

**WE WORK HARD FOR WATER  
SO YOU DON'T HAVE TO.**

# 2016 ANNUAL REPORT



**JORDAN VALLEY WATER  
CONSERVANCY DISTRICT**

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**Acronyms used in this publication:**

AF: Acre-feet

AMI: Advanced Metering Infrastructure

CT: Contact Time

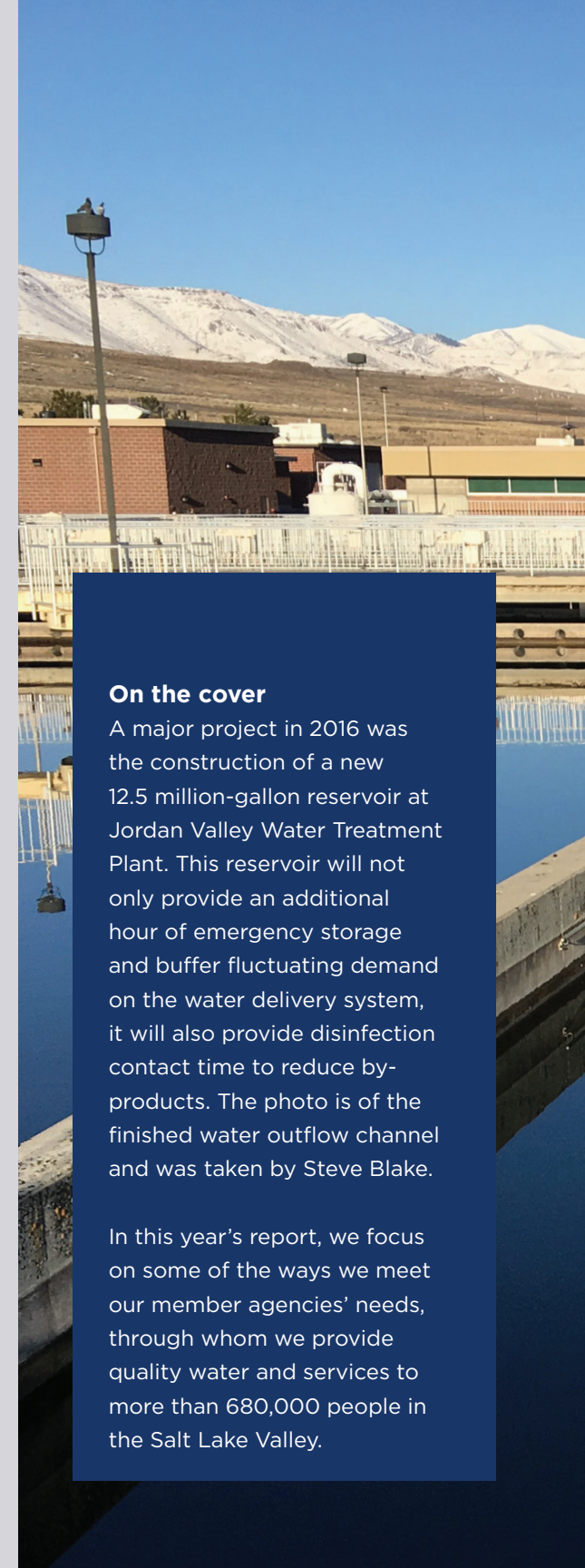
JVWTP: Jordan Valley Water Treatment Plant

MGD: million gallons per day

SCADA: Supervisory Control and Data Acquisition



**JORDAN VALLEY WATER**  
CONSERVANCY DISTRICT



**On the cover**

A major project in 2016 was the construction of a new 12.5 million-gallon reservoir at Jordan Valley Water Treatment Plant. This reservoir will not only provide an additional hour of emergency storage and buffer fluctuating demand on the water delivery system, it will also provide disinfection contact time to reduce by-products. The photo is of the finished water outflow channel and was taken by Steve Blake.

In this year's report, we focus on some of the ways we meet our member agencies' needs, through whom we provide quality water and services to more than 680,000 people in the Salt Lake Valley.



Jordan Valley Water Treatment Plant  
Photo by Tweet Johnson.



