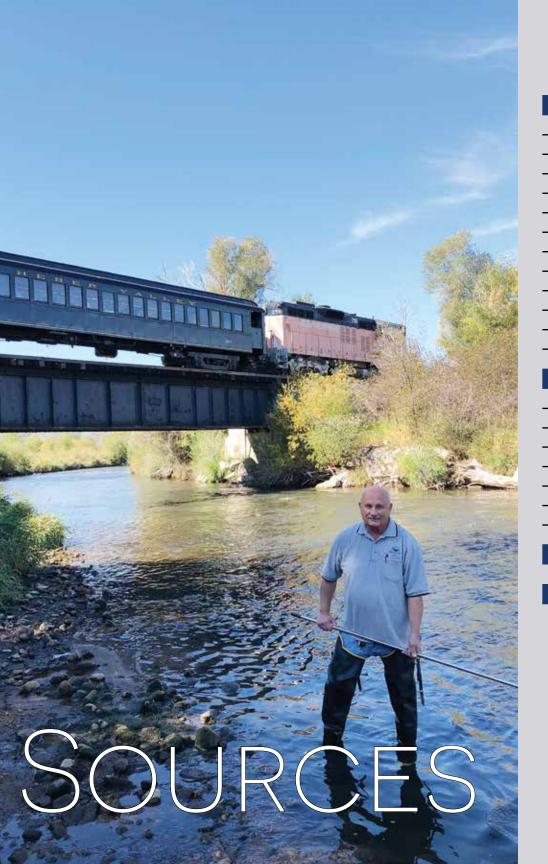


#### ONLINE EDUCATION

Some of Jordan Valley Water's garden classes are now available online. We also added to our educational offerings with Youtube videos and

live demonstration classes in the garden.





Municipal & Industrial Water Sources	2019 (AF)	2018 (AF)
Jordanelle Reservoir (Central Utah Project) <sup>a</sup>	30,087	52,760
Deer Creek Reservoir (Provo River Project) <sup>b</sup>	13,425	8,858
Upper Provo River reservoirs <sup>C</sup>	1,969	0
Echo Reservoir	2,992	3,149*
Provo River (unstored flows)	21,580	11,986*
Weber River (unstored flows)	0	2,260
Central Water Project	8,562	10,896
Salt Lake County mountain streams	3,009	632*
Culinary water purchased from MWDSLS	852	1,012
Salt Lake County groundwater (wells)	8,057	7,766*
Southwest groundwater (wells)	5,274	4,895*
Bingham Canyon Water Treatment Plant <sup>d</sup>	3,774	1,060
Subtotal for Municipal & Industrial sources	99,580	105,274*
Irrigation Water Sources		
Jordanelle Reservoir (Central Utah Project) <sup>a</sup>	0	0
Deer Creek Reservoir (Provo River Project) <sup>b</sup>	624	0
Upper Provo River reservoirs <sup>C</sup>	0	0
Echo Reservoir	0	0
Provo River (unstored flows)	11,270	1,286
Weber River (unstored flows)	0	0
Utah Lake	13,677	27,625
Subtotal for irrigation sources	25,571	28,911*
TOTAL ALL SOURCES	125,151	134,185*
Total water treated or transported for other agencies	10,608	14,232
Total all water sources & transport	135,759	148,417*

a) Provo River Sources
b) Weber, Duchesne, and Provo River sources
c) Stored in Jordanelle Reservoir
d)Treats southwest Salt Lake County groundwater
\*Improved water source and delivery accounting has been adopted. 2018's numbers reflect
the update.

## Delivering Quality Every Day®

Left: Mike samples a section of the Middle Provo River, a main source of drinking water. Photo by S. Grundy.
Right: Calin grades the access road to Bell Canyon.
Photo by D. Siaperas.

