

Pouring concrete bottom in the JVWTP backwash lagoons - A. Kimmerle

### Acronyms used in this publication:

AF: Acre-feet

AMI: Advanced Metering Infrastructure

JVWCD: Jordan Valley Water Conservancy District JVWTP: Jordan Valley Water Treatment Plant

MGD: Million Gallons per Day

SCADA: Supervisory Control and Data Acquisition SERWTP: Southeast Regional Water Treatment Plant

PRV: Pressure Reducing Valve WSP: Welded Steel Pipeline

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Pouring concrete bottom in JVWTP backwash lagoons A. Kimmerle





# **Drought:**

# Response vs. Resilience

The year 2021 came with many challenges, both socially and environmentally. Covid continued to dominate the news, and Utah experienced a dry spring with belownormal run-off, which put drought top of mind for us. Even though it is a way of life in Utah, this year's drought had an exceptional impact. Our immediate and long-term reactions will determine how Utah fares far into the future.

An immediate drought response is usually simple, like watering your lawn less. But drought resiliency takes more time and requires planning, like replacing less water-efficient fixtures with new ones, planning land use with water in mind, and determining how to optimize the diverse and limited water supply.

Utahns respond well to crises, and in our service area, approximately 11 percent less water was used in 2021 in response to the drought. But water is becoming more scarce—years like 2021 are becoming more common and severe. As our weather continues to warm, we are receiving less water in the form of snowpack, leading to drier soils and emptier reservoirs.

Many in the Salt Lake Valley are intrigued by or already pursuing drought resiliency, but it's not something we can achieve individually. Resiliency requires collaboration at every level, including homeowners, cities, water providers, and policy makers. Responding to drought and a changing climate can and should become a way of life in Utah.

I believe that tremendous progress was made in 2021 in response to the drought. Thank you to those who changed their watering habits or landscapes, those who enacted thoughtful legislation, and any who helped us use water more efficiently. All of these actions play an important role in achieving future drought resilience.