# GENERAL MANAGERS

Barton A. Forsyth  
*Assistant General Manager*

Richard P. Bay  
*General Manager*

Alan E. Packard  
*Assistant General Manager*



JORDAN VALLEY WATER  
CONSERVANCY DISTRICT

Jordan Valley Water provides water service for more than 680,000 residents in Salt Lake County. This is a challenging undertaking, involving tremendous amounts of water infrastructure. As Jordan Valley Water provides water service to its customers, it addresses water infrastructure in two important approaches: managing and maintaining existing infrastructure, and expanding new infrastructure to provide service for a rapidly growing population. The extensive scope of this water infrastructure can easily go unnoticed, and unappreciated by the public, because most is out of sight and underground.

Jordan Valley Water recently conducted tours for elected officials by walking inside the Jordan Aqueduct Terminal Reservoir. This huge underground concrete cavern stores 100 million gallons of treated water and provides service to Jordan Valley Water's member cities. Despite its tremendous capacity, the elected officials were surprised to learn that its capacity is only equal to about 13 hours of summer water demands!

The Terminal Reservoir provides a good visual example of the two approaches to water infrastructure by Jordan Valley Water. Managing this tremendous infrastructure requires ongoing maintenance, regular repair, and replacement of aging components. At the same time, its 13 hours of peak demand capacity reminds visitors of the need to continually expand and enlarge water infrastructure to meet the needs of Jordan Valley Water's rapidly growing member cities.

In this year's annual report, we will focus on work and efforts by Jordan Valley Water to maintain and improve water service to our member agencies, including fast-growing cities, water improvement districts, state government departments, and corporations.

How can Jordan Valley Water best support its fast-growing cities and improvement districts, as well as those that are more stable and nearly built out? Each agency requires stable, consistent, reliable, and high-quality water, 24 hours of every day of the year. Jordan Valley Water's capital plan includes aggressive repair and replacement projects to maintain aging infrastructure and to provide water delivery redundancies, as well as aggressive expansion of water infrastructure in areas of new growth. This approach provides substantial benefits to nearly built-out cities and districts as well as rapidly growing ones, by providing the ability to nimbly meet water needs of changing demographics and rapid population growth.

In short, the capital projects plan of Jordan Valley Water provides resources to manage existing water infrastructure and to build new infrastructure to provide more reliable, high-quality water service for all of our member cities, districts, and corporations. These efforts mean reliable, high-quality water deliveries to individual water customers throughout Salt Lake Valley.

# 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

Brian 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: Gary C. Swensen

## 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


Mark Palesh, City Manager  
Trustee Representative: Chad G. Nichols

## White City Water Improvement District

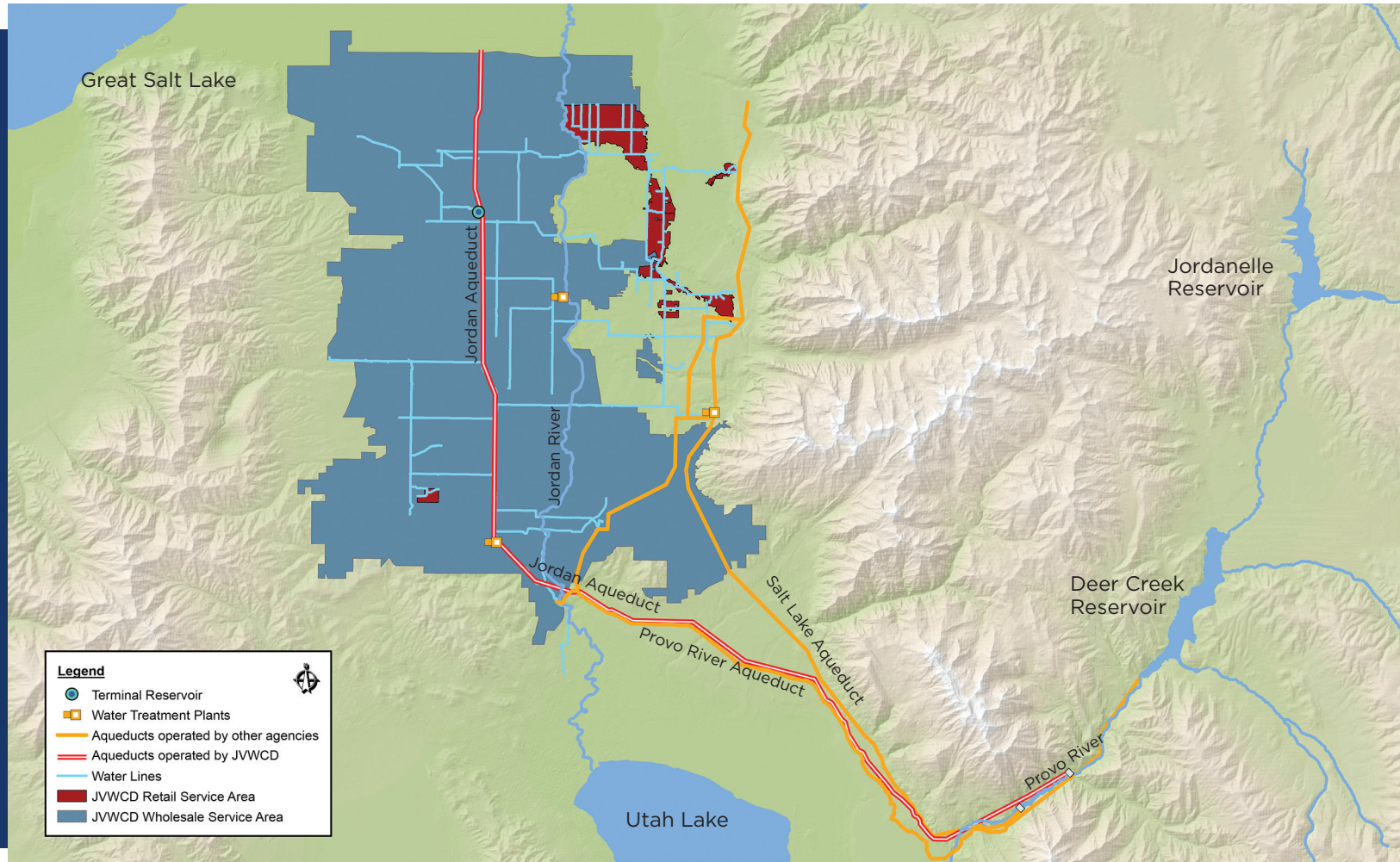
Paul Ashton, General Manager  
Trustee Representative: Stephen W. Owens

