MAGNA WATER DISTRICT AGENDA

FOR THE

REGULAR BOARD MEETING

10:00 AM

THURSDAY JUNE 13, 2024

8885 W 3500 S, MAGNA, UT 84044

GENERAL OFFICE BUILDING

(801)250-2118 Fax(801)250-1452

JUNE 13, 2024
REGULAR BOARD MEETING AGENDA
MAGNA WATER DISTRICT

MEETING DATE: June 13, 2024, at 10:00 am
LOCATION: 8885 W 3500 S, MAGNA, UT, GENERAL OFFICE BUILDING

A. Call to Order

B. Public, Board and Staff join in the Pledge of Allegiance

C. Welcome the Public and Guests

D. Public Comment

Written requests that are received – Please do not take over three minutes due to time restraints for other individuals and the Board.

E. Inquire of any conflicts of interests that need to be disclosed to the Board

F. Approval of common consent items

1. Minutes of the regular board meeting held May 16, 2024
2. Minutes of the special board meeting held May 29, 2024
3. Expenses for May 6 to June 2, 2024
   General Expenses: $1,481,712.77
   Zions Bank Bond Payment: $1,294,475.55

G. Employee Recognition

Tori Jensen

H. New Employee Introduction

Ashley Wells and Jaydon Shepherd

I. Department Reports:

1. General Manager Report

2. Engineering Report

3. Water Operations Report (water production and call out report)

4. Wastewater Operations Report

5. Controller/Clerk Report
    - Compliance Requirements Report

6. HR Manager Report

J. Project Awards & Agreements

Discussion and possible motion to approve the following project awards and agreements:

1. Meter stock purchase in the amount of $656,685.23 for 2025.

2. Nickerson Company, Inc repair estimate in the amount of $40,010 for Haynes #7.

3. Annual collection system maintenance, repairing inflow and infiltration in manholes, prep, spray, and coat manholes by Don Calvert for an amount not to exceed $250,000.

4. Slip line and spot repairs of the collection system by Twin D Construction in the amount of $139,700.

5. Award WRF Influent Project to low pre-qualified bidder, Corrio Construction, Inc., in the amount of $10,600,530.50.

6. Stantec scope and fee for construction management services for the WRF Influent Project in the amount of $733,799.

K. Administrative

Discussion and possible motion to approve the following administrative items:

1. Presentation and approval of 2023 Annual Financial Audit, Gilbert & Stewart, CPAs.

2. Interlocal Cooperation Agreement between Redevelopment Agency of Salt Lake County and MWD for the Arbor Park Water Line Replacement.

3. Approve the selected engineering consultant for the EDR Water Treatment Plant Finish and Feed Tank Study.

4. Resolution 2024-02 Resolution Regarding 2024 Budget Amendment.

5. Resolution 2024-03 Resolution Adopting 2024 Certified Tax Rates.

For information and discussion only – no action items:

- SCADA Needs Assessment for drinking and secondary water facilities.
- Possible special board meeting – June 27, 2024, at 10:00 am (if needed) to adopt the District's certified tax rates.
- Next month's board meeting – July 11, 2024, at 10:00 am

L. Motion to meet immediately in a closed meeting to discuss the character, professional competence, or physical or mental health of an individual, the purchase, exchange, or lease of real property, including any form of a water right or water shares, and collective bargaining pursuant to Utah Code Ann. §§ 52-4-204 through 205.

M. Motion to close the closed meeting and re-open the public board meeting.

N. Consider action on any noticed agenda item discussed in closed meeting.

O. Other Business

P. Adjourn

MEETING MINUTES

MINUTES OF THE
SPECIAL MEETING
OF THE BOARD OF TRUSTEES OF
MAGNA WATER DISTRICT

A special meeting of the Board of Trustees of the Magna Water District was held Wednesday, May 29, 2024, at 4:30 pm, at the Magna Water District General Office, Kim Bailey Board Room, located at 8885 West 3500 South, Magna, UT.

Call to Order: Mick Sudbury called the meeting to order at 10:00 a.m.

Trustees Present:
Mick Sudbury, Chairman
Jeff White
Dan Stewart

Staff Present:
Clint Dilley, General Manager
LeIsle Fitzgerald, District Controller
Trevor Andra, District Engineer
Raymond Mondragon, Water Operations Manager
Dallas Henline, Wastewater Operations Manager
Andrew Sumsion, HR Manager

Call to Order: Board Chairman, Mick Sudbury, called the meeting to order.

Public, Board, and Staff join in the Pledge of Allegiance: Board Chairman led everyone in the Pledge of Allegiance.

Welcome the Public and Guests: There were no public or guests present.

Inquire of any conflicts of interests that need to be disclosed to the Board: There are no conflicts of interests with the items on the agenda.

PROJECT AWARDS & AGREEMENTS
Discussion and possible motion to approve the following project awards and agreements:

Purchase and Sale Agreement between Union Pacific Railroad Company and Magna Water District with a purchase price of $7,474,591.08, for Parcel #14-31-200-005, 17.69 Acres, at 8979 W 3500 S: Mick Sudbury expressed his desire, and wanted to go on record with this statement, that the District determine how many acres are needed for the infrastructure planned for this property and any other future planned infrastructure the District identifies, plus a buffer amount of property, then any extra property not needed, needs to be sold and the profits from any land sale be put back into the District's reserves. Clint and Trevor suggested having a preliminary engineering study done that will perform geotechnical, preliminary site grading that will identify exactly the size of property needed for the infrastructure. The District will be subdividing and sale the extra property. A motion was made by Jeff White, seconded by Dan Stewart, to approve the Purchase and Sale Agreement between Union Pacific Railroad

Company and Magna Water District with a purchase price of $7,474,591.08, for Parcel #14-31-200-005, 17.69 Acres, at 8979 W 3500 S. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:24 to 5:52.

Adjourn: Having no further business to discuss, a motion was made by Dan Stewart, seconded by Jeff White, to adjourn the meeting at 4:43 pm. The motion was approved as follows: Jeff White, yea, Dan Stewart, yea, and Mick Sudbury, yea.

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Attest Chairperson

MINUTES OF THE
REGULAR MEETING
OF THE BOARD OF TRUSTEES OF
MAGNA WATER DISTRICT

A regular meeting of the Board of Trustees of the Magna Water District was held Thursday, May 16, 2024, at 10:00 a.m., at the Magna Water District General Office, Kim Bailey Board Room, located at 8885 West 3500 South, Magna, UT.

Call to Order: Mick Sudbury called the meeting to order at 10:00 a.m.

Trustees Present:
Mick Sudbury, Chairman
Jeff White
Dan Stewart

Staff Present:
Clint Dilley, General Manager
LeIsle Fitzgerald, District Controller
Trevor Andra, District Engineer
Raymond Mondragon, Water Operations Manager
Dallas Henline, Wastewater Operations Manager
Andrew Sumsion, HR Manager
Beau Lamper, Wastewater Operations Leadman
Chett Draper, Wastewater Operations Maintenance
Scott Beck, Wastewater Operations Maintenance
Dyllan Delobel, Wastewater Operations Maintenance

Also Present:
Nathan Bracken, Smith Hartvigsen PLLC
Don Olsen, Epic Engineering
Marie Owens, AE2S
Madison Bertech, Stantec Engineering

Welcome the Public and Guests: Chairman welcomed those in attendance.

Pledge of Allegiance: Chairman lead those in attendance in the Pledge of Allegiance.

Public Comment: None

Chairman asked if any of the staff or board members had a conflict of interest with anything on this agenda. There were no conflicts of interest.

Approval of Common Consent Items:

Minutes of the regular board meeting held April 11, 2024
Expenses for April 1 to May 5, 2024:
General Expenses: $1,246,852.79
Zions Bank Bond Payment: $-0-

A motion was made by Dan Stewart, seconded by Jeff White, to approve the minutes of the regular board meeting held April 11, 2024, and to approve the general expenses from April 1to May 5, 2024, and the Zions Bank Bond payment in the amount of $1,246,852.79 and $-0-; respectively. The motion was approved as follows: Mick Sudbury, yea, Dan Stewart, and Jeff White, yea.

EMPLOYEE RECOGNITION
Dallas Henline recognized the Wastewater Treatment Plant crew for their Outstanding Treatment Plant under 5 mg/d award from WEAU. The last time the award was won by Magna Water District was 1987. For full discussion please go to board meeting recording beginning at position 2:17 to 6:09.

DEPARTMENT REPORTS
General Manager Report: Clint indicated due to attending conferences, a manager's report was not included in the board meeting packet. Clint highlighted the following items:

- Virginia Fish is retiring effective May 31, 2024. Retirement party will be held on May 28, 2024 at 12:00 pm, wanted to invite the Board of Trustees.
- The front office position has been posted in-house, there was no applicants from inside, and posted the position outside the District. There have been nearly 150 applicants, the position was closed on Tuesday. Will be interviewing candidates next week.
- A candidate has been selected for the wastewater collections position, will be doing a walk through with the candidate next week.
- Interviews have been lined up for the Water Construction position next week.
- PFAS is being talked about more and more regarding culinary water, but now with wastewater. Known as "forever chemicals". Magna Water District has done some testing for them, did not find any indication so far in the drinking water system. There is a likelihood that the District will see it in the wastewater system.
- Jordan Valley has done some data analysis on the District's water use data. They provided the District with a report. They indicated the District was doing a great job on conserving as a community in comparison with other member agencies. The areas where the District can improve on would be our water loss, continuing to find and repair leaks, ones that don't surface, how to track any water that is not getting into the system. The District has applied for a grant with Jordan Valley Water for a leak detection program for the District.
- Clint & Trevor met with Dan Torres, Economic Development Director for MSD, meeting went well.

No actions were taken, for full discussion please go to board meeting recording beginning at position 7:28 to 18:51.

Engineering Report:
Trevor reported on the 2023 Waterline replacement project, Improvements to Office Building – Lobby Office, WRF Reuse Project, and the Change House at the WWTP. No actions were taken, for full discussion, please go to board meeting recording beginning at position 18:52 to 33:56. Please also see the engineering insert in the board meeting packet.

Water Operations Report (including water production and call out report): Raymond presented the production report. The culinary water production for the month of April was 100.03 million gallons or 274.18-acre feet, a 12.51% increase from 2023. YTD was 365.04 million gallons or 990.08-acre feet, a 31.35% increase from 2023. We have purchased 263.70-acre feet of water from Jordan Valley Water. Raymond reported the total number of callouts for the month of April was 15 callouts and a total of 61.5 hours. No actions were taken, for full discussion please go to board meeting recording beginning at position 33:57 to 37:07. Please also see the water production report insert in the board meeting packet.

Wastewater Operations Report (including status and call out report):
Dallas reported for the collections system there are two different contractors beginning work starting next week. Don Calvert lining manholes will start on the South Frontage Rd between 7200 W and 8000 W, working over to 8400 W. Twin-D Construction scheduled to do spot repairs in some of the collection lines. Huber will be coming for a 40-hour service next week on some of the wash compactors and grit removal equipment. Chlorine project is continuing and should be complete early July. There were no actions taken, for full discussion, please go to board meeting recording beginning at position 37:08 to 43:30.