Bart Forsyth, General Manager

# Bart Forsyth

General Manager, CEO

### Alan Packard

### **Assistant General Manager**

Engineering, Strategic & Long-Term Planning, and New Initiatives

### Shazelle Terry

# **Assistant General Manager**

Operations & Maintenance

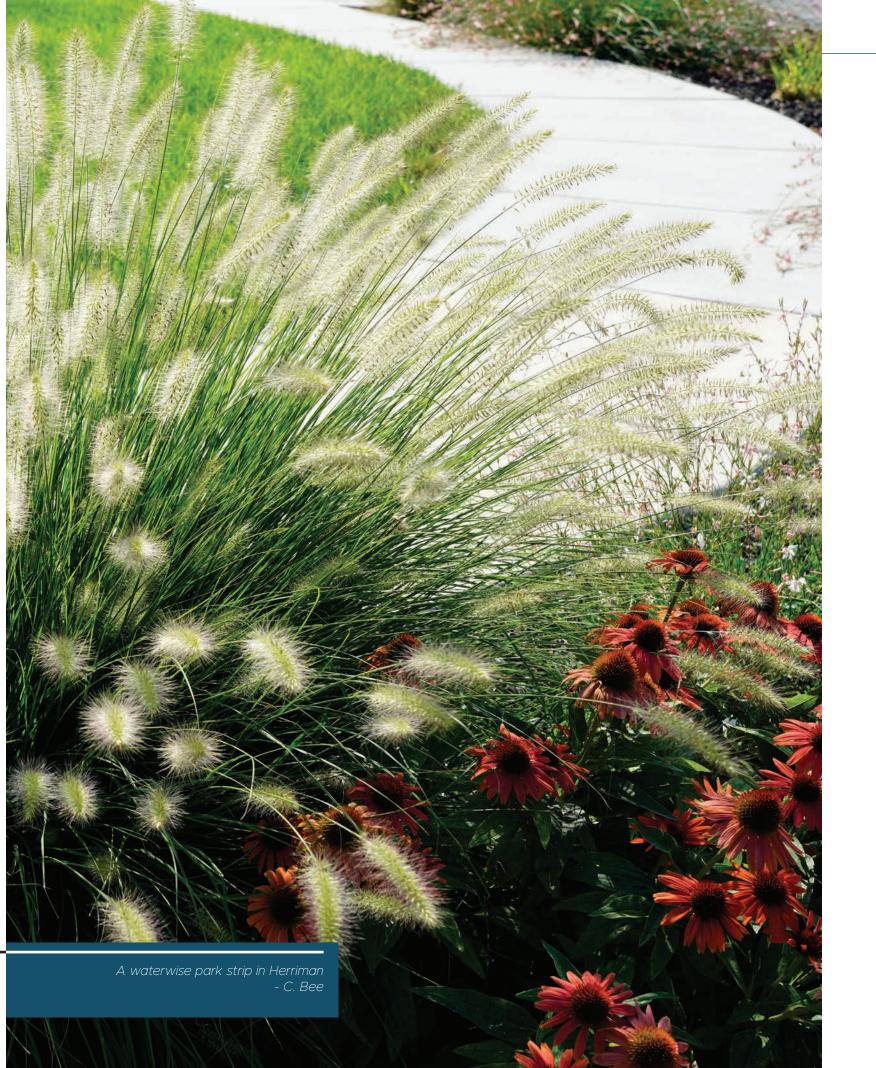
### Matt Olsen

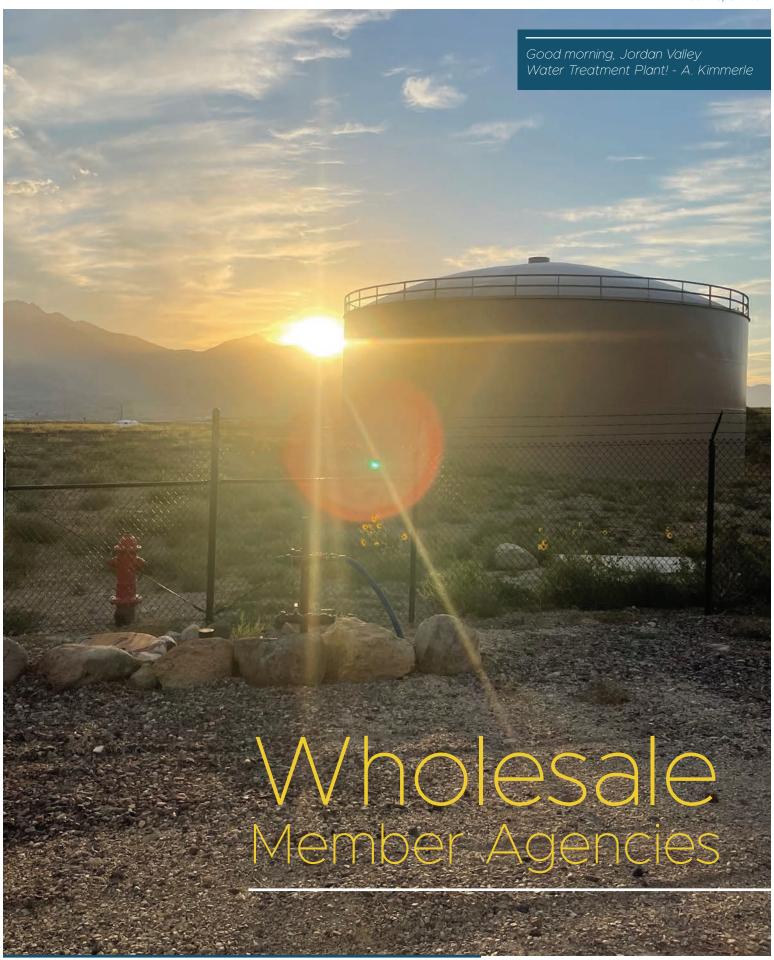
### **Assistant General Manager**

Communications. Water Conservation, and Information Systems



Matt Olsen Bart Forsyth Alan Packard Shazelle Terry





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

# Herriman City

Nathan Cherpeski, City Manager Trustee Representative: Sherrie L. Ohrn

# **Hexcel Corporation**

Jared Carling, Environmental Engineer Trustee Representative: Mick M. Sudbury

# Kearns Improvement District

Greg Anderson, General Manager Trustee Representative: Mick M. Sudbury

# Magna Water District

Clint Dilley, General Manager Trustee Representative: Mick M. Sudbury

# Midvale City

Matt Dahl, City Manager Trustee Representative: A. Reed Gibby

# Riverton City

David Brickey, City Manager Trustee Representative: Sherrie L. Ohrn

# City of South Jordan

Gary Whatcott, City Manager Trustee Representative: Dawn Ramsey

# City of South Salt Lake

Dennis Pay, City Engineer Trustee Representative: Barbara L. Townsend

# Taylorsville-Bennion Improvement District

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

# Utah Department of Corrections

Shawn Anderson. 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 Conservancy District works with multiple agencies to provide water throughout the Salt Lake Vallev.