## Willow Creek Country Club

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



Replacing a 24-inch valve at Southwest Groundwater Treatment Plant. This treatment plant purifies mining-contaminated groundwater that would otherwise be unusable by our member agencies.  
Photo by Brady Young.



# 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 13.



# TRUSTEES



Left to right, back row

Karen D. Lang

Stephen W. Owens  
Conservation Committee Chair

W. Brent Johnson

Gregory R. Christensen

Chad G. Nichols

Left to right, front row

Corey L. Rushton  
Chair

Gary C. Swensen

Scott L. Osborne  
Vice Chair

Ronald E. Sperry  
Finance Committee Chair

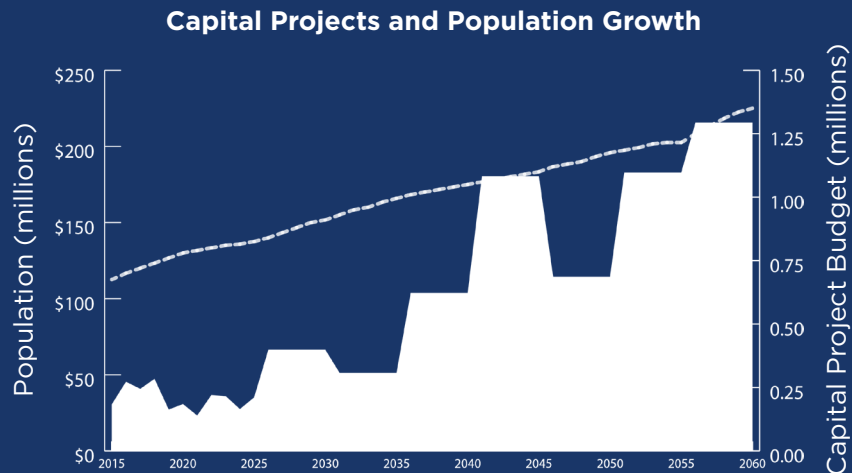
# CAPITAL PROJECTS



# CAPITAL PROJECTS AND POPULATION

After water conservation efforts, capital projects are the cornerstone of serving our current and growing population. Not only are capital projects how we repair and replace aging infrastructure, they are also how we pave the way for the future. They include big-ticket items such as canal enclosures, pipeline relocations, new water development, and expansion of treatment plants or other existing infrastructure.

Below is a graph that shows anticipated population growth climbing over our projected expenditures in capital projects. Careful planning is the only way we can stay ahead of the needs of coming generations.