Municipal & Industrial (M&I) Water Deliveries	2019 (AF)	2018 (AF)
City of Bluffdale	2,917	2,894
Copperton Improvement District	21	5
Draper City	4,016	4,371
Granger-Hunter Improvement District	18,929	19,152
Herriman City	4,527	4,011
Hexcel Corporation	874	897*
Kearns Improvement District	7,473	8,116*
Magna Water District	800	767
Midvale City	2,626	390
Riverton City	4,329	4,547
City of South Jordan	15,175	16,729
City of South Salt Lake	1,058	1,774
Taylorsville-Bennion Improvement District	4,044	4,701
Utah Department of Corrections	534	603
WaterPro, Inc. (treated) WaterPro, Inc. (raw)	950 0	951* 0
City of West Jordan	18,513	21,173
White City Water Improvement District	0	0
Willow Creek Country Club	285	373*
Subtotal for member agency deliveries	87,072	91,454
JVWCD retail service areas (Holladay, Murray, Sandy, South Salt Lake and unincorporated county)	7,897	9,336
JVWCD system non-revenue water (use & loss)	4,612	4,484*
Subtotal for deliveries, use and loss	99,580	105,274
Irrigation and raw water	2019	2018
Welby Jacob Water Users Co. <sup>a</sup>	25,571	28,911*
Subtotal for irrigation & raw water	25,571	28,911
Total delivered water	125,151	134,185*
M&I Water treated or transported for other agencies	2019	2018
Metropolitan Water District of SL & Sandy	10,608	14,232

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.

\*Improved water source and delivery accounting has been adopted 2018's numbers reflect.

135,759 148,417\*

Total water delivered, treated or transported



<sup>\*</sup>Improved water source and delivery accounting has been adopted. 2018's numbers reflect the update.





#### Repair & Replacement

Aging infrastructure is one topic every water agency knows something about. Some of the working infrastructure in this valley was installed when the pioneers first arrived, but most of it falls into the 50 years old or younger category.

With estimates for statewide water infrastructure repairs as high as \$18 billion into 2060, water agencies and the state will need to work together to ensure infrastructure stays viable and able to deliver our quality product.

#### Watersheds

Watersheds need protection as much as any other item discussed in this publication. They house the very sources of our drinking water, and damage to them can have long-lasting and far-reaching consequences.

Jordan Valley Water participates in several watershed protection programs, like the Provo River Watershed Council, to ensure our drinking water sources are as safe and pristine as possible. For information about what you can do to help, visit ProvoRiverWatershed.org.





# Debt Service Coverage Ratio 2.5 1.5 1.0 0.0 2000 2011 2012 2014 2015 2014 2017 2018 2018



# FINANCIAL STEWARDSHIP

Balance Sheet Summary as of June 30th:							
	2019	2018	2017	2016	2015		
Assets: Current Restricted Capital Other	\$54,590,332 69,266,250 526,273,827 19,566,111	\$54,213,600 57,497,690 497,515,098 19,136,178	\$54,849,313 49,792,125 471,427,593 15,429,418	\$44,819,066 15,032,770 448,122,214 16,903,556	\$51,431,109 28,903,249 424,407,003 16,295,945		
Total Assets	\$669,696,520	\$628,362,566	\$591,498,449	\$524,877,606	\$521,037,306		
<u>Liabilities:</u> Current Long-term	\$18,216,397 356,952,015	\$16,676,945 333,001,188	\$17,229,860 306,036,114	\$14,175,112 249,625,637	\$16,718,015 257,251,372		
Total Liabilities	375,168,412	349,678,133	323,265,974	263,800,749	273,969,387		
Total Fund Net Assets	294,528,108	278,684,433	268,232,475	261,076,857	247,067,919		
Total Liabilities & Fund Net Assets	\$669,696,520	\$628,362,566	\$591,498,449	\$524,877,606	\$521,037,306		
Income Statement Summary for fiscal years ended June 30th:							
	2019	2018	2017	2016	2015		
Revenues: Operating (water sales) Property taxes Interest Intergovernmental Non-operating	\$53,222,432 20,063,290 2,260,091 145,669 4,610,393	\$53,670,981 18,203,887 1,651,609 2,737 0	\$52,108,797 14,954,597 1,109,313 29,835 45,805	\$47,830,269 14,915,457 370,002 584,285 72,265	\$40,674,455 13,831,898 564,331 88,996 137,774		
Total Revenues	80,301,875	73,529,214	68,248,347	63,772,278	55,297,454		
Expenses: Operating Interest Non-operating	50,315,995 12,984,228 281,244	48,251,373 11,399,419 1,182,207	47,608,657 10,578,867 588,989	45,332,249 7,787,165 0	42,387,394 8,346,776 0		
Total Expenses	63,581,467	60,832,999	58,776,513	53,119,414	50,725,170		
Approximate Contribution to Capital Expenses <sup>a</sup>	\$16,720,408	\$12,696,215	\$9,471,834	\$10,652,864	\$4,572,284		
Other Cash Flow Information for fiscal years ended June 30th:							
	2019	2018	2017	2016	2015		
Capital Improvements	\$41,562,334	\$36,367,448	\$31,731,635	\$31,801,417	\$35,310,360		
Debt Service Payments	\$20,365,220	\$20,437,815	\$19,188,677	\$15,291,092	\$15,621,788		