Water sources are distributed through a variety of booster pumps and pipelines for delivery throughout the Salt Lake Valley.

This map shows the scale and distance water sources travel.

# Trustees











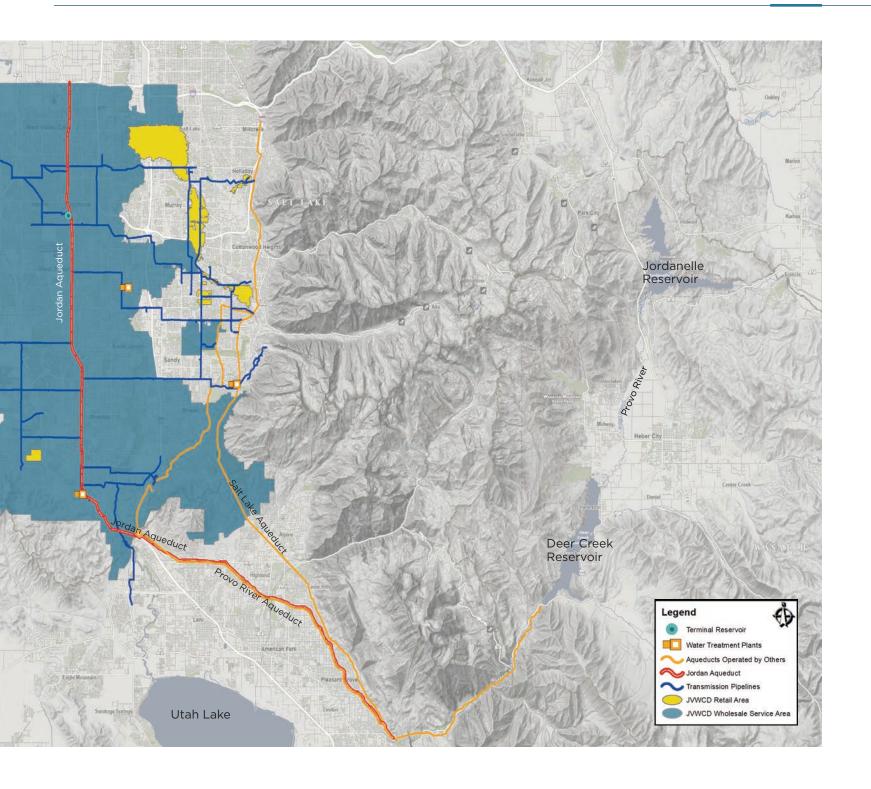














# Service Area



# Our water future

Just as past planning prepared us for the present, 2021 has highlighted the need to continue developing drought resiliency for the future—especially as drought and unpredictable climate patterns become more and more common. This report highlights several of Jordan Valley Water's current initiatives to help increase drought resilience for the communities we serve.

Jordan Valley Water recently completed a comprehensive plan that includes drought mitigation and response actions affecting each community within its service area.

# 14 Utah Water Savers

Rebates for water saving actions are available to homeowners in Jordan Valley Water's service area through UtahWaterSavers.com. Because of the drought, interest in water efficient landscaping has drastically increased, making 2021 a record-breaking year for participation.

Water Efficiency Standards are the best way for communities to reduce vulnerabilities to drought. See the difference that Water Efficiency Standards are making in our service area.

# 18 Water Conservation

Reducing water use helps create drought resiliency. See what Jordan Valley Water and its Member Agencies have been doing to achieve water conservation during 2021.

Jordan Valley Water is committed to taking proactive steps to avoid economic and social disruptions because of inadequate water supply. During 2021, we completed a Drought Contingency Plan that identifies measures to prepare for future droughts as well as responses to take when drought conditions do arise. Thank you to each Member Agency that participated in the development of this plan. We look forward to continued collaboration as we implement strategies to build drought resilience for the communities we serve.