**J**ordan Valley Water's capital projects allow us to better serve more than 680,000 population through our member agencies. In 2016, major capital projects included the replacement of our SCADA system, construction of a new 12.5 million-gallon finished water storage reservoir at Jordan Valley Water Treatment Plant, and implementation of an advanced metering infrastructure (AMI) for our retail customers. In addition, we implemented a special water conservation initiative called Localscapes and worked on many other operation and maintenance projects.



Opposite page: 78-inch finished water connection from new 12.5 MG reservoir at JWTP. Photo by David McLean.

Above: Pouring a new reservoir outflow channel for the same new 12.5 MG reservoir. This additional stored finished water will buffer fluctuating demand, reduce disinfection by-products, and provide about three hours of emergency storage. Photo by Tweet Johnson.

# DELIVERING **QUALITY** EVERY DAY

With a planning horizon of 50 years, delivering our quality water takes dedication and tenacity. Our sources of drinking water have to come from farther and farther away, meaning our capital projects take more planning and effort than ever.

Our capital projects are just one example of how we serve our member agencies and take care of business: planning ahead to build for now and into the future.

## SCADA SYSTEM REPLACEMENT

SCADA, or Supervisory Control and Data Acquisition, is how Jordan Valley Water monitors and controls its water delivery system. This has been a major project over the past few years and will improve our ability to monitor our system and increase accuracy of our data.

## 12.5-MG STORAGE RESERVOIR

Jordan Valley Water Treatment Plant is the largest treatment plant in Utah, and serves water to a million people. This additional reservoir is being built to buffer the fluctuating demand for finished water, provide end-of-process contact time to reduce disinfection by-products, and provide about three hours of additional emergency storage.

## ADVANCED METERING INFRASTRUCTURE

AMI is the latest technology in measuring water use that provides water use data in near real time. Homeowners will receive new, enhanced bills, and be able to use an online “portal” to see exactly when they used the most water, adjust accordingly, and become more informed and conscientious consumers. Semi-annual reporting will remind them how they used water for the year and reinforce water-efficiency messaging.



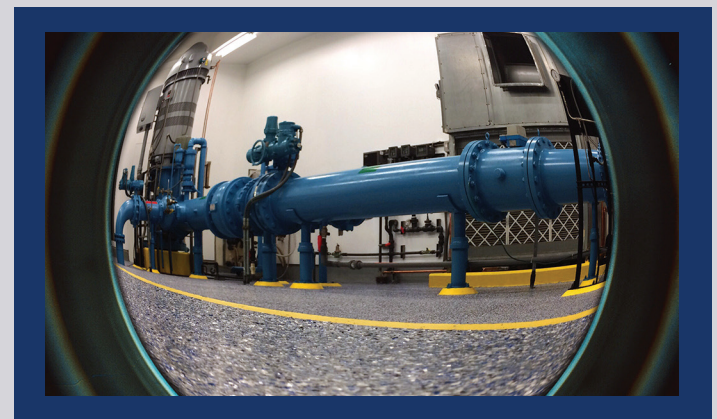
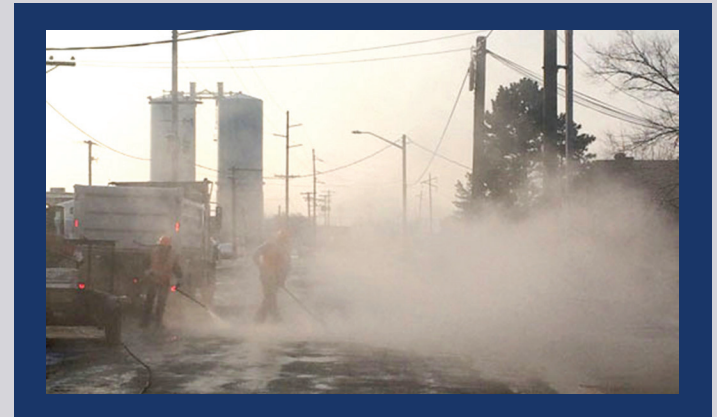


Installing a 72-inch butterfly isolation valve on reach 2 of the Southwest Aqueduct. This interconnect vault for the Jordan Aqueduct and Southwest Aqueduct is part of the 12.5 MG reservoir project at Jordan Valley Water Treatment Plant.  
Photo by Steve Blake