Controller Report/Clerk Report:
Compliance Requirements Report: LeIsle reported the District is up to date with legal requirements and internal policies. No actions were taken, for full discussion please go to board meeting recording beginning at position 43:31 to 44:49. Please also see the controller/clerk insert in the board meeting packet.

1st Quarter 2024 Budget vs. Actual Financial Report: LeIsle presented the 1st quarter 2024 budget vs actual report. The revenues are slightly over what has been budgeted, and the expenses are slightly under what has been budgeted. Compared to budget, the District is within budget. No actions were taken, for full discussion please go to board meeting recording beginning at position 44:50 to 47:53.

HR Manager Report:
Andrew reported to the Board the following:

- Safety focus for the month of May is Traffic Safety.
- Performed annual hearing test were completed.
- Certified all flaggers for a three-year certification.
- Held safety training on gas meters and confined space training.

- Magna Water District will participate in the 4th of July celebration.
- Inquired about a summer employee activity. Possibly a Bees Game. Board gave approval to move ahead with the activity.

No actions were taken, for full discussion please go to board meeting recording beginning at position 47:54 to 54:13.

PROJECT AWARDS & AGREEMENTS
Discussion and possible motion to approve the following project awards and agreements:

AE2S Scope and fee for the 8800 W Waterline Replacement Project in the amount not to exceed $79,930: A motion was made by Jeff White, seconded by Dan Stewart, to approve the AE2S scope and fee for the 8800 W Waterline Replacement Project in the amount not to exceed $79,930. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea, and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 54:14 to 57:16.

2024 Ventrac 4520N Multiuse sweeper in the amount of $40,695: A motion was made by Jeff White, seconded by Dan Stewart, to approve the purchase of a 2024 Ventrac 4520N Multiuse sweeper in the amount of $40,695. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea, and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 57:17 to 1:00:01.

Amendment to CRS Engineering task order for Haynes Well #8 Replacement Project in the amount of $25,000: A motion was made by Jeff White, seconded by Dan Stewart, to approve the amendment to CRS Engineering task order for Haynes Well #8 Replacement Project in the amount of $25,000. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:00:02 to 1:02:35.

Approval to change new uniforms, rugs & bathroom services supplier to Vestis: A motion was made by Jeff White, seconded by Dan Stewart, to change the supplier of the District's uniforms, rugs & bathroom services to Vestis contingent on legal review of contract. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:02:36 to 1:06:44.

Property Purchase and Sale Agreement with Northrop Grumman System Corporation for Zone 3 Reservoir property in the amount of $14.00/square foot – estimated to be $3,756,614.40. Final amount will be determined based on survey: A motion was made by Jeff White, seconded by Dan Stewart, to approve the property Purchase and Sale Agreement with Northrop Grumman System Corporation for Zone 3 Reservoir property in the amount of $$14.00/square foot – estimated to be $3,756,614.40. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:06:45 to 1:10:17.

Temporary Construction Easement Boundary Line Agreement and Restrictive Covenants with Northrop Grumman System Corporation for Zone 3 Reservoir property. Temporary construction easement amount of $18,000 per month with four months due at execution of Easement Agreement initially in the amount of $72,000: A motion was made by Jeff White, seconded by Dan Stewart, to approve the Temporary Construction Easement Boundary Line Agreement and Restrictive Covenants with Northrop Grumman System Corporation for Zone 3 Reservoir property. Temporary construction easement amount of $18,000 per month with four months due at execution of Easement Agreement initially in the amount of $72,000, subject to Northrop Grumman agreeing to the change regarding the noxious weeds in the easement area, only the easement area, not the entire property. The motion was approved as follows: Mick Sudbury, yea, Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:10:18 to 1:13:05.

ADMINISTRATIVE
Discussion and possible motion to approve the following administrative items:

1. **Resolution 2024-01; Resolution Supporting an Application to hold Elections to the Board of Trustees during the Regular General Election Cycle Under Utah Code Section 17B-1-306(14) Election Change Resolution 2024-01:** A motion was made by Jeff White, seconded by Dan Stewart, to approve Resolution 2024-01; a Resolution Supporting an Application to hold Elections to the Board of Trustees during the Regular General Election Cycle Under Utah Code Section 17B-1-306(14) Election Change Resolution 2024-01. Upon this change of Election period, and approval of the request, the Trustee Candidacy period will be in January. Chairman recused his self from voting on the above agenda item. The motion was approved as follows: Mick Sudbury, (did not vote), Jeff White, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:14:56 to 1:21:21.

2. **Election Cycle Change Application Letter to Lt. Governor Deidre M Henderson:** This agenda item was meant to be part of the above item. The resolution approves the letter to Lt. Governor Deidre M Henderson and the sending of the letter.

3. **Magna Water Collections System Health Assessment 2024:** Dallas presented to the Board the collection system health assessment provided by the acoustic analysis performed by SL Rat system of the collections system. No actions were taken, for full discussion please go to board meeting recording beginning at position 1:21:22 to 1:29:03.

For Information and discussion only – no action items:

- **Next month's board meeting – June 6, 2024, at 10:00 am.** Jeff White has a conflict with this date and will be out of town. A motion was made by Jeff White, seconded by Dan Stewart, to change the June 2024 regular board meeting to June 13, 2024, at 10:00 am, due to conflicts of schedule. The motion was approved as follows: Mick Sudbury,

yea, Dan Stewart, yea and Dan Stewart, yea. For full discussion please go to board meeting recording beginning at position 1:29:04 to 1:30:28.

- **Possible Special board meeting – June 27, 2024, at 10:00 am to review and accept 2024 Certified Tax Rate**

Motion to meet immediately in a closed meeting to discuss the character, professional competence, or physical or mental health of an individual, purchase, exchange, or lease of real property, including any form of a water right or water shares, and collective bargaining pursuant to Utah Code pursuant to Utah Code Ann. §§ 52-4-204 through 205. Jeff White made a motion to meet immediately in closed session to discuss the character, professional competence, or physical or mental health of an individual, the purchase, exchange, or lease of real property, including any form of a water right or water shares, and collective bargaining pursuant to Utah Code Ann. §§ 52-4-204 through 205. The motion was seconded by Dan Stewart, and approved as follows: Mick Sudbury, yea, Dan Stewart, yea, and Jeff White, yea at 11:32 a.m.

Motion to close the closed session and to reopen the open session of the Board Meeting: Jeff White made a motion to close the closed session and reconvene the open session at 1:12 p.m. The motion was seconded by Dan Stewart, yea, and approved as follows: Mick Sudbury, yea, Dan Stewart, and Jeff White, yea.

Consider action on any noticed agenda item discussed in closed meeting: none

Other Business: None

Adjourn: Having no further business to discuss, a motion was made by Dan Stewart, seconded by Jeff White, to adjourn the meeting at 1:13 pm. The motion was approved as follows: Mick Sudbury, yea, Dan Stewart, yea, and Jeff White, yea.

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Attest Chairperson

INVOICE PAYMENTS

MAGNA WATER DISTRICT
INVOICE PAYMENTS
5/6/2024 TO 6/2/2024

Check Issue Date	Payee	Amount	Description
5/7/2024	LOUMIS CDL TESTING	1,575.00	CDL ASSESSMENT & ROAD TEST
5/8/2024	ADVANCED ENGINEERING & ENVIR. SERVICES	3,749.25	LEAD AND COPPER RULE REVISION
5/8/2024	ADVANCED ENGINEERING & ENVIR. SERVICES	30,865.65	SCADA NEEDS ASSESSMENT
5/8/2024	AMAZON CAPITAL SERVICES	154.89	NO TRESPASSING SIGNS
5/8/2024	AMAZON CAPITAL SERVICES	(69.99)	RETURN PRINTER
5/8/2024	AMBIENTE H2O INC	5,078.91	STATOR KITS- WAS PUMPS- WWTP
5/8/2024	AQS ENVIRONMENTAL SCIENCE	2,000.00	SEWER CHEMIST CONSULTANT
5/8/2024	AQUA ENVIRONMENTAL SERVICES	53,028.60	CHLORINE BLDG EQUIPMENT UPGRADE -WWTP
5/8/2024	BATTERY SYSTEMS	180.86	BATTERIES- 8000 BOOSTER
5/8/2024	BATTERY SYSTEMS	71.62	BATTERY- #72
5/8/2024	BOWEN COLLINS & ASSOCIATES	13,821.50	REUSE PROJECT
5/8/2024	CHEMTECH-FORD	178.00	WWTP LAB & TESTING
5/8/2024	CHEMTECH-FORD	338.00	WWTP LAB & TESTING
5/8/2024	CHEMTECH-FORD	454.00	WWTP LAB & TESTING
5/8/2024	CHEMTECH-FORD	338.00	WWTP LAB & TESTING
5/8/2024	CHEMTECH-FORD	172.00	WATER LAB & TESTING
5/8/2024	CHEMTECH-FORD	120.00	WATER LAB & TESTING
5/8/2024	CHEMTECH-FORD	600.00	WATER LAB & TESTING
5/8/2024	CINTAS 1ST AID	185.23	SHOP CABINET
5/8/2024	CINTAS CORPORATION #180	229.76	WWTP UNIFORMS & LINEN
5/8/2024	CINTAS CORPORATION #180	213.71	WWTP UNIFORMS & LINENS
5/8/2024	CINTAS CORPORATION #180	207.77	WWTP UNIFORMS
5/8/2024	CINTAS CORPORATION #180	337.42	WWTP UNIFORMS
5/8/2024	CINTAS CORPORATION #180	168.59	OFFICE RUGS
5/8/2024	CINTAS CORPORATION #180	122.62	SHOP UNIFORMS & LINENS
5/8/2024	CINTAS CORPORATION #180	146.92	SHOP UNIFORMS & LINENS
5/8/2024	CINTAS CORPORATION #180	165.76	SHOP UNIFORMS
5/8/2024	CINTAS CORPORATION #180	131.87	SHOP UNIFORMS
5/8/2024	CONTINENTAL LIFE INSURANCE COMPANY	1,726.50	OPEB OBLIGATION
5/8/2024	CORE & MAIN, LP	21,016.00	STOCK PARTS- SHOP
5/8/2024	CRUS OIL INC./QUALCO	66.30	OIL & FUEL FILTERS- 8000 GENERATOR
5/8/2024	E.T. TECHNOLOGIES, INC	1,108.92	SLUDGE REMOVAL
5/8/2024	E.T. TECHNOLOGIES, INC	1,425.80	SLUDGE REMOVAL
5/8/2024	E.T. TECHNOLOGIES, INC	1,840.39	SLUDGE REMOVAL
5/8/2024	ELECTRO POWER UTAH LLC	2,789.84	CHOPPER PUMP #112 VFD REPLACEMENT
5/8/2024	EVERGREEN BUSINESS SOLUTIONS	82.95	NOTARY STAMP
5/8/2024	HARRINGTON INDUSTRIAL PLASTICS	124.34	REPAIR PARTS- BRINE PUMP
5/8/2024	IGES, INC.	2,070.55	REUSE FACILITY MATERIALS TESTING
5/8/2024	INTERMOUNTAIN FARMERS ASSOCIATION	704.88	FERTILIZER- SHOP
5/8/2024	KILGORE COMPANIES, LLC	380.00	CONCRETE FOR REPAIRS
5/8/2024	LEVERAGE IT SOLUTIONS	1,846.47	STANDARD SUPPORT -APRIL 2024
5/8/2024	METERWORKS	158,420.00	5/8 METERS
5/8/2024	METERWORKS	2,194.50	REPAIR PARTS FOR HYDRANT METERS
5/8/2024	MORGAN ASPHALT	381.33	ASPHALT REPAIRS
5/8/2024	NOLAND & SON CONSTRUCTION	18,725.00	PERMIT FEE REIMB -2023 WATERLINE REPL PROJECT
5/8/2024	O'REILLY	35.22	MAXI FUSES - #74
5/8/2024	PACE ANALYTICAL SERVICES, INC.	971.00	UCMR 5 TESTING
5/8/2024	PETROLEUM EQUIPMENT CO	1,599.09	PARTS - RAS CONVAULT- WWTP
5/8/2024	REMOTE CONTROL SYSTEMS. INC.	500.00	SERVICE -ZONE 3 IRRIGATION BOOSTER STATION
5/8/2024	SLCO PUBLIC WORKS ENGINEERING	1,250.00	CONSTRUCTION PERMIT
5/8/2024	SMITH & LOVELESS, INC	46,000.06	WWTP INFLUENT PROJECT
5/8/2024	SMITH POWER PRODUCTS INC.	362.50	TANK SENDING UNIT- 7600 CONVAULT
5/8/2024	SPEEDS POWER EQUIPMENT	1,547.99	CONCRETE & PIPE SAW
5/8/2024	STANTEC CONSULTING SERVICES INC.	15,780.33	WWTP INFLUENT PROJECT PHASE 2 DESIGN
5/8/2024	STANTEC CONSULTING SERVICES INC.	10,201.80	WRF MASTER PLAN UPDATE 2023
5/8/2024	THATCHER COMPANY	7,508.74	CHEMICALS
5/8/2024	THATCHER COMPANY	15,562.88	CHEMICALS
5/8/2024	THATCHER COMPANY	(7,500.00)	CHEMICALS
5/8/2024	THE RAGMAN COMPANY	580.00	RAGS- SHOP
5/8/2024	U. S. POSTMASTER	25,000.00	POSTAGE
5/8/2024	VANGUARD CLEANING SYSTEMS	650.00	CLEANING - OFFICE
5/8/2024	VANGUARD CLEANING SYSTEMS	350.00	CLEANING - WWTP
5/8/2024	VANGUARD CLEANING SYSTEMS	542.00	CLEANING - EDR
5/8/2024	VEHICLE LIGHTING SOLUTIONS	1,422.98	LIGHTBAR & MOUNTING KIT - #50
5/8/2024	VORTEX COLORADO, INC.	804.89	NORTH OVERHEAD DOOR REPAIR- PARKING GARAGE- WWTP
5/8/2024	WHITMORE, AMANDA	3,164.00	TUITION REIMBURSEMENT
5/9/2024	ALLSTATE	478.27	INSURANCE & OPEB OBLIGATION
5/9/2024	CODALE ELECTRIC SUPPLY INC.	1,483.00	POWER TOOLS - #8 & #83
5/10/2024	AWWA	86.00	MEMBERSHIP RENEWAL
5/10/2024	REPUBLIC SERVICES #864	2,230.00	WWTP GARBAGE COLLECTION