# Drought Planning Highlights

Jordan Valley Water's Drought Contingency Plan formalizes a collaborative and effective process for evaluating and responding to drought conditions. A Drought Monitoring Committee, with representatives from each Member Agency, will review supply forecast information each spring and recommend a drought response level ranging from Normal to Critical (see below).

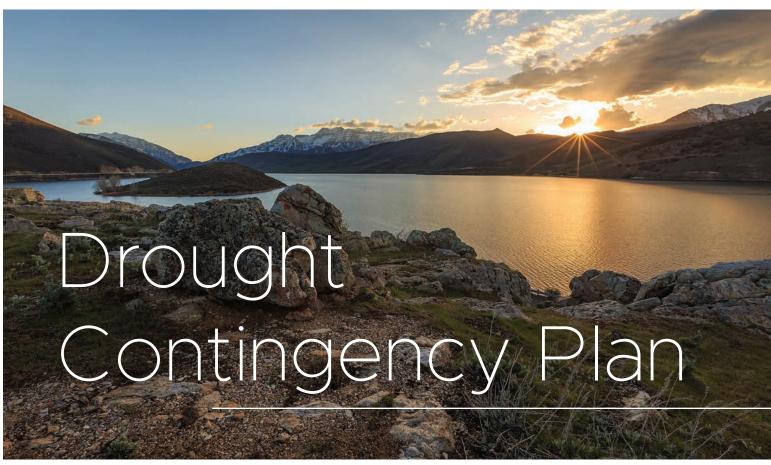


# **Response Actions**

Drought levels determined by the Drought Monitoring Committee may include specific response actions that can be triggered during times of drought. These responses are designed to preserve availability of water for essential uses and services. The Drought Contingency Plan establishes the framework for each response action prior to a drought so that they can be implemented quickly and effectively when needed.

# **Mitigation Efforts**

With a long-term approach to planning, Jordan Valley Water can prepare for uncertainties like changing climates, development trends, and drought. Mitigation measures identified in our Drought Contingency Plan include projects focused on relieving pressure to our most vulnerable supply sources to reduce the need for extreme drought response actions during times of drought. A full list of Jordan Valley's drought mitigation activities and a timeline of implementation is available upon request.









Achieving needed water demand reductions during times of drought will require continued collaboration with each of Jordan Valley Water's Member Agencies. Actions to mitigate the impact of drought across our service area will contribute to effective results and more resilient communities.

# Utah Water Savers

# Drought resilience programs for Salt Lake County and beyond

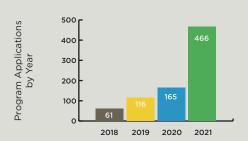




Utah Water Savers was created by Jordan Valley Water as a hub for water conservation programs. It has since expanded to provide programs statewide in partnership with the Utah Division of Water Resources.

Since the programs were first widely introduced in 2017, participation has more than doubled each year. Each program has seen an additional boost in interest since the pandemic started and as public concern about the ongoing drought continues to grow.

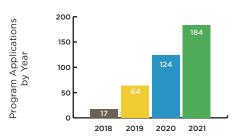






Park strips are one of the most difficult places for grass to thrive and for people to maintain. This program offers homeowners cash rebates to "flip" their park strip to be water efficient and beautiful.

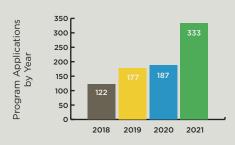






Localscapes Rewards makes getting a landscape that works in Utah easier than ever. If homeowners are looking to install or renovate a landscape, they may qualify for cash rewards and a free review of their landscape plan.

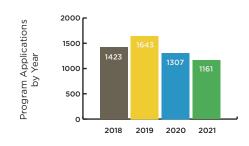






This program is for homeowners that want to improve their existing landscape. They can sign up for a free consultation to get expert advice about their watering practices, landscape, and sprinkler system.

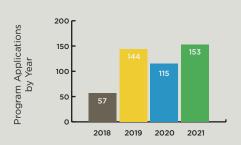
# Smart Controller Rebates





Smart controller rebates are offered to help save water by automatically adjusting watering schedules based on local weather and landscape needs. Homeowners can stop worrying about turning off sprinklers after it rains.