# DELIVERIES

Municipal & Industrial (M&I) Water Deliveries	2016 (AF)	2015 (AF)
City of Bluffdale	2,496	2,135
Copperton Improvement District	0	3
Draper City	3,963	3,686
Granger-Hunter Improvement District	19,517	18,960
Herriman City	3,303	2,736
Hexcel Corporation	679	677
Kearns Improvement District	8,425	7,568
Magna Water District	823	807
Midvale City	131	182
Riverton City	4,812	3,168
City of South Jordan	15,089	14,003
City of South Salt Lake	747	1,320
Taylorsville-Bennion Improvement District	4,700	4,700
Utah Department of Corrections	555	550
WaterPro, Inc. (treated)	1,059	990
WaterPro, Inc. (raw)	85	422
City of West Jordan	20,329	19,505
White City Water Improvement District	0	0
Willow Creek Country Club	352	288
<i>Subtotal for member agency deliveries</i>	<i>87,065</i>	<i>81,700</i>
JVWCD retail service areas (Holladay, Murray, Sandy, South Salt Lake and unincorporated county)	8,721	8,201
JVWCD system non-revenue water (use & loss)	1,634	3,114
<i>Subtotal for deliveries, use and loss</i>	<i>97,420</i>	<i>93,015</i>
<b>Irrigation and raw water</b>	<b>2016</b>	<b>2015</b>
Utah Dept. of Public Safety	14	7
Welby Jacob Water Users Co. <sup>a</sup>	25,079	29,715
<i>Subtotal for irrigation &amp; raw water</i>	<i>25,093</i>	<i>29,722</i>
<b>Total delivered water</b>	<b>122,513</b>	<b>122,737</b>
<b>M&amp;I Water treated or transported for other agencies</b>	<b>2016</b>	<b>2015</b>
Metropolitan Water District of SL & Sandy	9,287	9,360
<i>Subtotal for treated or transported water</i>	<i>9,287</i>	<i>9,360</i>
<b>Total water delivered, treated or transported</b>	<b>131,800</b>	<b>132,097</b>

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.



# SOURCES

## WE WORK HARD FOR WATER SO YOU DON'T HAVE TO

Municipal & Industrial Water Sources	2016 (AF)	2015 (AF)
Jordanelle Reservoir (Central Utah Project) <sup>a</sup>	39,058	45,309
Deer Creek Reservoir (Provo River Project) <sup>b</sup>	6,349	12,216
Upper Provo River reservoirs <sup>c</sup>	3,457	0
Echo Reservoir	3,311	3,371
Provo River (unstored flows)	20,755	14,752
Weber River (unstored flows)	0	839
Central Water Project	7,443	1,670
Salt Lake County mountain streams	2,229	1,981
Salt Lake County groundwater (wells)	13,302	5,951
Southwest Groundwater Treatment Plant	1,472	3,443
Bingham Canyon Water Treatment Plant <sup>d</sup>	44	3,483
<i>Subtotal for Municipal &amp; Industrial sources</i>	<i>97,420</i>	<i>93,015</i>
Irrigation Water Sources		
Jordanelle Reservoir (Central Utah Project) <sup>a</sup>	0	0
Deer Creek Reservoir (Provo River Project) <sup>b</sup>	0	0
Upper Provo River reservoirs <sup>c</sup>	0	0
Echo Reservoir	0	0
Provo River (unstored flows)	5,340	4,005
Weber River (unstored flows)	0	0
Utah Lake	19,753	25,717
<i>Subtotal for irrigation sources</i>	<i>25,093</i>	<i>29,722</i>
<b>TOTAL ALL SOURCES</b>	<b>122,513</b>	<b>122,737</b>
Total water treated or transported for other agencies	9,287	9,360
<b>Total all water sources &amp; transport</b>	<b>131,800</b>	<b>132,097</b>

a) Provo River sources

b) Weber, Duchesne, and Provo River sources

c) Stored in Jordanelle Reservoir

d) Treats southwest Salt Lake County groundwater

Photos, previous page, top to bottom:

Cleaning up after a mainline break includes spraying down the roadway where repairs were made. Photo by Frank Smith.

Meter key lids in black and white. Photo by Chad Steadman.

Maintenance staff keeps our well houses in pristine condition. Photo by Steve Schmidt.

Photo, left: Middle Fork stream above Wasatch Blvd. Photo by Heidi Nilsson.



The 66-inch Jordan Aqueduct at 5400 South Bangerter Highway was recently relocated to accommodate a highway overpass. Photo by Danny Ernest.



# 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 arrived, but most of it falls into the 50 years or younger category.