MAGNA WATER DISTRICT
INVOICE PAYMENTS
5/6/2024 TO 6/2/2024

Check Issue Date	Payee	Amount	Description
5/10/2024	REPUBLIC SERVICES #864	525.99	EDR/SHOP GARBAGE COLLECTION
5/10/2024	APA BENEFITS	50.00	DEFINED BENEFIT FEE
5/10/2024	UTAH BARRICADE COMPANY	348.00	BARRICADE RENTAL - FEB 2024
5/10/2024	UTAH BARRICADE COMPANY	372.00	BARRICADE RENTAL - MAR 2024
5/10/2024	MICROSURVEY	400.00	SUBSCRIPTION
5/10/2024	CASELLE, INC.	2,379.00	SUPPORT & MAINTENANCE
5/10/2024	UTAH BROADBAND	279.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	119.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	99.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	159.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	199.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	99.00	BROADBAND/INTERNET SUPPORT
5/10/2024	UTAH BROADBAND	199.00	BROADBAND/INTERNET SUPPORT
5/10/2024	AWWA	200.00	AWWA CONFERENCE
5/10/2024	ROCKY MOUNTAIN CARE CLINIC	90.00	DRUG SCREENING
5/10/2024	ROCKY MOUNTAIN CARE CLINIC	65.00	DOT PHYSICAL EXAM
5/10/2024	ANSERFONE	231.50	NIGHT ANSWERING SERVICE
5/10/2024	APPLICANT PRO	175.90	JOB LISTINGS
5/10/2024	WEST VALLEY CITY	130.20	EDR STORMWATER FEE
5/10/2024	BANKCARD CENTER	1,100.00	POST PPA DOCUMENT RESTATEMENT FEE
5/10/2024	AIRGAS USA, LLC - CENTRAL DIVISION	72.00	ARGON RENTAL CYLINDER
5/10/2024	VERIZON CONNECT FLEET USA LLC	426.80	MONTHLY GPS SERVICE
5/10/2024	SMITH HARTVIGSEN, PLLC	2,341.50	GENERAL LEGAL MATTERS
5/10/2024	SMITH HARTVIGSEN, PLLC	57.00	LEGISLATIVE MATTERS
5/10/2024	FEDEX	177.00	SHIPPING
5/10/2024	AWWA	2,478.00	MEMBERSHIP
5/10/2024	AWWA	86.00	MEMBERSHIP
5/10/2024	BLUELINE SERVICES	147.00	RANDOM DRUG TEST
5/10/2024	BANKCARD CENTER	624.48	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	624.48	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	624.48	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	468.36	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	468.36	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	568.34	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	393.12	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	207.79	HOTEL - WEAU CONFERENCE
5/10/2024	BANKCARD CENTER	207.79	HOTEL - WEAU CONFERENCE
5/10/2024	SHRED-IT	79.67	DOCUMENT SHREDDING
5/10/2024	BANKCARD CENTER	280.51	BOARD MEETING LUNCH
5/10/2024	FEDEX	196.20	SHIPPING
5/10/2024	NATIONAL BENEFIT SERVICES, LLC	52.00	HRA PLAN ADMIN FEE- MARCH 2024
5/10/2024	VERIZON WIRELESS	379.26	CELLPHONE SERVICE
5/10/2024	SIGN NOW	48.15	ONLINE APPLICATIONS
5/10/2024	BANKCARD CENTER	25.00	ENTITY REGISTRATION
5/10/2024	SIGN NOW	48.15	ONLINE APPLICATIONS
5/10/2024	SIGN NOW	48.15	ONLINE APPLICATIONS
5/10/2024	SIGN NOW	48.15	ONLINE APPLICATIONS
5/12/2024	PURCHASE POWER	250.00	POSTAGE
5/13/2024	ELITE GROUNDS, LLC	75.00	ADMIN BLDG LANDSCAPE MAINTENANCE
5/13/2024	INDUSTRIAL SUPPLY CO., INC.	212.62	TOOLS - METER CREW
5/14/2024	BANKCARD CENTER	1,430.84	RAYMOND MONDRAGON CC PURCHASES
5/14/2024	DOMINION ENERGY	134.01	NATURAL GAS FOR 3291 S 8000 W
5/14/2024	DOMINION ENERGY	2,724.00	NATURAL GAS 6850 W 2820 S
5/14/2024	DOMINION ENERGY	383.66	NATURAL GAS 6026 PARKWAY BLVD
5/14/2024	DOMINION ENERGY	732.28	NATURAL GAS FOR 8931 W 3500 S
5/14/2024	DOMINION ENERGY	6,266.95	NATURAL GAS 7650 W 2100 S
5/14/2024	DOMINION ENERGY	494.08	NATURAL GAS 8885 W 3500 S
5/15/2024	1800 ASPHALT, LLC	2,500.00	ASPHALT CRACK SEAL & REPAIR- WWTP ADMIN BLDG
5/15/2024	AQUATIC INFORMATICS, INC	2,500.00	HACH RIO DATA SOFTWARE- WWTP SCADA
5/15/2024	CHEMTECH-FORD	454.00	WWTP LAB & TESTING
5/15/2024	CHEMTECH-FORD	628.00	WWTP LAB & TESTING
5/15/2024	CHEMTECH-FORD	338.00	WWTP LAB & TESTING
5/15/2024	CHEMTECH-FORD	600.00	WATER LAB & TESTING
5/15/2024	CINTAS 1ST AID	35.20	EDR CABINET FIRST AID
5/15/2024	CINTAS 1ST AID	42.75	WWTP CABINET FIRST AID
5/15/2024	CINTAS 1ST AID	86.85	OFFICE CABINET FIRST AID
5/15/2024	CINTAS 1ST AID	90.22	SHOP CABINET FIRST AID
5/15/2024	CINTAS 1ST AID	18.83	WWTP CABINET FIRST AID
5/15/2024	DELUXE	240.84	OFFICE SUPPLIES- OFFICE
5/15/2024	E.T. TECHNOLOGIES, INC	1,874.69	SLUDGE REMOVAL

