



Sandy City, Utah

10000 Centennial Parkway
Sandy, UT 84070
Phone: 801-568-7141

Meeting Agenda

City Council

Ryan Mecham, District 1
Alison Stroud, District 2
Zach Robinson, District 3
Scott Earl, District 4
Brooke D'Sousa, At-large
Marci Houseman, At-large
Cyndi Sharkey, At-large

Tuesday, August 23, 2022

5:15 PM

Water Treatment Plant Tour

Work Session - Water Treatment Plant Tour

Web address to view complete packet:
<http://sandyutah.legistar.com>

5:15 Tour

Work Session Items

1. [22-313](#) (Public Utilities Tour of Water Treatment Plant & Department Update)

Attachments:

[Water Tour Agenda - Metro Little Cottonwood Water Treatment Plant](#)

[MWDSLS System Facilities](#)

[Water Revenue Needs Fact Sheet](#)



Staff Report

File #: 22-313, **Version:** 1

Date: 8/23/2022

Agenda Item Title:

(Public Utilities Tour of Water Treatment Plant & Department Update)

Presenter: Tom Ward - Public Utilities Director

Description/Background:



TOM WARD, P.E.
PUBLIC UTILITIES DIRECTOR

MONICA ZOLTANSKI
MAYOR

SHANE E. PACE
CHIEF ADMINISTRATIVE OFFICER

AGENDA

To: Sandy City Council, Council Staff

Copy: Mayor Monica Zoltanski, Shane Pace/CAO

From: Tom Ward

Re: August 23, 2022 Council Agenda & Tour
Water Infrastructure Needs and Little Cottonwood Water Treatment Plant Tour

5:00 pm Gather at Sandy Bus (west entrance City Hall)

5:10-6:00 pm Sandy bus departs.

Drive past 14 East Lone Hollow which was location of large water main breaks that flooded two homes. Bus will not stop. (Scott Ellis, Public Utilities)

6:00-7:00 pm Metro Water District of Salt Lake & Sandy
3430 Danish Rd, Cottonwood Heights, UT 84093

Update on water revenue needs. (Abi Holt, Public Utilities, 5 min)

Tour of Little Cottonwood Water Treatment Plant (60 min)

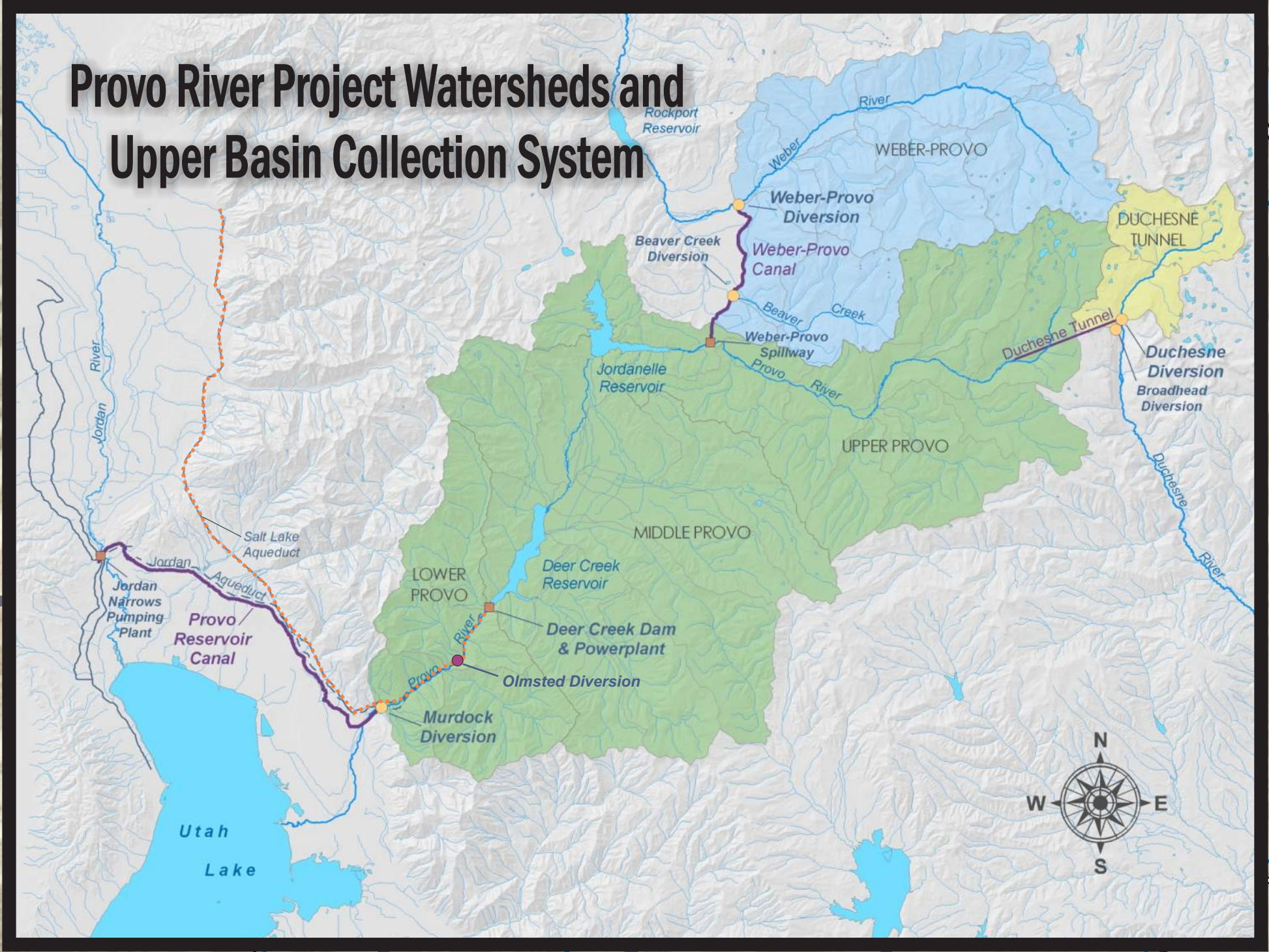
Mike Devries, General Manager, Metro Water of Salt Lake & Sandy