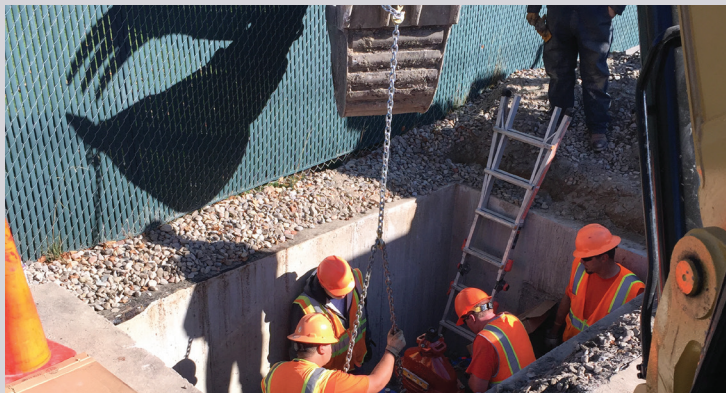
With estimates for statewide repairs as high as \$18 billion by 2060, water agencies and the state will need to work together to ensure infrastructure stays viable and able to deliver our quality product.

Repair and replacement projects in 2016 included the following:

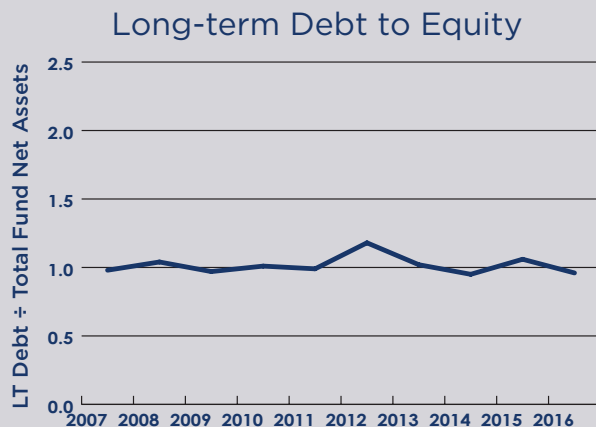
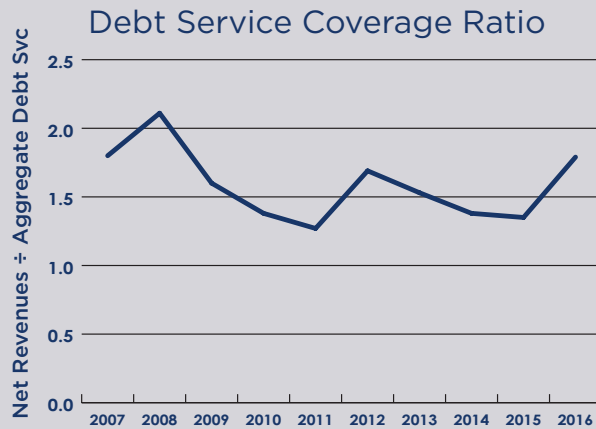
- Main Street and West Temple pipeline replacements
- Jordan Valley Water Treatment Plant high-rise building roof replacement
- Reservoir painting and repairs
- Well pump station chemical feed system replacements

A significant maintenance project in 2016 was the relocation of a section of the 66-inch Jordan Aqueduct to accommodate a new overpass on Bangerter Highway.

Photos: Installing a 12-inch meter and strainer at Willow Creek. Photo by Calin Perry.  
Val Cossey and Andy Adams repair a meter leak through a juniper hedge. Photo by Ron Kidd.



# FINANCIAL STEWARDSHIP



## Balance Sheet Summary as of June 30th:

	2016	2015	2014	2013	2012
<b>Assets:</b>					
Current	\$44,819,066	\$51,431,109	\$47,651,918	\$44,892,167	\$37,538,621
Restricted	15,032,770	28,903,249	19,310,145	24,451,273	35,305,544
Capital	448,122,214	424,407,003	394,264,182	394,514,905	388,976,187
Other	16,903,556	16,295,945	17,783,520	19,932,077	23,997,605
<b>Total Assets</b>	<b>\$524,877,606</b>	<b>\$521,037,306</b>	<b>\$479,009,765</b>	<b>\$483,790,422</b>	<b>\$485,817,957</b>
<b>Liabilities:</b>					
Current	\$14,175,112	\$16,718,015	\$11,676,949	\$14,322,006	\$16,020,505
Long-term	249,625,637	257,251,372	221,024,301	228,223,829	235,669,859
<b>Total Liabilities</b>	<b>263,800,749</b>	<b>273,969,387</b>	<b>232,701,250</b>	<b>242,545,835</b>	<b>251,690,364</b>
<b>Total Fund Net Assets</b>	<b>261,076,857</b>	<b>247,067,919</b>	<b>246,308,515</b>	<b>241,244,587</b>	<b>234,127,593</b>
<b>Total Liabilities &amp; Fund Net Assets</b>	<b>\$524,877,606</b>	<b>\$521,037,306</b>	<b>\$479,009,765</b>	<b>\$483,790,422</b>	<b>\$485,817,957</b>