MAGNA WATER DISTRICT
INVOICE PAYMENTS
5/6/2024 TO 6/2/2024

Check Issue Date	Payee	Amount	Description
5/15/2024	E.T. TECHNOLOGIES, INC	1,146.79	SLUDGE REMOVAL
5/15/2024	E.T. TECHNOLOGIES, INC	2,322.16	SLUDGE REMOVAL
5/15/2024	FILTER TECHNOLOGIES	739.58	HVAC FILTERS- WWTP
5/15/2024	HARRINGTON INDUSTRIAL PLASTICS	112.29	REPAIR PARTS- BRINE PUMP STATION
5/15/2024	HEARTH & HOME	408.33	BOARD RM FIREPLACE REPAIR
5/15/2024	HI- VALLEY CHEMICAL	2,527.78	CHEMICALS
5/15/2024	IPS	129.54	T&A MONTHLY FEE-MAY
5/15/2024	JACKS TIRE & OIL	725.79	TIRE REPLAC & TIRE REPAIR- #61
5/15/2024	JATERKA, ROBERT	591.20	TUITION REIMBURSEMENT
5/15/2024	JORDAN VALLEY WATER	28,796.22	WATER DELIVERIES
5/15/2024	MID ATLANTIC TRUST COMPANY	3,920.87	401(K)
5/15/2024	MORGAN ASPHALT	393.36	ASPHALT REPAIRS
5/15/2024	PREMIER TRUCK GROUP	85.00	EMISSIONS & INSPECTION- #30
5/15/2024	PREMIER TRUCK GROUP	85.00	EMISSIONS & INSPECTION- #4
5/15/2024	PREMIER TRUCK GROUP	40.00	INSPECTION- #89
5/15/2024	PREMIER TRUCK GROUP	80.88	MARKER LIGHTS- #7
5/15/2024	PREMIER TRUCK GROUP	153.99	DASH SKELETON -SERVICE BRAKE- #74
5/16/2024	BANKCARD CENTER	2,957.90	ANDREW SUMSION CC PURCHASES
5/16/2024	CORRIO CONSTRUCTION, INC.	853,353.48	MAGNA WRF REUSE PROJECT
5/16/2024	RICOH USA , INC	259.93	COPIER ADMINISTRATIVE OFFICE
5/17/2024	ROCKY MOUNTAIN POWER CO.,	18,591.05	POWER BARTON 1&2
5/20/2024	ROCKY MOUNTAIN POWER CO.,	36.24	POWER 3500 S TANKS
5/20/2024	ROCKY MOUNTAIN POWER CO.,	19.72	POWER BACHUS RES
5/20/2024	ROCKY MOUNTAIN POWER CO.,	472.47	POWER SECONDARY RES PUMP
5/20/2024	ROCKY MOUNTAIN POWER CO.,	3,225.00	POWER ZONE 3 CUL PUMP STATION
5/20/2024	ROCKY MOUNTAIN POWER CO.,	289.67	POWER CEMENT SHOP
5/20/2024	ROCKY MOUNTAIN POWER CO.,	1,489.80	POWER VFORGE RESERV
5/20/2024	ROCKY MOUNTAIN POWER CO.,	11.75	POWER JORDAN V CON
5/23/2024	ALL IN STITCHES INC.	709.00	COMPANY LOGO HATS
5/23/2024	BATTERY SYSTEMS	328.58	BATTERY- #58
5/23/2024	BATTERY SYSTEMS	271.29	BATTERIES- #55
5/23/2024	BLUELINE SERVICES	33.50	NEW EMPLOYEE BACKGROUND CHECK
5/23/2024	CITY CREEK WINDOW CLEANING	870.00	OFFICE WINDOW CLEANING
5/24/2024	ROCKY MOUNTAIN POWER CO.,	88.38	POWER BOOSTER STATION
5/24/2024	ROCKY MOUNTAIN POWER CO.,	541.26	POWER SHALLOW WELLS
5/24/2024	STAPLES BUSINESS CREDIT	14.99	OFFICE SUPPLIES- OFFICE
5/24/2024	STAPLES BUSINESS CREDIT	52.05	OFFICE SUPPLIES- OFFICE
5/24/2024	USA BLUEBOOK	489.95	SAFETY HARNESSES - WW DEPT
5/28/2024	BLUE STAKES OF UTAH 811	512.14	BILLABLE E-MAIL NOTIFICATIONS
5/28/2024	FERGUSON WATERWORKS #1616	673.75	SEWER TEST BALLS & POLY LIFT LINE
5/28/2024	FERGUSON WATERWORKS #1616	366.93	SEWER TEST BALLS & POLY LIFT LINE
5/28/2024	GRAINGER	121.83	ASPHALT RAKES
5/28/2024	GRAINGER	418.92	CHOP SAW BLADES
5/28/2024	LOWE'S	65.49	FITTINGS- FUEL TANK- 8000 W GENERATOR
5/28/2024	LOWE'S	210.81	MISC SUPPLIES- WWTP
5/28/2024	LOWE'S	117.01	MISC SUPPLIES- SEWER CREW
5/28/2024	MID ATLANTIC TRUST COMPANY	3,920.87	401(K)
5/28/2024	PITNEY BOWES INC	91.29	INK CARTRIDGE- OFFICE SUPPLIES- OFFICE
5/28/2024	POLYDYNE INC	13,497.78	POLYMER PURCHASES
5/28/2024	SAFETY SUPPLY & SIGN CO.	780.10	BLUE STAKES MARKING PAINT & WAND
5/28/2024	THE LINCOLN NATIONAL LIFE	731.10	INSURANCE
5/30/2024	HUBER TECHNOLOGY	2,876.36	WASH BAR MOTOR & GEARBOX- SCREW PRESS- WWTP
5/30/2024	MOUNTAINLAND SUPPLY COMPANY	1,077.19	SECONDARY METER BOXES & LIDS
5/30/2024	UTAH LTAP	200.00	CONFINED SPACE TRAINING
5/30/2024	WORKERS COMPENSATION FUND OF U	2,147.70	WCF INSURANCE
5/31/2024	ROCKY MOUNTAIN POWER CO.,	9.76	POWER WWTP ADMIN BLDG
5/31/2024	ROCKY MOUNTAIN POWER CO.,	26,937.34	POWER WWTP ADMIN BLDG
		$ 1,481,712.77	

VENDOR NAME	AMOUNT	YTD Totals
1800 ASPHALT, LLC	2,500.00	2,500.00
ADVANCED ENGINEERING & ENVIR. SERVICES	34,614.90	43,594.65
AETNA	1,726.50	1,726.50
AIRGAS	72.00	1,420.98
ALL IN STITCHES INC.	709.00	709.00
ALLSTATE	478.27	2,391.35
AMAZON CAPITAL SERVICES	84.90	1,049.18
AMBIENTE H2O INC	5,078.91	25,164.21
ANSERFONE	231.50	1,315.00
APA BENEFITS	50.00	6,050.00
APPLICANT PRO	175.90	335.72
AQS ENVIRONMENTAL SCIENCE	2,000.00	10,000.00
AQUA ENVIRONMENTAL SERVICES	53,028.60	81,737.85
AQUATIC INFORMATICS	2,500.00	7,000.00
AWWA	2,850.00	4,188.00
BANKCARD CENTER	9,981.45	9,981.45
BATTERY SYSTEMS	852.35	1,298.56
BLUE STAKES OF UTAH 811	512.14	3,022.40
BLUELINE SERVICES	180.50	1,042.00
BOWEN COLLINS & ASSOCIATES	13,821.50	87,848.62
CASELLE	2,379.00	11,895.00
CHEMTECH-FORD	4,220.00	37,965.00
CINTAS 1ST AID	459.08	2,334.27
CINTAS CORPORATION #180	1,724.42	13,891.53
CITY CREEK WINDOW CLEANING	870.00	870.00
CODALE ELECTRIC SUPPLY INC.	1,483.00	1,684.60
CORE & MAIN, LP	21,016.00	28,391.68
CORRIO CONSTRUCTION, INC.	853,353.48	2,811,275.43
CRUS OIL INC./QUALCO	66.30	1,181.79
DELUXE	240.84	240.84
DOMINION ENERGY	10,734.98	94,947.83
E.T. TECHNOLOGIES, INC	9,718.75	75,657.64
ELECTRO POWER UTAH LLC	2,789.84	12,590.81
ELITE GROUNDS, LLC	75.00	4,228.06
EVERGREEN BUSINESS SOLUTIONS	82.95	478.80
FEDEX	373.20	2,300.32
FERGUSON WATERWORKS #1616	1,040.68	22,382.55
FILTER TECHNOLOGIES	739.58	1,479.16
GRAINGER	540.75	1,157.83

VENDOR NAME	AMOUNT	YTD Totals
HARRINGTON INDUSTRIAL PLASTICS	236.63	487.21
HEARTH & HOME	408.33	408.33
HI- VALLEY CHEMICAL	2,527.78	2,527.78
HUBER TECHNOLOGY	2,876.36	303,032.52
IGES, INC.	2,070.55	19,845.47
INDUSTRIAL SUPPLY CO., INC.	212.62	1,352.62
INTERMOUNTAIN FARMERS ASSOCIATION	704.88	704.88
IPS	129.54	640.08
JACKS TIRE & OIL	725.79	2,618.29
JATERKA, ROBERT	591.20	1,273.44
JORDAN VALLEY WATER	28,796.22	149,148.33
KILGORE COMPANIES, LLC	380.00	4,377.15
LEVERAGE IT SOLUTIONS	1,846.47	18,361.45
LOUMIS CDL TESTING	1,575.00	1,575.00
LOWE'S	393.31	6,644.69
METERWORKS	160,614.50	337,176.07
MICROSURVEY	400.00	400.00
MID ATLANTIC TRUST COMPANY	7,841.74	197,838.17
MORGAN ASPHALT	774.69	2,245.67
MOUNTAINLAND SUPPLY COMPANY	1,077.19	42,586.45
NATIONAL BENEFITS SERVICE	52.00	42,156.00
NOLAND & SON CONSTRUCTION	18,725.00	18,725.00
O'REILLY	35.22	1,043.78
PACE ANALYTICAL SERVICES, INC.	971.00	2,898.00
PETROLEUM EQUIPMENT CO	1,599.09	1,599.09
PITNEY BOWES INC	91.29	91.29
POLYDYNE INC	13,497.78	40,493.34
PREMIER TRUCK GROUP	444.87	452.25
PURCHASE POWER	250.00	520.00
REMOTE CONTROL SYSTEMS. INC.	500.00	11,800.00
REPUBLIC SERVICES	2,755.99	5,969.50
RICOH USA , INC	259.93	1,977.57
ROCKY MOUNTAIN CARE CLINIC	155.00	1,397.00
ROCKY MOUNTAIN POWER CO.,	51,712.44	280,032.66
S.L.CO. ENGINEERING DIVISION	1,250.00	7,125.00
SAFETY SUPPLY & SIGN CO.	780.10	2,344.66
SHRED-IT	79.67	453.83
SIGN NOW	192.60	662.19
SMITH & LOVELESS, INC	46,000.06	46,000.06

VENDOR NAME	AMOUNT	YTD Totals
SMITH HARTVIGSEN, PLLC	2,398.50	19,503.50
SMITH POWER PRODUCTS INC.	362.50	362.50
SPEEDS POWER EQUIPMENT	1,547.99	1,747.87
STANTEC CONSULTING SERVICES INC.	25,982.13	179,112.65
STAPLES BUSINESS CREDIT	67.04	2,394.47
THATCHER COMPANY	15,571.62	142,776.10
THE LINCOLN NATIONAL LIFE	731.10	3,655.50
THE RAGMAN COMPANY	580.00	580.00
U. S. POSTMASTER	25,000.00	40,000.00
USA BLUEBOOK	489.95	1,899.94
UTAH BARRICADE COMPANY	720.00	1,800.00
UTAH BROADBAND	1,153.00	5,576.00
UTAH LTAP	200.00	200.00
VANGUARD CLEANING SYSTEMS	1,542.00	9,252.00
VEHICLE LIGHTING SOLUTIONS	1,422.98	1,422.98
VERIZON CONNECT FLEET	426.80	3,120.69
VERIZON WIRELESS	379.26	2,251.39
VORTEX COLORADO, INC.	804.89	7,441.69
WEST VALLEY CITY	130.20	520.80
WHITMORE, AMANDA	3,164.00	3,787.24
WORKERS COMPENSATION FUND OF U	2,147.70	8,598.50
TOTALS	1,481,712.77	5,412,317.25

MAGNA WATER DISTRICT
ZIONS BANK BOND PAYMENT
5/6/2024 TO 6/2/2024

Check Issue Date	Payee	Amount	Description
5/8/2024	ZIONS FIRST NATIONAL BANK	83,609.69	5436869-BOND SER 2013
5/8/2024	ZIONS FIRST NATIONAL BANK	427,600.19	GO BOND SERIES 2019
5/8/2024	ZIONS FIRST NATIONAL BANK	783,265.67	GO BOND SERIES 2017
		$ 1,294,475.55	

MANAGER'S REPORT

MEMO

TO: **MWD Board of Directors**

FROM: **Clint Dilley, P.E., General Manager**

DATE: **06/05/24 (June 13th Board Meeting)**

RE: **Report and Discussion from General Manager**

PURPOSE OF MEMO

The purpose of this memo is to provide the Magna Water District (MWD) Board of Directors a general report from the General Manager and associated discussion with input from rest of management team to keep the board abreast of general matters in the District. The format of the memo will primarily be a list of bullet points to assist guiding the discussion in the board meeting.