7:15-7:45 pm Return to City Hall

8pm Arrive City Hall by 8:00 pm or earlier.

Please find enclosed map of Metro Water facilities for your reference. Metro provides 100% of Sandy surface water sources to our drinking water system. Nearly half Sandy's water budget goes to Metro. Sandy bought into the Metro system to provide reliable, high quality drinking water for our residents and businesses. Sandy owns valuable water rights in Little Cottonwood and Bell Canyon, and we pay Metro to treat and deliver that water to our system. In addition, Metro provides other water supplies to Sandy from Metro's sources in the Provo River / Deer Creek system, the Central Utah Water Conservancy District, and the Ontario Drain Tunnel above Jordannelle Reservoir.

Also enclosed is a summary of the Sandy Water Enterprise fund current financial situation given the fact we are selling less water now that water conservation is here to stay, the cost of water has increased dramatically with inflation, and the City has a long list of pipe replacement projects we need complete to maintain levels of service and mitigate impacts, costs and damages from pipe breaks.



Jordan Aqueduct Reach No. 3

DESIGN CAPACITY:
120 CFS (78 MGD)
FACILITIES:
(1) 48-inch Pipe

Terminal Reservoir

DESIGN CAPACITY:
100 MG
FACILITIES:
2/7 MWDSLS 28.6 MG

Jordan Aqueduct Reach No. 2

DESIGN CAPACITY:
270 CFS (175 MGD)
FACILITIES:
(1) 78-inch Pipe

15000 South Pipeline

DESIGN CAPACITY:
33 MGD (Gravity)
84 MGD (POMA Sleeve Valves)
50% MWDSLS

Point of the Mountain Aqueduct (Untreated Water)

DESIGN CAPACITY:
151 MGD
FACILITIES:
(1) 84-inch Pipe
(2) 2.5 Miles in Length

Jordan Valley Water Treatment Plant

DESIGN CAPACITY:
180 MGD
2/7 MWDSLS 51 MGD

Jordan Aqueduct Reach No. 1

DESIGN CAPACITY:
270 CFS (175 MGD)
FACILITIES:
(1) 78-inch Pipe

MWDSLS SERVICE AREA

Facilities

- 1 DEER CREEK DAM
- 2 MURDOCK DIVERSION
- 3 OLMSTED TUNNEL & SIPHON
- 4 POINT OF THE MOUNTAIN AQUEDUCT UNTREATED WATER INTAKE
- 5 JORDAN NARROWS INTAKE & SIPHON
- 6 JORDAN NARROWS TURBINE & PUMPING PLANT
- 7 ALPINE DRAPER TUNNEL (Salt Lake Aqueduct)
- 8 MURRAY POWER PLANT INTAKE
- 9 LITTLE COTTONWOOD & BELL CANYON CREEK INTAKE
- 10 LITTLE COTTONWOOD WATER TREATMENT PLANT
- 11 10 MG RESERVOIR
- 12 TERMINAL RESERVOIR
- 13 POINT OF THE MOUNTAIN WATER TREATMENT PLANT
- 14 OLMSTED DIVERSION
- 15 JORDAN VALLEY WATER TREATMENT PLANT
- 16 100 MG TERMINAL RESERVOIR
- 17 LITTLE DELL RESERVOIR
- 18 UTAH LAKE PUMP STATION