Old, higher-flush toilets are a leading cause of wasted water in Utah homes. Rebates will only be given for replacing toilets that use more than 1.6 gallons per flush and were installed in homes built before 1994.



# Water Efficiency Standards

Jordan Valley Water is partnering with Member Agencies and cities to implement water efficiency standards on new construction and landscape installations. These standards significantly reduce present and future costs of water conservation and ensure that outdoor water use for new landscapes is efficient and sustainable.

As a water supply solution, Water Efficiency Standards provide several key advantages over alternative approaches to water supply planning.



# What Do the Standards Include?

Efficiency standards developed for landscaping in Jordan Valley Water's service area consider the beauty and function of a landscape as much as its water efficiency. Landscapes that follow the standards can look nice, be easy to maintain, and provide space for relaxation and recreation while still being more Utah friendly and water efficient.

Agencies that have adopted Water Efficiency Standards have each shown leadership in planning for the future and building more drought-resilient communities.

# **Impact**

Water efficiency standards for new construction are part of a proactive plan to extend Jordan Valley's water supply into the future. By addressing outdoor landscaping for new construction, Water Efficiency Standards provide a balanced approach for smart landscapes with smart water use.

Dec. 19, 2020

Adopted as a city ordinance





May 4, 2021

Adopted as a city ordinance

June 9, 2021

Adopted as a city ordinance





June 9, 2021

Adopted as a

JVWCD Policy

July 14, 2021

Adopted as a city ordinance





February 14, 2022

Adopted as a township ordinance





Thank you to Herriman, South Jordan, West Jordan, Bluffdale, and Kearns Metro Township for pioneering the implementation these standards. Our retail area has also implemented the standards for all new connections.



# **Cost Savings**

Landscapes that are installed when a home or development is built often stays in place for decades. Installing waterefficient landscapes up front for new construction is five times less expensive than replacing those landscapes in the future—making efficiency standards an attractive solution.

# **Great Looking Communities**

Jordan Valley Water's standards promote landscaping styles that use less water while also achieving high curb appeal and manageable maintenance.

## Sustainable Water Use

Early implementation of water efficiency standards makes room for a more moderate regional water solution that avoids extreme requirements or actions.

### **Environmental Benefits**

Water efficient yards delay the need for expensive water development projects because we are using water that is already available to our communities in a more efficient way. Using water in this way allows it to stay in rivers, streams, lakes, and wetlands—helping avoid severe environmental impacts.

# Water Conservation

# Conservation is one of our biggest sources of water as we plan for the future

Jordan Valley Water has set a water conservation goal of 187 gpcd by 2030. Achieving the goal is a critical component of our water supply plan and would save an estimated 11,000 acre-feet annually.

Long-term reductions in water demand mean that new water supply projects can be delayed—which translates into big financial savings and a lower overall cost of service.

Achieving the goal of 187 gpcd would save an estimated 11,000 acre-feet annually.



# **Member Agency Grant Participation in 2021**



Every year, Jordan Valley Water funds water conservation programs put on by our Member Agencies. Here are programs funded for 2021:

### Bluffdale

- Park strip landscape conversion project
- Parks and trails landscape conversion project
- Central Irrigation Control Project

### **Granger-Hunter Improvement District**

- Leak detection equipment for hydrants
- Water system leak detection project
- Push broom giveaway
- Conservation calendars and public information campaign
- Conservation program advertisements

### Herriman

 Water Conservation Coordinator staff position

### **Kearns Improvement District**

Zone D - 5 MG tank landscaping

### Riverton

No-name park improvement project

### South Jordan

- Toilet rebate program
- Indoor water fixtures rebate program
- Turf conversion rebate program
- Water Conservation Coordinator staff position

# Taylorsville-Bennion Improvement District

- WeatherTRAK central irrigation control
- Drought contingency planning and conservation rate structure study

### WaterPro, Inc.

 Pressure irrigation meters on 150 residential connections

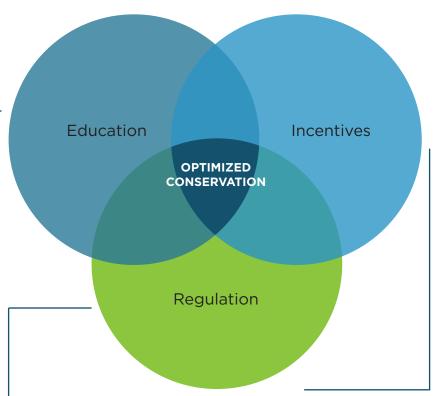


# Three Categories of Conservation Programs

### **Education:**

Education programs are critical for informing the public on the source of their water supply, how water is used, and the need for effective conservation measures. Progress in water conservation requires the collective efforts of water suppliers, consumers, and regulatory authorities making informed decisions.