REPORT FROM GENERAL MANAGER

After discussions with the board and management team we have focused our efforts on three main areas including 1) Staffing 2) Operations and 3) Communication as outlined in the following sections.

STAFFING

- Front Office
    - Customer Service/Cash Receiving
        - Ashley Wells started on 6/4/24 to replace Virginia Fish who retired 5/28/24
- Operations
    - Water Construction Crew
        - More interviews to be completed this week.
    - Collections Crew
        - Jaden Sheppard started 6/3/24

OPERATIONS

- Water Operations
    - Secondary water system fully operational. Waiting on fabricated piping to complete 3500 South Zone 1 capacity expansion with new pump and filter
    - Water crew finished lead and copper rule inventory. AE2S reviewing data for any final requirements prior to submission to DDW.
    - CCR water quality report to be complete prior to end of June
    - After inspection of Haynes well #7 pump, we recommend replacement with a new pump assembly due to poor condition
    - Moving forward on Haynes Well #8 bidding process after consultant confirming requirements of EPA grant are included in contract documents

- WWTP Operations
    - Huber completed inspection and maintenance of their equipment at WWTP with positive feedback on condition & care
    - RH Borden finished acoustic assessment of collection system and found system in similar condition to last years inspection
    - Collections working with Don Calvert on system lining and rehab locations
    - Collections working with Twin D on spot repairs
    - Aeration equipment swap out for higher efficiency units completed with much success and much higher DO levels observed in oxidation ditches
- Office
    - Bids obtained to seal off portion of lobby in NW corner of building to allow for a new meeting room
    - Domain change to ".gov" from ".com" has been approved and will now have IT work on change over of email, website, etc. prior to end of 2024
    - Controller working with auditors on completion of annual audit
    - Controller to set up a surplus sale for unused office equipment, furniture, etc. to assist in final cleanup of basement
- Delinquent accounts
    - April 2024
        - Accounts that are delinquent: 382
        - Total of all delinquent accounts: $62,937.27
        - Average delinquent account balance: $164.75
        - Pink notices sent out = 130
            - Pink notices were 50% effective
        - Red notices were 95% effective as of 4/18/24

    - March 2024
        - Accounts that are delinquent: 692
        - Total of all delinquent accounts: $86,324.39
        - Average delinquent account balance: $124.74
        - Pink notices sent out = 173
            - Pink notices were 72% effective
        - Red notices were 90% effective as of 3/19/24

    - February 2024
        - Accounts that are delinquent: 562
        - Total of all delinquent accounts: $70,115.60
        - Average delinquent account balance: $124.76
        - Pink notices sent out = 163
            - Pink notices were 65% effective
        - Red notices were 95% effective as of 2/14/24

COMMUNICATION & MORALE

- Continue working toward improving communication w/ board members & community partners
    - GM & HR MGR attended the Magna City Open House at Matheson Jr High on 6/3/24
    - Working on finalizing employee participation in fourth of July parade
    - JVWCD will host an emergency communications planning workshop on June 27th at 8:30
- Work to improve communication & morale with employees
    - Distributed hats with MW logo to all employees
    - Held retirement celebration for Virginia Fish on 5/28/24

    - Planning on SL bees game for summer employee get together

- Work to improve communication with customers
    - Sent out 2024 water picture flyer for distribution in May. Will look at WWTP award flyer for June
    - Generated a flyer to handout about the District & answered customer questions at Magna City Open House on a range of topics from secondary water, irrigation ditches, leak repairs, RV dumps, water quality & pressure issues
    - Thorough and prompt response to customer concerns and complaints
        - None to report this month

ENGINEERING REPORT

Engineering Report (Updated 06/05/24)

Capital and General Engineering Projects

- **2023 Water line replacement project**
  - **8850 W.**
    - **All piping and connection to existing pipes are complete. Services are being tied over.**
  - **9000 W.**
    - **Scheduled to start laying pipe next week.**
- **WRF Reuse Project**
  - **Installing Pumps**
  - **Working on mechanical piping and filters**.
  - **Working on electrical**
- **Influent Pump Station**
  - **On agenda**
  - **Tentatively scheduled to start July/August**
  - Equipment Pre-procurement
    - Screw Pumps and Grit Washers
- **WWTP Facility Plan Update**
  - WWTP model complete
  - Facility assessment complete
  - Approximately 70% complete
- **Haynes Well #8 Replacement**
  - Well drilling and casing design complete
  - Pump house design complete
  - **Working on paperwork and agreement for $1.31 million grant**
- West Side Collection Phase 1B Project
  - **Rebid in July 2024.**
- Truck Garage
  - Adjust size to 4 bays
- Solids Handling Building Expansion
  - Plan review in progress
- **Change House**
  - **Selected consultant to provide a technical memo comparing locations and facility types.**
  - Temporary locker/change area location on main level of existing operations building.
  - door at top of stairs has been installed
- **7200 W- 3100 S to Beagley Lane Secondary Project**
  - **Working on schedule for bidding and construction, look to bid in June.**
- Zone 3 Secondary Water Reservoir
  - **Waiting in NG for final agreement to execute.**
  - Design picked back up.

WATER OPERATIONS MANAGER REPORT

Summary Of Water Deliveries
MAGNA WATER DISTRICT
System # 18014
May-24

Source	Month's Deliveries (AF)		Change %	Current Month's Gall	Deliveries YTD (AF)		Change %	YTD Gallons
CULINARY WATER	**2024**	**2023**			**2024**	**2023**		
Well Sources Barton and Haynes	434.42	410.68			1,424.50	1,299.40		
To Waste	48.47	42.97			168.52	163.38		
Total Finished Blend EDR	385.03	363.84			1,241.69	1,129.31		
JVWCD Magna Reading	69.13	69.25			332.51	341.47		
JVWCD	70.32	**69.42**			**334.02**	**341.68**		
Total Culinary Water	**455.35**	433.26	4.85%	148,365,780	1,575.71	1,470.99	6.65%	513,410,438
SECONDARY WATER								
Irrigation Well #1	36.95	24.18			49.13	30.09		
Irrigation Well #2	27.55	22.36			41.86	28.00		
Irrigation Well #3	-	13.49			0.17	20.58		
High Zone (secondary)	33.93	13.82			44.84	13.82		
Low Zone (secondary)	39.86	16.54			45.96	16.54		
Total secondary Usage	138.29	90.39	34.64%	45,058,892	181.96	109.03	40.08%	59,287,663
Total Production of Water	593.64	523.65	11.79%	193,424,534	1,757.67	1,580.02	10%	572,698,101

*** EDR Blend + Total Secondary + JVWCD = Total Production**

Water Production Report & Callout Report

May 2024

Water Production Summary

The culinary water production for the month of May was 148.36 million gallons or 434.42-acre feet, a 4.85% increase from 2023. YTD was 513.41 million gallons or 1,424.50-acre feet, a 6.65% increase from 2023.

We have purchased 334.02-acre feet of water from Jordan Valley Water.

Callout Report – Water and Wastewater Combined

Total number of call outs - 18
- Water – 15
- Wastewater – 3

Total Hours for call outs – 80.25
- Water – 60
- Wastewater – 20.25

Mainline Leak - 0
Service Line Leaks – 4
Miscellaneous - 14

MAY CALL OUTS

Dept.	Employee	Date	Hours	Description
EDR	JON DAVIS	5/1/2024	3	RESTART COMPUTER
SEWER	CHET DRAPER	5/5/2024	14.25	POWER OUTAGE
WATER	ROB JATERKA	5/3/2024	3	WATER IN APPROACH, STANDING WATER - 3844 S DANBURY DR
EDR	ED TUCKER	5/7/2024	3	RESTART UNIT
SEWER	SCOTT BECK	5/12/2024	3	POWER BUMP- EAST HW
EDR	STEVE CLARK	5/10/2024	3	RESTART COMPUTER
		5/11/2024	3	RESTART COMPUTER
SEWER	BEAU LAMPER	5/18/2024	3	POWER OUTAGE- DOWNED LINES AT 7200 W 2100 S
WATER	JUSTIN LONG	5/17/2024	6	SECONDARY LINE HIT BY CONTRACTOR, FLOODING YARDS, TURNED OFF WATER- 7540 W 2820 S FOXTAIL PARK.
		5/20/2024	3	WATER COMING FROM PARK STRIP, FLOODING GARAGE, REQUESTING WATER OFF - 8540 W ZAMORA DR
		5/22/2024	3	HOUSE FLOODING FROM BROKEN SPRINKLER PIPE, TURNED WATER OFF - 3854 S IRON BARON RD
WATER	CONNOR MCREYNOLDS	5/10/2024	3	REPORT OF WATER LEAKING, NOTHING FOUND -7337 W GARDENIA
		5/11/2024	3	SERVICE LINE LEAK - 7337 W GARDENIA CIR
		5/15/2024	3	SERVICE LINE LEAK - 2648 S 8800 W
WATER	CHRIS THOMPSON	5/17/2024	3	SECONDARY LINE HIT BY CONTRACTOR, FLOODING YARDS, TURNED OFF WATER- 7540 W 2820 S FOXTAIL PARK.
EDR	JON DAVIS	5/23/2024	3	RESTART UNITS 3&4
		5/24/2024	3	AIR COMPRESSOR FAILURE
EDR	MATT SKOGERBOE	5/24/2024	3	AIR COMPRESSOR FAILURE
WATER	ROB JATERKA	5/30/2024	3	SERVICE LEAK- 3420 S 7615 W
		5/31/2024	3	PINHOLE IN RESETTER, REMOVED RESETTER & SET METER - 8565 W 3100 S
WATER	GAVIN HENSHAW	5/30/2024	3	SERVICE LEAK- 3420 S 7615 W
WATER	GENE STOTT	5/30/2024	3	SERVICE LEAK- 3420 S 7615 W

Total Callout Hours	**80.25**
Total Callouts	**18**
Total Water/EDR Hours	**60**
Total # of Water Callouts	**15**
Total WWTP Hours	**20.25**
Total WWTP Callouts	**3**