Little Dell Dam

DESIGN CAPACITY:
20,500 AC-FT
FACILITIES:
(1) 224-foot High Dam
(2) Outlet Spillway

Terminal Reservoir & Sam Park West Reservoirs

DESIGN CAPACITY:
47.8 MG
FACILITIES:
(2) 13.8 MG Concrete Reservoirs
(1) 11.3 MG Concrete Reservoir
(1) 8.9 MG Concrete Reservoir

Salt Lake Aqueduct

DESIGN CAPACITY:
175 CFS (113 MGD)
FACILITIES:
(1) 69-inch Concrete Pipe
(2) Alpine Tunnel
(3) Various Welded Steel Siphons
(4) 42 Miles Total Length
(5) 33 Miles Untreated Water
(6) 9 Miles Treated Water

Little Cottonwood Water Treatment Plant

DESIGN CAPACITY:
143 MGD

Point of the Mountain Aqueduct (Treated Water)

DESIGN CAPACITY:
North to South (Gravity) - 100 MGD
South to North (Pumped) - 80 MGD
FACILITIES:
(1) 60-inch Welded Steel Pipe
(2) 12 Miles in Length

Point of the Mountain Water Treatment Plant

DESIGN CAPACITY:
70 MGD

Deer Creek Dam & Reservoir

DESIGN CAPACITY:
162,564 AC-FT
149,700 AC-FT Active Pool
2,864 AC-FT Dead Pool
49,700 AC-FT Carry Over
100,000 Association Shares
Normal year yield to MWDSLS is 61,900 AC-FT

FACILITIES:
(1) Dam
(2) Land Around Reservoir
(3) Outlet Works and Spillway
(4) Salt Lake Aqueduct Intake (MWDSLS Facility)

RECREATION USE:
Managed by Utah State Parks & Recreation

OUTLET WORKS CAPACITY:
2 Tube Valves

SPILLWAY CAPACITY:
12,000 CFS

Bureau of Reclamation Facility (Provo River Project)
Operated by Provo River Water Users Association

Deer Creek Powerhouse

DESIGN CAPACITY:
5 MW
FACILITIES:
(1) 2-2,475 kW Generators

Provo River Aqueduct

Jordan Aqueduct Reach No. 4

DESIGN CAPACITY:
270 CFS (175 MGD)
FACILITIES:
(1) 72-inch & 66-inch Welded Steel Pipe

Olmsted Siphon

Murdock Diversion

DESIGN CAPACITY:
550 CFS
FACILITIES:
(1) Diversion Dam

Utah Lake Pump Station

DESIGN CAPACITY:
769 CFS Total
135 CFS MWDSLS (17.6%)
FACILITIES:
(1) 4 Vertical Propeller Pumps @ 200 CFS Each
(2) 1400 HP Total

Provo River Aqueduct

DESIGN CAPACITY:
626 CFS Maximum
187 CFS MWDSLS
FACILITIES:
(1) 21.5 miles of 126-inch and 120-inch diameter welded steel pipe