Conservation Garden Park is Jordan Valley Water's primary resource for educating the public on water-efficient landscaping. More than 2,100 people attended classes and events in 2021 and many more in-person and virtual options are being added each year.



### Regulation:

New laws and regulations can be enacted at federal, state, and local levels to mandate efficient plumbing fixtures or landscaping for new construction. Integrating land and water use planning is one of the

> most effective means of ensuring a sustainable water supply into the future.

Effective water conservation programs are built on education. incentives, and regulations.

Water conservation is the best new supply we currently have.

Adoption of Water Efficiency Standards by Member Agencies and newly passed state laws focused on water conservation are examples of integrated planning efforts.

**Incentives** are frequently offered to water users that are willing to change to newer technologies, such as low-flush toilets, or convert to more water-efficient landscaping. Jordan Valley Water's incentive programs are designed to achieve water savings over multiple years, making them very cost-effective investments.

Incentive programs we utilize include (with amounts expended in 2021):

**Flip Your Strip** (\$90,849)

Toilet Replacements (\$18,753 funded by Division of Water Resources)

Smart Controller Rebates (\$84,646 funded by Division of Water Resources)

Localscapes® Rewards - including Homebuilder Rewards (\$393,886)

**Landscape Consultations** 

Member Agency Grants (\$259,925)

Landscape Leadership Grants (\$75,998)

**Strategic Water Management** (\$19,396)

Est. annual water savings: 30.2 million gallons Turf converted: 1,354,263 square feet

# Water Sources

Municipal & Industrial Water Sources	2021 (AF)	2020 (AF)
Jordanelle Reservoir (Central Utah Project) <sup>a</sup>	42,625	58,632
Deer Creek Reservoir (Provo River Project) <sup>b</sup>	11,170	9,368
Upper Provo River reservoirs <sup>C</sup>	2,121	2,114
Echo Reservoir	998	2,260
Provo River (unstored flows)	10,068	15,076
Weber River (unstored flows)	1,291	212
Central Water Project	12,674	14,902
Salt Lake County mountain streams	1,381	1,537
Culinary water purchased from MWDSLS	924	1,119*
Salt Lake County groundwater (wells)	16,748	7,133
Southwest Groundwater Treatment Plant	3,896	4,284*
Bingham Canyon Water Treatment Plant <sup>d</sup>	2,717	3,617
Subtotal for Municipal & Industrial sources	106,612	120,256*
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)	0	8,600
Weber River (unstored flows)	0	0
Utah Lake	25,140	22,823
Subtotal for irrigation sources	25,140	31,422
TOTAL ALL SOURCES	131,752	151,679*

<sup>\*</sup>These numbers have been updated to reflect complete data collection.

- a) Provo River Sources
- b) Weber, Duchesne, and Provo River Sources
- c) Stored in Jordanelle Reservoir
- d) Treats southwest Salt Lake County groundwater

Jordan Valley Water uses both surface water and groundwater sources to serve our customers. Delivering quality water and services is our top priority.





# Water Deliveries

Municipal & Industrial (M&I) Water Deliveries	2021 (AF)	2020 (AF)
City of Bluffdale	3,428	3,733
Copperton Improvement District	2	1
Draper City	4,549	5,063
Granger-Hunter Improvement District	17,698	20,297
Herriman City	5,734	6,142
Hexcel Corporation	601	714
Kearns Improvement District	7,822	8,980
Magna Water District	803	802
Midvale City	3,113	3,542
Riverton City	4,820	4,773
City of South Jordan	16,423	19,077
City of South Salt Lake	889	1,038
Taylorsville-Bennion Improvement District	4,700	4,594
Utah Department of Corrections	422	504
WaterPro, Inc. (treated)	1,134	1,351
City of West Jordan	20,066	22,837
White City Water Improvement District	0	0
Willow Creek Country Club	305	386
Subtotal for wholesale deliveries	92,509	103,833
JVWCD retail service areas (Holladay, Murray, Sandy, South Salt Lake and unincorporated county)	7,636	8,794
JVWCD system non-revenue water (use & loss)	6,467	7,629*
Subtotal for deliveries, use and loss	106,612	120,256*
Irrigation and raw water		
Welby Jacob Water Users Co. <sup>a</sup>	25,140	31,422
Subtotal for irrigation & raw water	25,140	31,422
TOTAL WATER DELIVERED	131.752	151.679*