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



# EXECUTIVE STAFF























Not shown: Mindy Keeling

#### Staff at press time:

Alex Mitchell Allen Curtis Amanda Strack Andy Adams Ann Mecham Antonio Cardenas **Austin Jones Bailey Anderson** Blake Mousley **Brad Boren Brad Perez Brady Young** Brayden Cluff Brayden Jensen **Bryan Smith** Calin Perry Casey Cannon Chad Steadman Clifton Smith Clint Thurgood Cory Collins Courtney Brown

Cynthia Bee Dan Claypool Danny Ernest Danny Siaperas Danny White Dave Beratto Dave Hyde Dave Mecham Dave Spackman David Garcia David McLean **Debbie Gates Denise Goodwin Dustin Brusch** Eddie Ojeda Eduardo Cracchiolo Ellen Bolliger Ellisa Demetsky **Emilie Bashore Eppie Trujillo** Eric Poulsen Ethan Granger

Frank Montoya Frank Smith Gage Stewart Gavin Clark Glen McIntyre Hayden Coziar Hayley Shaffer Heidi Nilsson Jackie Buhler Jared Brace Jared Vigil Jeanette Perry Jed Brough Jeff Betton Jeff Burton Jeff King Jeff Small Jeremy Toone Jim Bogenschutz Jon Hilbert Jordan Richards Jordan Tomsic

Josh Ashcroft Josh Shrewsbury Joshua McDougall JT Cracroft Justin Spainhower Karen Karriker Keenan Robertson Ken Butterfield **Kevin Crane Kevin Rubow** Kim Castelan Kolby Parman Kyle Chapman Kyle Kennedy Laina McGinty Lisa Kasteler Lorena Purissimo **Lorrie Cowles** Marcelo Anglade Marcelo Del Rio Margaret Dea Martin Feil

Matt Hinckley Megan Hatch Michele Guy Mike Axelgard Mike Gonzales Mike Lorenc Mike Rasmussen Mindy Keeling Natalie Boyack Nathan Talbot Nick Bradshaw Nick McDonald Paul Mattinson **Quintin Rubio** Ray Stokes Robert Squire Ryan Forsyth Rylan Walker Savidtri Thanasilp Scott Fitzpatrick Sharon Smith Shaun Moser

**Shaun Proctor** Stan Grundy Steve Beck Steve Blake Steve Crawford Steve Hansen Steve Minch Steve Schmidt Teresa Atkinson Tim Rainbolt **Todd Peterson** Todd Schultz Travis Christensen Troy Black Troy Tucker Twila Brantley Vai Eteaki Val Cossev Wade Tuft Wayne Sims, II Yvette Amparo-Espinoza

# Outstanding Employees

# RESILIENCY IN A TIME OF CHANGE.

JORDAN VALLEY WATER CONSERVANCY DISTRICT

**Delivering Quality Every Day®** 

www.jvwcd.org 8215 South 1300 West West Jordan, UT 84088