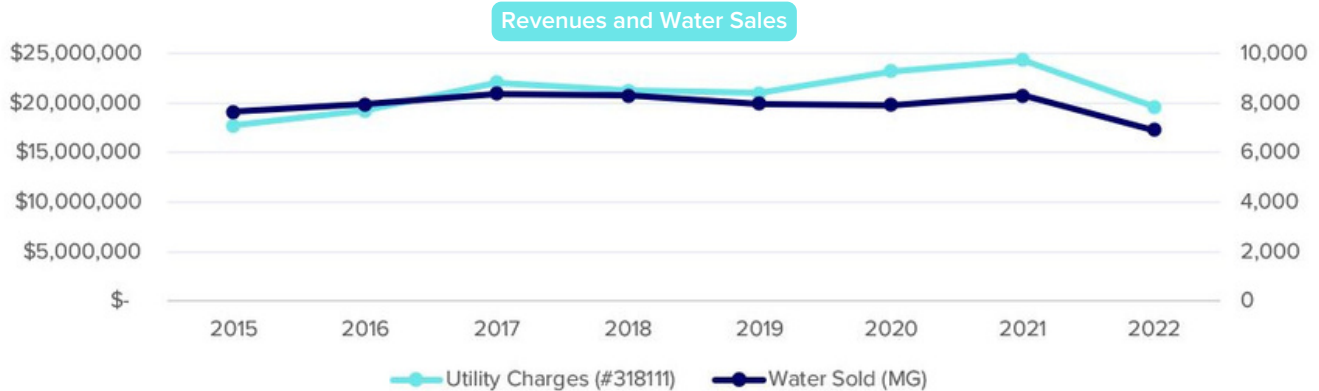
SYSTEM FACILITIES

Metropolitan Water District of Salt Lake & Sandy

WATER REVENUE NEEDS

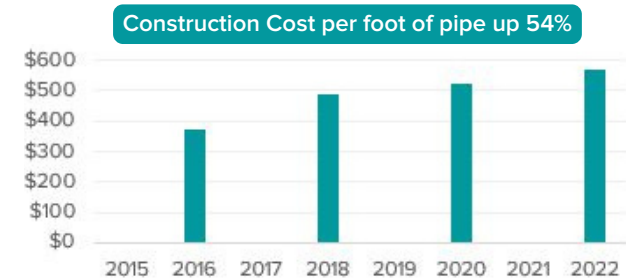
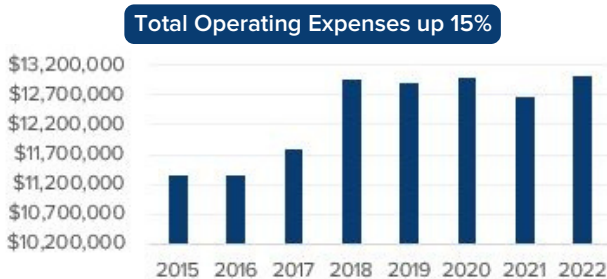
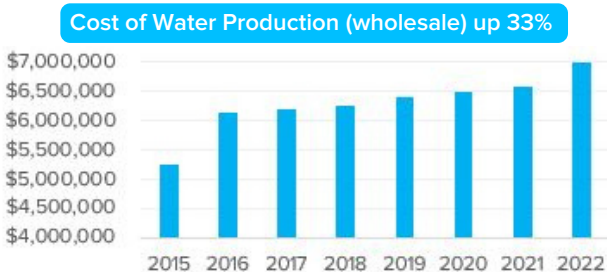
CONSERVATION IS HERE TO STAY - REVENUES ARE DOWN

Revenues are down. FY 2022 was the lowest revenue year since FY 2016.



WATER EXPENSES ARE UP 15% TO 54%

Existing costs have increased since 2015.



CAPITAL SPENDING IS DOWN

Since 2015 our Capital Outlays have essentially stayed the same. Average actual capital spending since 2015 is \$3.8 million. FY 2022 we spent \$3.2 million. Capital Outlays need to be increased to be able to replace water pipe that has reached the end of its useful life.



WATER REVENUE NEEDS



A main line break in Sandy Woods on July 17, 2022



A main line break in Sandy in 2018

REVENUES ARE DOWN:

- FY 2022 retail water sales revenue was the lowest it's been since FY 2016

EXPENSES ARE UP:

- Cost of water production (wholesale) is up 33% from 2015
- Personnel services are up 35% from 2015
- Total Operating Expenses are up 15% from 2015
- Contractor costs to replace pipe are up 54% since 2015
- Inflation is around 10% across the board and across the country

OUR CAPITAL OUTLAY BUDGET HAS REMAINED STEADY:

- Average annual capital spending since 2015 is \$3.8 million
- To replace water pipe that has reached the end of its useful life, outside consultants have recommended increasing our average yearly capital spending to approximately \$10-12 million

THE PRICE OF INACTION:

- Increased spending on band-aid pipe repairs for pipes that will need to be replaced anyway
- Increased number of emergency repairs puts our staff in dangerous conditions compared to planned repairs
- Increases in main line breaks comes with an increased number of complaints from residents, an increased number of claims to our risk department, and increased costs to cover repairs and claims
- Over the past ten years we have spent \$585,415 on 52 claims from waterline breaks and flooding.

SUMMARY:

To ensure Sandy City Public Utilities continues to provide the highest-quality service to all residents we must invest in our water supply and infrastructure. Rate changes are needed to fund the repair and replacement of critical aging water infrastructure, meet new water quality requirements, and ensure that we can meet the water demand needs of our community. The services we provide are indispensable to every aspect of people's lives and we must deliver them 24/7 without interruption. This requires us to continually assess our infrastructure and make investments when needed to ensure safety and reliability. Our ongoing commitment to provide excellent service to residential, commercial, and industrial customers means we need to adjust our water rates to fund necessary upgrades.