\*These numbers have been updated to reflect complete data collection.

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



# **SERWTP Effluent Meter Vault**

The replacement of this flow meter provides a higher level of accuracy and chemical dosage reliability at Southeast Regional Water Treatment Plant. This project included the installation of an effluent flow meter, a new vault, and site improvements.

# Four Well Rehabilitation

Well rehabilitation at the 1850 East Newbury, 1000 East 7800 South, 9800 South 2300 East, and 8200 South 700 East wells included removing the existing pumping equipment, video inspection of the well casing and screen, redevelopment, and installation of new pumping equipment.

# **Creek Road Pipeline Vault Upgrades**

The Creek Road pipeline was installed in 1960 and connects the east side well field to reservoirs at 3200 West 6200 South. This project rehabilitated three vaults on this pipeline at 175 West 7500 South, 6567 South 1300 West, and 700 West Winchester.



# Demand, Supply, and Major **Conveyance Study**

This study will determine the future demand for build-out of Jordan Valley Water's service area. With updated demand projections, the source, treatment, storage, and conveyance infrastructure necessary to support this demand can be determined. This study will identify when large capital projects are needed and will be beneficial in planning and preparing to meet future water needs.

### New piping installation at 700 W Winchester

# **SWGWTP Air Tower Improvements**

This air tower has been in operation since 2012. The purpose of the air tower is to release excessive carbon dioxide in the reverse osmosis permeate to reduce acidity without the use of chemicals. Upgrades will increase the efficiency of the system by installing new air distribution vanes, inlet filters, a water distributor, and a demister assembly.



# Transmission/ Distribution Stabilization Study

Jordan Valley Water has significantly changed its water source mix with the addition of several new water sources, including Bingham Canyon Water Treatment Plant, Southwest Ground Water Treatment Plant, many underground wells, and Central Water Project inflows. This project will characterize the hydraulic, chemical, and physical processes that occur when these different source waters blend in our transmission and distribution system and provide a water quality parameter framework for successful blending, operating, monitoring, and optimization of our water deliveries.

# Millcreek and South Salt Lake Distribution Pipelines Replacement

This project includes design and replacement of distribution pipelines in Millcreek and South Salt Lake, including replacement of approximately 10,000 feet of cast iron pipe (which was installed in the 1950s and 1960s) with new C900 PVC distribution pipelines.

# Microwave Radio System Upgrade

This project upgraded Jordan Valley Water's existing microwave radio system. The antiquated equipment was experiencing age-related failure and is no longer supported. Jordan Valley Water contracted with CenturyLink for fiber internet services to serve as our communications backbone.