LEAKS

Date	Address	Hours	Mainline/Service
5/11/2024	7337 W GARDENIA CIR	3	SERVICE
5/15/2024	2648 S 8800 W	3	SERVICE
5/17/2024	7540 W 2820 S	9	SERVICE
5/30/2024	3420 S 7615 W	9	SERVICE
	TOTAL	**24**	

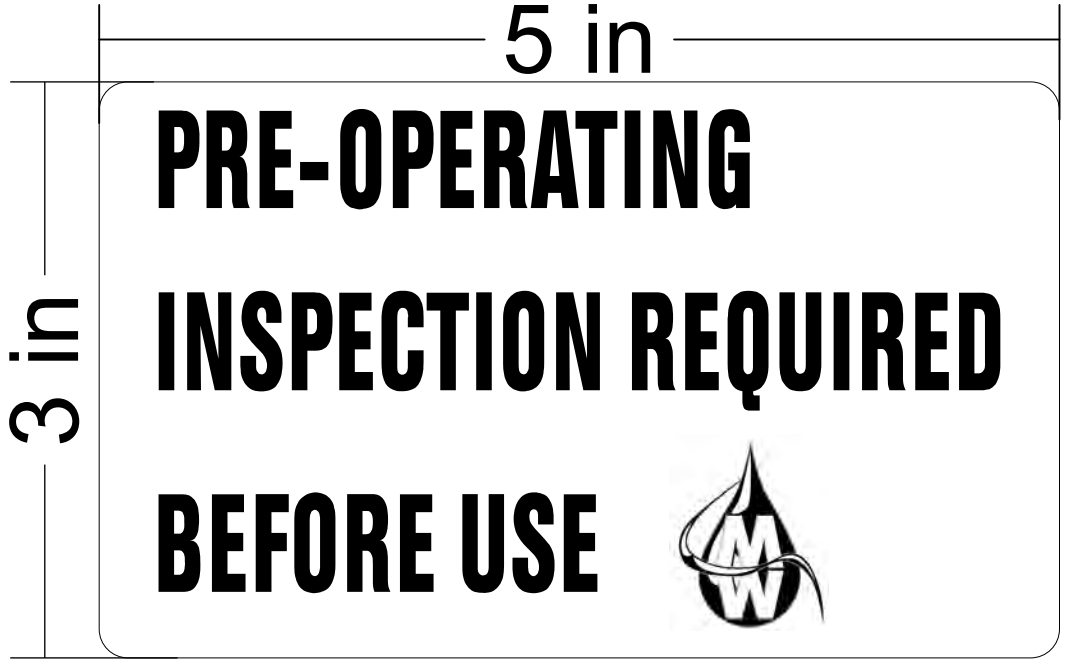
COMPLIANCE REPORT

COMPLIANCE OF LEGAL REQUIREMENTS AND INTERNAL POLICIES CHECK LIST

LEGAL REQUIREMENTS	DATE COMPLETED	DUE DATE	NEXT SCHEDULED FOR
Posting of Annual Schedule of Regular Board Meetings	1/2/2024	1st Monday in January	1/1/2025
Adoption of District's Annual Tentative Budget	10/19/2023	11/30/2024	10/1/2024
Annual Certification and Filing of Budget with State Auditor	11/28/2023	12/31/2024	12/31/2024
Annual Filing of Impact Fees Report with State Auditor	3/31/2024	3/31/2024	3/31/2025
Annual Filing of Financial Statements with State Auditor	6/30/2024	6/30/2024	6/30/2025
Participation in Utah Public Finance Website (transparent.utah.gov) Salaries/Benefits	1/30/2024	3/31/2024	3/31/2025
Quarterly Budget to Actual Reports provided to Board of Trustees			
1st Quarter	5/16/2024	May	05/31/2025
2nd Quarter		July	07/31/2025
3rd Quarter		November	11/30/2025
4th Quarter		February	02/28/2026
Quarterly Expenditures and Revenues posted to Utah Public Transparency Website			
1st Quarter	4/27/2024	04/30/2024	04/30/2025
2nd Quarter		08/31/2024	8/31/2025
3rd Quarter		10/31/2024	10/31/2025
4th Quarter		01/31/2025	1/31/2026
WWTP Annual Biosolids Report to State	1/16/2024	2/18/2024	2/28/2025
OSHA 300 Report - Posted & Submitted	3/2/2024	3/2/2024	3/2/2025
Board member contact information (name, phone number, and email address) posted on the Utah Public Notice Website	1/8/2024	30 days after information has changed	1/1/2025
Semi-annual Report to State Money Management Council			
June 30 Report	7/1/2023	07/31/2024	7/31/2025
December 31 Report	1/25/2024	01/31/2025	1/31/2026
File statement with Division of Corporations re: receipt of notice of claim	1/8/2024	January	1/31/2025
File with Registry of Lieutenant Governor	5/22/2024	COMPLETED 04/11/2024 ng	4/11/2025
Disclosure regarding responsibility of homeowner to repair retail water line	5/1/2024	COMPLETED 04/11/2024 Semi-Annually	10/31/2024
Annual ET Technologies Waste Renewal Certification	4/30/2024	COMPLETED 04/11/2024	4/30/2025
Water Use Report	3/31/2024	03/31/2024	3/31/2025
Municiple Wastewater Planning Program Report	4/11/2024	April 15	5/1/2025

Publish Consumer Confidence Report	7/1/2023	Every July 1	7/1/2024
Annual Employee Training			
Sexual Harassment & Discrimination	5/31/2023	December 31	5/31/2024
Tuition Assistance Program	On-going	During Hiring Onboarding	On-going
Fraud Awareness Training	9/1/2024	December 31	
Ethical Behavior	7/26/2023	December 31	7/31/2024
Preventing Violence in the Workplace	6/28/2023	December 31	6/30/2024
Annual Trustee Training			
Open and Public Meetings Act	11/30/2024	12/01/2024	11/30/2025
Utah Public Officers' and Employees' Ethics Act	11/30/2024	12/01/2024	11/30/2025
New Trustee Special and Local District training Course	11/30/2024	Within one year of Office	11/30/2025
Conflict of Interest Annual certification	4/22/2024	2/29/2024	02/29/2025
Emloyee Performance Evaluations	11/30/2023	12/31/2024	11/30/2025
Hotline	Ongoing	Posted on Website always	Ongoing
Annual Filing of Fraud Risk assessment with State Auditor	12/14/2023	June 30 of following year	12/31/2024
GRAMA Training Annual for Records Officer	4/9/2023	COMPLETED 04/11/2024	4/9/2024
Proper Notice of Public Meetings	Ongoing	date and time	Ongoing
Appoint A Board Chair Person Annually	1/11/2024	January Regular Board Meeting	1/1/2025
Public Tax Increase Hearing	Ongoing	When Needed	Ongoing
Review Insurance/Bonding Requirements	Annually	December 2024	2025
Review Fund Balance Limitation	Annually	December 2024	2025
Imposing/Increasing Fee - Public Hearing	4/22/2021	When needed	Unknown
Copies of "Robert's Rules of Order" (b) Subject to Subsection (3)(3), a board of trustees shall: (i) adopt rules of order and procedure to govern a public meeting of the board of trustees; (ii) conduct a public meeting in accordance with the rules of order and procedure described in Subsection (3)(b)(i); and (iii) make the rules of order and procedure descruibed in Subsection (3)(b)(i) available to the public: (A) at each meeting of the board of trustees; and (B) on the local district's public website, if available	ongoing	ongoing	ongoing
Meeting Minutes Meeting Minutes and any materials distributed at the Meeting available on the Utah Public Notice Webiste, District website, and district office and within three business days after holding an open meeting, make an audio recording of the open meeting available to the public for listenting.	Ongoing		Ongoing

HR MANAGER REPORT



corporate image

MAGNA WATER

PRE-OP
PROOF

5/24/2024
Rendered By: Noel Perches

METER STOCK PURCHASE

# to Order	Unit Price	Size	Meter Type	Lay Length	Extended Pricing
1453	275.31	**5/8"**	5/8 T10	7.5"	$ 400,025.43
-	455.53	**1"**	1 MACH10 BLACK	10.75"	
5	918.37	**1.5"**	1.5 MACH10 BLACK	13"	$ 4,591.85
5	1086.61	**2"**	2 MACH10 BLACK	17"	$ 5,433.05
-		**4"**	MACH10 BLACK	20"	
-			MACH10 BLACK	14"	
-	2961.25	3"	MACH10 BLACK	17" replaces compound	
-	2899.4	3"	MACH10 BLACK	12" replaces HPT	
-			UME	12"	
-			UME	17"	
-	394.34	**3/4"**		9"	
-	455.53	**1"**		10.75"	
-	918.37	**1.5"**		13"	
-	1086.61	**2"**		17"	
600	394.35	**3/4"**		9"	$ 236,610.00
-	394.35	**3/4"**		7.5"	
-	455.53	**1"**		10.75"	
5	918.37	**1.5"**		13"	$ 4,591.85
5	1086.61	**2"**		17"	$ 5,433.05
					$ 656,685.23

NICKERSON

Sales Estimate

NICKERSON COMPANY, INC
801-973-8888

Date: 5/8/24
Estimate #: KTP010924
Job #:

Estimate good for 10 days

Customer: MAGNA WATER
Attention: BOB BATT
Pages: 2
Phone: 801-250-2118
Email: BOB@MAGNAWATER.COM

Important Notes:

Unless specifically indicated below, price does not include shipping, sales tax, installation, discharge piping, electrical controls or wiring. Please read, sign and return Terms and Conditions of Sales.

SHIPPING TERMS		PAYMENT TERMS	DUE DATE	
		Net 30 Days		
QTY	**ITEM**	**DESCRIPTION**	**UNIT PRICE**	**LINE TOTAL**
1.00		NICKERSON TO REPLACE PUMP ASSEMBLY	$ 40,010.00	$ 40,010.00
		WITH AMERICAN TURBING MODEL# 14-M-200,		
		REPAIR DISCHARGE HEAD, EPOXY COAT ID/OD,		
		REPLACE ALL COLUMN PIPE WITH LINED AND		
		COATED PIPE, REPLACE SHAFTING W/ 416SS,		
		REPLACE BRONZE RETAINERS AND RUBBER		
		INSERTS.		
		LEAD TIME IS APPROX. 5-6 WEEKS ARO		
0.00	OPTIONAL	USE OF NEW OLD STOCK COLUMN PIPE, LINED	$ (2,400.00)	
		AND COATED		
		Due to current economic conditions, pricing and		
		leadtimes are subject to change without notice.		
		Please note: Pricing does not include		
		any applicable taxes. These charges will		
		be added to your invoice. A 3% processing fee will		
		added to all Credit Card orders over $2,000.00		

Quote prepared by: Kyle Polatis
Thank you for your business!

Freight:	Not Included
Sales Tax:	Not Included
Total	**$ 40,010.00**

NICKERSON COMPANY, INC. WARRANTY, TERMS AND CONDITIONS OF SALE.