## Income Statement Summary for fiscal years ended June 30th:

	2016	2015	2014	2013	2012
<b>Revenues:</b>					
Operating (water sales)	\$47,830,269	\$40,674,455	\$42,081,690	\$40,702,664	\$40,097,418
Property taxes	14,915,457	13,831,898	13,622,517	13,607,576	13,327,419
Interest	370,002	564,331	562,292	666,589	590,549
Intergovernmental	584,285	88,996	26,141	531,870	1,929,610
Non-operating	72,265	137,774	6,761	174,690	25,281
<b>Total Revenues</b>	<b>63,772,278</b>	<b>55,297,454</b>	<b>56,299,401</b>	<b>55,683,389</b>	<b>55,970,277</b>
<b>Expenses:</b>					
Operating	45,332,249	42,378,394	42,789,061	40,570,432	38,750,188
Interest	7,787,165	8,346,776	6,956,471	6,498,385	6,468,018
<b>Total Expenses</b>	<b>53,119,414</b>	<b>50,725,170</b>	<b>49,745,532</b>	<b>47,068,817</b>	<b>45,218,206</b>
<b>Approximate Contribution to Capital Expenses<sup>a</sup></b>	<b>\$10,652,864</b>	<b>\$4,572,284</b>	<b>\$6,553,869</b>	<b>\$8,614,572</b>	<b>\$10,752,071</b>

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

	2016	2015	2014	2013	2012
Capital Improvements	\$31,801,417	\$35,310,360	\$8,878,526	\$14,702,913	\$43,378,111
Debt Service Payments	\$15,291,092	\$15,621,788	\$15,982,634	\$15,659,633	\$13,444,220

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

Taken from the audited financial statements.

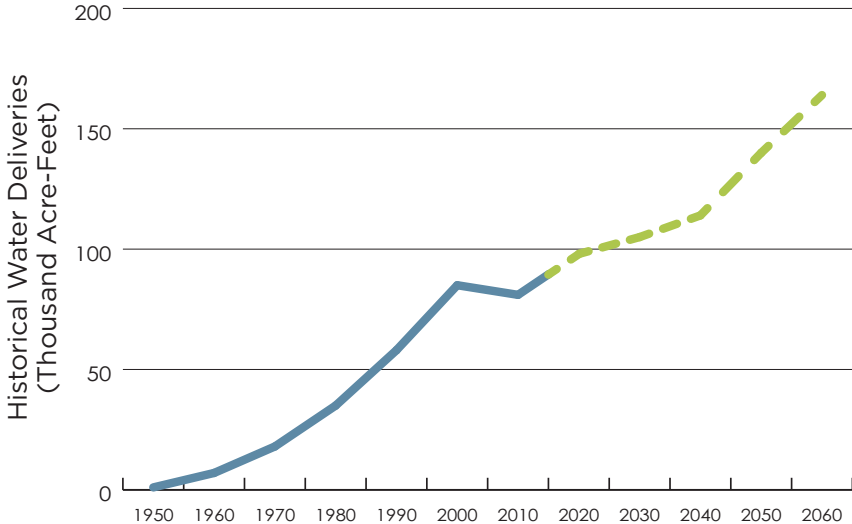
Inspecting Jordan Aqueduct Reach 3.  
Photo by Gordon Batt.



# WATER DELIVERIES AND **POPULATION**



HISTORICAL & PROJECTED JVVCD **WATER DELIVERIES**





Roof system replacement at the Jordan Valley Water Treatment Plant high-rise building was a major project in 2016. Here, workers are applying the TPO (thermoplastic polyolefin) membrane. Photo by Steve Crawford

Jordan Valley Water made its first annual delivery of 20 acre-feet in 1951, and has experienced increasing demands almost every year since. Projected population for our service area tracks very similarly to the entire state's, and is expected to almost double in the next 45 years.