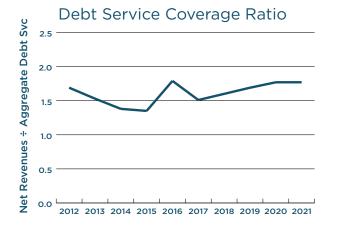


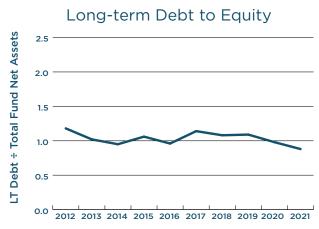




# Financial Stewardship

Balance Sheet Summary as of June 30th:								
	2021	2020	2019	2018	2017			
Assets: Current Restricted Capital Other	\$71,177,333 7,912,690 546,720,363 16,707,372	\$62,022,286 26,756,562 547,183,564 18,891,468	\$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 49,792,125 471,727,593 15,429,418			
Total Assets	\$642,517,758	\$654,853,880	\$669,696,520	\$628,362,566	\$591,498,449			
<u>Liabilities</u> : Current Noncurrent	\$17,943,938 291,357,946	\$19,913,783 319,841,344	\$18,216,397 \$356,952,015	\$16,676,945 333,001,188	\$17,229,860 306,036,114			
Total Liabilities	309,301,884	339,755,127	375,168,412	349,678,133	323,265,974			
Total Net Position	333,215,874	315,098,753	294,528,108	278,684,433	268,232,475			
Total Liabilities and Net Position	\$642,517,758	\$654,853,880	\$669,696,520	\$628,362,566	\$591,498,449			
Income Statement Summary for fiscal years ended June 30th:								
	2021	2020	2019	2018	2017			
Revenues: Operating (water sales) Property taxes Interest Intergovernmental Non-operating	\$62,726,943 21,133,800 638,942 92,155 922,603	\$60,659,921 20,281,934 1,900,885 75,331 325,763	\$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			
Total Revenues	\$85,514,443	83,243,834	80,301,875	73,529,214	68,248,347			
Expenses: Operating Interest Non-Operating	55,172,384 11,757,534 487,243	53,035,299 13,090,260 0	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			
Total Expenses	67,417,161	66,125,559	63,581,467	60,832,999	58,776,513			
Approximate Contribution to Capital Expenses <sup>a</sup>	\$18,097,282	\$17,118,275	\$16,720,408	\$12,696,215	\$9,471,834			
Other Cash Flow Information for fiscal years ended June 30th:								
	2021	2020	2019	2018	2017			
Capital Improvements	\$11,466,398	\$31,928,931	\$41,562,334	\$36,367,448	\$31,731,635			
Debt Service Payments	\$22,040,296	\$22,003,217	\$20,365,220	\$20,437,815	\$19,188,677			





# 26

# Executive Staff

























Congratulations to
Reid Lewis on his
retirement as General
Counsel from the
District after 27 years.
We will miss his humor
and are sad to see him
go. We wish him well in
his new adventures!



### Staff at press time:

Alex Mitchell Alisha Kimmerle Allen Curtis Amanda Strack Andy Adams Ann Mecham Annette Mills Aubrey Menon Bailey Anderson **Bailey Petty** Ben Perdue Brad Boren Brad Perez Brayden Cluff Brayden Jensen Brvan Smith Caleb Vincent Calin Perry Casey Cannon Chad Steadman Christian Vasquez Clifton Smith

Clint Thurgood Conor Tyson Cory Collins Courtney Brown Cynthia Bee Dan Claypool Danny Siaperas Danny White Dave Beratto Dave Hyde Dave Spackman David Garcia David Gregory David McLean Devan Gunnell Dustin Brusch Eduardo Cracchiolo Ellisa Demetsky Emma Pratt Ferguson Eppie Trujillo Eric Poulsen

Frank Smith Gage Stewart Garrett Starley Hayden Coziar Heidi Nilsson **Hunter Sexton** Jackie Buhler Jared Brace Jared Vigil Jeanette Perry Jed Brough Jeff Betton Jeff King Jeff Small Jeremy Toone Jon Hilbert Jordan Tomsic Josh Ashcroft Josh Shrewsbury Joshua McDougall JT Cracroft Justin Spainhower

Kailob Szarek Karen Karriker Keenan Robertson Ken Butterfield 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 Marshall Clark Martin Feil Matt Hinckley Matt Roberts Megan Jenkins Michael Brown

Michele Guv Mike Axelgard Mike Gonzales Mike Lorenc Mike Rasmussen Natalie Boyack Nathan Talbot Nick McDonald Otis Helmick Paul Mattinson Quintin Rubio Ray Stokes Robert Squire Ryan Forsyth Ryan Jeffs Rvlan Walker Savidtri Thanasilp Shaun Moser Shaun Proctor Sheldon Sharrard Spencer Anderson Stan Grundy

Steve Beck Steve Blake Steve Crawford Steve Hansen Steve Schmidt Tanner Palmer Teresa Atkinson Terrance Cook Tim Rainbolt Todd Peterson Todd Schultz Travis Christensen Troy Black Troy Garrett Troy Tucker Vai Eteaki Val Cossev Wade Tuft Wayne Sims, II Yvette Amparo