PURCHASER:_____P.O.#_____

DESCRIPTION_____

All orders shall be made out to Nickerson Company, Inc. at P.O. Box 25425, Salt Lake City, Utah 84125 and shall be subject to acceptance by Nickerson Company, Inc.

1. CONSTRUCTION AND LEGAL EFFECT. Our sale to you will be solely upon the terms and conditions set forth herein. They supersede and reject any conflicting terms and conditions of yours, any statement in yours to the contrary notwithstanding. Exceptions to any of our terms and conditions must be contained in a written or typed (not printed) statement received from you; we shall not be deemed to have waived any of our terms and conditions or to have assented to any modification or alteration of such terms and conditions unless such waiver or assent is in writing and signed by an authorized officer. No representation of any kind has been made by us except as set forth herein; this agreement conclusively supersedes all prior writings and negotiations with respect thereto and we will furnish only the quantities and items specifically listed on the face hereof; we assume no responsibility for furnishing other equipment or material shown in any plans and/or specification for a project to which the goods ordered herein pertain. Any action for breach of contract must be commenced within one year after the cause of action has accrued Our quoted prices, discounts, terms and conditions are subject to change without notice.

2. PRICES. Unless otherwise noted on the face hereof, prices are net F.O.B. Point of Origin. Service time of a factory-trained service man is not included and may be charged extra. The amount of any applicable present or future tax or other government charge upon the production, sale, shipment or use of goods ordered or sold will be added to billing unless you provide us with an appropriate exemption certificate.

3. DEFECTIVE EQUIPMENT AND LIMITATION OF WARRANTIES. Providing purchaser notifies us promptly, if within one year from date of shipment equipment sold by Nickerson Company, Inc. fails to function properly under normal, proper and rated use and service because of defects in material or workmanship demonstrated to our satisfaction to have existed at the time of delivery, the company reserving the right to either inspect them in your hands or request their return to us will at our option repair or replace at our expense F.O.B. our Salt Lake City plant, or give you proper credit for such equipment or parts determined by us to be defective, if returned transportation prepaid by purchaser. The foregoing shall not apply to equipment that shall have been altered or repaired after shipment to you by anyone except our authorized employees, and the company will not be liable in any event for alterations or repairs except those made with its written consent. Purchaser shall be solely responsible for determining suitability for use and the company shall in no event be liable in this respect. The equipment or parts manufactured by others but furnished by us will be repaired or replaced only to the extent of the original manufacturer's guarantee. Our obligations and liabilities hereunder shall not be enforceable until such equipment has been fully paid for. Purchaser agrees that if the products sold hereunder are resold by purchaser, he will include in the contract for resale, provisions which limit recoveries against us in accordance with this section. In case of our failure to fulfill any performance representation, it is agreed that we may at our option remove and reclaim the equipment covered by this agreement at our own expense and discharge all liability by repayment to the purchaser of all sums received on account of the purchase price. (The foregoing obligations are in lieu of all other obligations and liabilities including negligence and all warranties, or merchantability or fitness for a particular purpose or otherwise, express or implied by connection with the sale or furnishing of goods or parts, their design, suitability for use, installation or operation.) We will in no event be liable for any direct, indirect, special or consequential damages or delay resulting from any defect whatsoever, and our liability under no circumstances will exceed the contract price for the goods for which liability is claimed.

4. DELIVERY. Delivery, shipment and installation dates are estimated dates only, and unless otherwise specified, are figured from date of receipt of complete technical data and approved drawings as such may be necessary. In estimating such dates, no allowance has been made, nor shall we be liable directly or indirectly for delays of carriers or delays from labor difficulties, shortages, strikes or stoppages of any sort, fires, accidents, failure or delay in obtaining materials or manufacturing facilities, acts of govemment affecting us directly or indirectly, bad weather, or any causes beyond our control or causes designated Acts of God or force majeure by any court of law, and the estimated delivery date shall be extended accordingly. We will not be liable for any damages or penalties whatsoever, whether direct, indirect, special consequential, resulting from our failure to perform or delay in performing unless otherwise agreed in writing by an authorized officer.

5. OPERATING CONDITIONS AND ACCEPTANCE. Recommendations and quotations are made upon the basis of operating conditions specified by the Purchaser. If actual conditions are different than those specified and performance of the equipment is adversely affected thereby, Purchaser will be responsible for the cost of all expenses incurred in, and reasonable profit for, performance of the equipment is adversely affected thereby, Purchaser will be responsible for the cost of all changes in the equipment required to accommodate such conditions, and we reserve the right to cancel this order and Purchaser shall reimburse us for all costs and expenses incurred in, and reasonable profit for, performance hereunder. We reserve the right to refuse any order based upon a quotation containing an error. The provisions in any specification or char issued by Nickerson Co. are descriptive only and are not warranties or representations; Nickerson Co. will certify to a rated capacity in any particular product upon request. Capacity head and efficiency certifications are based on shop tests and when handling clear, fresh water at a temperature not over 85° F. Certifications are at this specified rating only and do not cover sustained performance over any period of time nor under conditions varying from these.

6. SHIPPING. Unless you specify otherwise in writing, (a) goods will be boxed or crated as we may deem proper for protection against normal handling, and extra charge will be made for preservation, waterproofing, export boxing and similar added protection of goods; (b) routing and manner of shipment will be at our discretion, and may be insured at your expense, value to be stated at order price. On all shipment F.O.B. our plant, delivery of goods to the initial carrier will constitute delivery to you and all goods will be shipped at your risk. A claim for loss of damage in transit must be entered with the carrier and prosecuted by you. Acceptance of material from a common carrier constitutes a waiver of any claims against us for delay or damage or loss.

7. CANCELLATION AND RETURNED EQUIPMENT. Orders may be cancelled only with our written consent and upon payment or reasonable and proper cancellation charges. Goods may be returned only when specifically authorized and you will be charged for placing returned goods in saleable condition, any sales expenses then incurred by us, plus a restocking charge and any outgoing and incoming transportation costs which we pay.

8. CREDIT AND PAYMENT. Payment for products shall be 30 days net. Pro-rata payments shall become due with partial shipments. A late charge of 2 percent per month or the maximum permitted by law, which ever is less, will be imposed on all past due invoices. We reserve the right at any time to alter, suspend, credit, or to change credit terms provided herein, when in our sale opinion your financial condition so warrants. In such case, in addition to any other remedies herein or by law provided. Failure to pay invoices at maturity date at our election makes all. subsequent invoices immediately due and payable irrespective of terms, and we may withhold all subsequent deliveries until the full account is settled, and we may terminate this agreement. Acceptance by us of less than full payment shall not be a waiver of any of our rights. You represent by sending each purchase order to us that you are not insolvent as that term is defined in applicable state or federal statutes. In the event you become insolvent before delivery of any products purchased hereunder, you will notify us in writing. A failure to notify us of insolvency at the time of delivery shall be construed as a reaffirmation of your solvency at that time. Irrespective of whether the products purchased hereunder are delivered directly to you, or to a customer of yours, and irrespective of the size of shipment, we shall have the right to withhold or reclaim goods under the applicable state and federal statutes. Where youCare responsible for any delay in shipment the date of completion of goods may be treated by us as the date of shipment for purposes of payment. Completed goods shall be held at your cost and risk and we shall have the right to bill you for reasonable storage and insurance expenses. Regardless of price quoted, all orders will be invoiced in the minimum amount of $50.00 net.

9. INSPECTION. Inspection of goods in our plant by you or your representative will be permitted insofar as this does not unduly interfere with our workflow, provided that complete details of the inspection you desire are submitted to us in writing in advance.

10. RECORDS, AUDITS AND PROPRIETARY DATA. Unless otherwise specifically agreed in writing signed by an authorized officer, neither you nor any representative of yours, nor any other person, shall have any right to examine or audit our cost accounts, books or records of any kind or on any matter, or be entitled to, or have control over, any engineering or production prints, drawings or technical data which we, in our sale discretion, may consider in whole or part proprietary to ourselves.

The undersigned accepts this quotation and agrees to the warranty terms and conditions printed on this sheet, and acknowledges that he and, or she is bound thereby and it is fully understood and agreed that ownership, title and right of unrestricted repossession of property, shall remain with the Nickerson Company, Inc., until paid for in full. The signers hereof agree that if any default of this contract occurs, they will retum all above merchandise in good order upon demand, and all payments previously made are to be forfeited for rental and use thereof, plus an additional sum for any legal or attorney fees incurred in the enforcement of above provisions.

SIGNED_____ TITLE_____ DATE_____

Please sign and return to Nickerson Co. with order.

DON CALVERT

Don Calvert Painting & Special Coatings LLC

Proposal submitted to: Magna Water District

Scope of work: Refurbish Manholes

We agree to the following:

We will wash all the manholes with a 5000 PSI washer. The manholes will then be inspected for water infiltration. All water infiltration will then be stopped with an epoxy injection, or a cementitious stop leak filler. All areas of the manholes will then receive a cementitious trowel coat as needed, to rebuild the walls and benches of the manhole. All areas of the manholes will then be lined be with Raven 405 lining, with the exception of the invert channel. Mil thickness to be a minimum of 150 mils. A keyway will be cut at the waterline of the invert for a termination point for the liner. Upon completion of the liner application, all areas will be spark tested with a high voltage tester. All pinholes detected will then be marked, abraded and filled with Raven 405 liner. Pricing based on an average depth of 10.7 ft. deep and 5' diameter. Based on 37 manholes. Manhole # 47 is already lined and will only need water infiltration addressed. Therefore, it is not included in the average. The average is based on 28 manholes that we could look at, and including nine manholes that we were unable to inspect, with an average of 5, dia. And 11 ft. deep [condition unknown]. The price to complete the manholes will be:

$ 6010.00 =/- Per manhole for the Raven 405 Lining.

$ 1500.00 =/- per manhole for water mitigation. A lot of the holes inspected did not appear to need any water mitigation.

Traffic control will be $ 8900.00

Permits for WVC and UDOT should be $ 1500.00 [price unknown until applied for], based on last year's pricing, and recent communications with the entities. Bid bonds are still in effect from last year, no fees applicable.

There is a remaining balance of $ 7139.00 from last year for manhole # 36, which was completed but did not fit into the do not exceed budget.

Final amount of work to be completed, to be decided by Magna Water District budget approval. Please let me know if you have any questions. We can always adjust the volume of work and pricing to what you need. Thanks, it is always a pleasure to work with you.