How does Jordan Valley Water expect to serve approximately half a million more people by 2060? Water conservation is key, and we've seen an incredible response to conservation messaging, but more will be necessary. Even though consumers in our service area have decreased their daily consumption by 18 percent on average, we need to meet the state goal of 25 percent reduction in 10 short years. And even with a 25 percent reduction, development of the Bear River will most likely still be necessary in the future.

The costs for both implementing additional conservation initiatives and developing new water supplies are rising. If we want a sustainable water supply for our children and grandchildren, Utahns will have to make difficult choices about how water will be used. These decisions will mostly impact our landscaping styles, because every water user in the state will need to be more conscientious about their water use.

# EXECUTIVE STAFF



**Shazelle Terry**  
Operations Manager

**Reid Lewis**  
General Counsel

**Dave Martin**  
CFO/Treasurer

**Brian McCleary**  
Controller

**Jason Brown**  
Information Systems Manager

**Matt Olsen**  
Communications Manager

**Brian Callister**  
Maintenance Manager

**Shane Swensen**  
Engineering Manager

**Debbie Petersen**  
Human Resources Manager

**Linda Townes**  
Public Information

**Jackie Maas**  
Executive Assistant

**Beverly Parry**  
Administrative Assistant

Not shown: **Jessica Richards**  
Administrative Assistant

*Staff at press time:*

Adrian Parra	Courtney Brown	Eppie Trujillo	Jon Hilbert	Martin Feil	Stan Grundy
Alan Thackeray	Craig Fahrni	Eric Poulsen	Josh Ashcroft	Matt Hinckley	Steve Beck
Alex Mitchell	Cynthia Bee	Frank Montoya	Josh Shrewsbury	Megan Hatch	Steve Blake
Allen Curtis	Dan Claypool	Frank Roberts	Joshua McDougall	Mike Axelgard	Steve Crawford
Amanda Strack	Danny Ernest	Frank Smith	JT Cracroft	Mike Gonzales	Steve Hansen
Andy Adams	Danny White	Glen McIntyre	Justin Spainhower	Mike Lorenc	Steve Minch
Ann Mecham	Dave Beratto	Gordon Batt	Karen Karriker	Mike Rasmussen	Steve Schmidt
Blake Mousley	Dave Hyde	Greg Mark	Ken Butterfield	Mindy Obert	Teresa Atkinson
Blake Woolsey	Dave Mecham	Hak Tatafu	Kevin Crane	Nathan Talbot	Tim Rainbolt
Brad Boren	Dave Spackman	Hayley Betton	Kevin Rubow	Nick McDonald	Todd Peterson
Brad Mabey	David Garcia	Heidi Nilsson	Kirk Oman	Paul Mattinson	Todd Schultz
Brad Perez	David McLean	Jackie Buhler	Kody Evans	Quintin Rubio	Travis Christensen
Brady Young	Debbie Gates	Jared Brace	Kolby Parman	Ray Stokes	Troy Tucker
Bryan Smith	Denise Goodwin	Jared Vigil	Kyle Kennedy	Robert Squire	Tweet Johnson
Calin Perry	Don Olsen	Jason Newren	Leonard Mascher	Ron Bown	Twila Brantley
Cary Shaw	Duff Turner	Jay Frandsen	Lisa Kasteler	Ryan Forsyth	Uriel Lucero
Casey Cannon	Dustin Bruschi	Jeanette Perry	Lorena Purissimo	Savidtri Thanasilp	Val Cossey
Casey Mascaro	Eddie Ojeda	Jeff Betton	Lorrie Cowles	Scott Olsen	Wade Tuft
Chad Steadman	Eduardo Cracchiolo	Jeff Bryant	Marcelo Anglade	Sharon Smith	Wayne Sims, II
Clifton Smith	Ellen Bolliger	Jeff King	Marcelo Del Rio	Shaun Moser	Yvette
Clint Thurgood	Ellisa Demetsky	Jeff Small	Margaret Dea	Shaun Proctor	Amparo-Espinoza
Cory Collins	Emilie Bashore	Jim Bogenschutz			

# OUTSTANDING EMPLOYEES



JORDAN VALLEY WATER  
CONSERVANCY DISTRICT

*Delivering Quality Every Day*

**WE WORK HARD FOR WATER  
SO YOU DON'T HAVE TO.**



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

8215 South 1300 West  
West Jordan, UT 84088

Construction of 12.5 MG reservoir at JWTP. Photo by Tweet Johnson.