Annual Collection System Maintenance to be completed by Don Calvert

With a designated DO NOT EXCEED price of $250,000.00

Signature: Dallas Henline

TWIN D

TWIN "D" Inc.
3120 N. 675 E. Layton, Utah 84041
801-771-3038 www.twind.net

Statement

TO
MAGNA WATER DISTRICT
8885 WEST 3500 SOUTH
MAGNA, UT 84044

STATEMENT NO. 1692
DATE 04/16/2024
TOTAL DUE $139,700.00
ENCLOSED

DATE	DESCRIPTION	AMOUNT	OPEN AMOUNT
01/30/2024	Invoice #26351: Due 02/29/2024. PR, PRE-BILL POINT REPAIRS (ADJUST ONCE DONE WITH PROJECT)	139,700.00	139,700.00

Signature: Dallas Henline

Current Due	1-30 Days Past Due	31-60 Days Past Due	61-90 Days Past Due	90+ Days Past Due	Amount Due
0.00	0.00	139,700.00	0.00	0.00	**$139,700.00**

WRF INFLUENT PROJECT

Stantec Consulting Services Inc.
2890 East Cottonwood Parkway Suite 300, Salt Lake City UT 84121-7283

June 3, 2024

Attention: Mr. Trevor Andra, PE - District Engineer
Magna Water District
8885 West 3500 South
Magna, UT 84044

Dear Trevor,

A bid opening for the construction of the **Magna Water Reclamation Facility (WRF) Influent Project** was held on Thursday, May 23, 2024 at 2:00 p.m in the Magna Water District Board Meeting Room. One sealed bid was received and read out loud. The bidder was Corrio Construction (Corrio) at $10,600,530.50 (base bid). The following is a summary of the bid results:

Contractor	Addenda 2-4 Acknowledged	Total Base Bid	Bid Alternate A	Total Lump Sum Bid with Alternate A	Bid Bond Included
Corrio Construction	Yes	$10,600,530.50	$119,388.00	$10,719,918.50	Yes

Eight of the nine pre-qualified contractors attended the pre-bid meeting, and one other contractor dropped out officially before bid day. However, only Corrio submitted a bid. Corrio is the contractor for the Magna WRF Reuse Project currently under construction, and this may have discouraged other contractors from bidding. Follow-up discussions with pre-qualified contractors that chose not to bid suggest that it is still a very busy time. These two factors: 1) Corrio already onsite and 2) high volume of project bids in the market place seem to be the reason for low bid day participation.

A pre-design cost estimate was created in 2021 and adjusted in 2024 using the ENR Construction and Material Cost Indexes. The adjusted estimate had the project cost between $6 and $7 million. The higher than expected project costs are likely due to several factors such as the complexity of the yard piping modifications and bypass pumping required during construction, and overall inflation since 2021 on materials, equipment, and labor. Comparisons of Corrio's current bid to the reuse bid are similar.

Construction for the Magna WRF Reuse Project with Corrio has gone smoothly. They attended the mandatory pre-bid meeting and acknowledged the addenda in the bid forms. Corrio submitted a bid bond for the correct amount of five percent (5%) of the bid price, and the bonds are properly completed and notarized. This is a critical project for the District in order to increase pumping capacity, replace aging equipment, and abandon the old West Headworks building. We therefore recommend awarding this project to Corrio.

We have included a copy of the Agreement to send to Corrio should the District choose to award this project.

If you have any questions or comments, please contact one of us.

Reference:

Regards,

Stantec Consulting Services Inc.

Madison Bertoch P.E.
Project Engineer
Phone: 801-617-3311
madison.bertoch@stantec.com

J. Clinton Rogers P.E.
Vice President
Phone: 801-617-3204
clint.rogers@stantec.com

Attachment: Agreement

SECTION 00 52 13 - AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 20___

by and between Magna Water District (hereinafter called Owner) and

_____

(hereinafter called Contractor).

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK.

Contractor shall complete the Work as specified or indicated in the Owner's Contract Documents entitled Magna Water Reclamation Facility Influent Design Project.

The Work is generally described in Section 01 10 00 – Summary of Work.

ARTICLE 2. CONTRACT TIMES.

The Work shall be Substantially Complete within 18 months from the commencement date stated in the Notice to Proceed. Substantially Complete is defined as certificates of proper installation, training, and start-up completed for the mechanical equipment and all electrical, I&C and SCADA required for operational system. Final completion shall occur within 60 days after approved Substantial Completion.

ARTICLE 3. LIQUIDATED DAMAGES.

Owner and the Contractor recognize that time is of the essence of this Agreement and that the Owner will suffer financial loss if the Work is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by the Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay the Owner $500 for each day that expires after the time specified in Article 2 herein.

ARTICLE 4. CONTRACT PRICE.

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule(s).

ARTICLE 5. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

ARTICLE 6. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of this Agreement and the following attachments to this Agreement:

Notice Inviting Bids (Section 00 00 30).

Instructions to Bidders (Section 00 21 13).

Bid Forms including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits (Section 00 41 00).

Performance Bond (Section 00 61 13).

Payment Bond (Section 00 61 16).

General Conditions (Section 00 72 13).

Supplementary General Conditions (Section 00 73 13).

Technical Specifications, as listed in the Table of Contents.

Drawings, as listed in the Sheet Index.

Addenda numbers _____ to _____, inclusive.

Change Orders which may be delivered or issued after Effective Date of the Agreement and are not attached hereto.

There are no Contract Documents other than those listed in this Article 6. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.5 of the General Conditions.

ARTICLE 7. ASSIGNMENT

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, Owner and Contractor have caused this Agreement to be executed the day and year first above written.

Owner _____	Contractor _____
_____	_____
By _____	By _____
	[CORPORATE SEAL]
Attest _____	Attest _____
Address for giving notices	Address for giving notices
_____	_____
	License No. _____
Approved as to Form:	
_____	Agent for service of process: _____
(Signature)	
_____	_____
(Title)	

AGREEMENT CERTIFICATE
(if Corporation)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____

_____

_____
a corporation existing under the laws of the State of _____, held on _____, 20_____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ President of the Corporation, be and is hereby authorized to execute the Agreement dated _____, 20___, by and between this Corporation and Magna Water District and that his/her execution thereof, attested by the Secretary of the Corporation, and with the Corporate Seal affixed, shall be the official act and deed of this Corporation."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the corporation this _____, day of _____, 20_____.

_____
Secretary

(SEAL)

AGREEMENT CERTIFICATE
(if Partnership)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____

_____

_____
a partnership existing under the laws of the State of _____, held on _____, 20_____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Partnership, be and is hereby authorized to execute the Agreement dated _____, 20_____, by and between this Partnership and Magna Water District and that his/her execution thereof, attested by the _____ shall be the official act and deed of this Partnership."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____, 20_____.

_____
Partner

(SEAL)

AGREEMENT CERTIFICATE
(if Joint Venture)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

_____

_____

a joint venture existing under the laws of the State of _____, held on

_____, 20_____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Joint Venture, be and is hereby authorized to execute the Agreement dated _____, 20_____, by and between this Joint Venture and Magna Water District and that his/her execution thereof, attested by the _____ shall be the official act and deed of this Joint Venture."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____, 20_____.

_____
Managing Partner

(SEAL)

- END OF AGREEMENT -

STANTEC INFLUENT PROJECT

EXHIBIT A

SCOPE OF SERVICES - DRAFT

ENGINEERING SERVICES SUPPORT DURING CONSTRUCTION

PROJECT DESCRIPTION

This scope of services is for Stantec to provide engineering services to Magna Water District (MWD) during the construction phase of the Magna Water Reclamation Facility Influent Project. This project consists of the construction and installation of a new influent pump station with three screw pumps and a new grit washing building with two grit washing units along with associated connections, EI&C systems, and all other equipment and infrastructure required to make the new treatment facilities complete and operational. This project also includes retrofit work inside the headworks building including demolition of the existing influent pump station, expansion of the existing intermediate pump station, and replacement of the grit pumps and grit chamber equipment. The project also includes significant site work including yard piping, earthwork, paving, grading, and demolition. Construction is anticipated to begin in July 2024.

The work breakdown split between Stantec and subconsultants is described below. All subconsultants are managed under Stantec's contract and their fees are included in Stantec's scope of work or with MWD.

- Overall Project Management: Stantec
- Site Civil: BC&A
- Process Mechanical: BC&A (influent pump station) and Stantec (headworks and grit washing facility)
- Structural: BC&A (influent pump station) and Stantec (headworks and grit washing facility)
- Electrical and Instrumentation: Stantec
- Mechanical - HVAC and Plumbing: Stantec
- Architectural: Stantec
- Third-Party Materials Testing: AGEC (under a separate contract with MWD)
- Special Inspections: BC&A
- SCADA Programming and Integration: SKM, Inc. (under a separate contract with the Contractor)

SCHEDULE

The contract is anticipated to require 18 months to achieve Final Completion.

SCOPE OF WORK

PART 1 – PROJECT MANAGEMENT

Stantec is responsible for the management of services we provide to MWD. Stantec's Project Manager (PM) is to monitor, report and coordinate efforts with BC&A's PM. This task will include planning, monitoring, controlling, and reporting the project. The team will use standard Stantec tools. Project Management tasks include the following:

Task 1.1 – Update Logs

Stantec will keep logs of decisions made on submittals and RFIs.

BC&A will provide construction management software (VPO) and assist Stantec in updating contract documents and submittal and RFI logs.

Task 1.2 – Monthly Invoicing and General Project Management

Stantec will manage this project using its standard project management practices. All work products will meet Stantec's quality review requirements. Stantec's PM will prepare and submit monthly invoices.

BC&A's PM will coordinate with their accounting department to submit invoices to Stantec.

PART 2 – ENGINEERING SERVICES DURING CONSTRUCTION

Stantec and BC&A will provide the following engineering services for the Magna WRF Influent Project in accordance with processes and procedures established in the contract documents.

Task 2.1 – Pre-Construction Meeting

Stantec will provide two (2) in-person attendees, the Project Manager and Project Technical Lead, and BC&A will provide two (2) in-person attendees, the Project Manager and Construction Manager, at the Pre-Construction meeting. The meeting is anticipated to last four (4) hours. Stantec will provide agenda and meeting minutes.

- Assumed 16 hours for preparation of Stantec portion of Conformed Drawings prior to the Pre-Construction meeting and 8 hours for BC&A.

Task 2.2 – Attend Progress Meetings

Stantec's Project Technical Lead will attend up to 60 construction progress meetings and the Construction Inspector will attend up to 30 construction progress meetings, as well as periodic in-person attendance from our Project Manager within their allotted hours. BC&A will provide two (2) in-person attendees, the Construction Manager and Field Observation Engineer, at up to 60 construction progress meetings, as well as periodic in-person attendance from their Project Manager.

- Travel time and expense to the site are included in the budgets for this task. Meetings are assumed to last one (1) hour.
- Stantec will provide agenda and meeting minutes.

Task 2.3 – Submittal Review

Contractor submittals will be reviewed for compliance with the Contract Documents and design intent. Submittals with appropriate comments will be provided to the Contractor.

Approximately 736 hours for Stantec over the course of 18 months are assumed for submittals, team coordination, document management, and coordination with BC&A. Approximately 390 hours are budgeted for BC&A for support given the work associated with the influent pump station and yard piping.

The number of submittals and resubmittals depends on the competency and management approach of the Contractor, which is beyond the control of the engineering team or MWD. Submittal review in excess of the budgeted hours will need to be authorized as additional services.

Task 2.4 –Respond to Contractor's Request for Information (RFI)

Stantec and BC&A will provide responses to RFIs from the Contractor. It is assumed each firm will review 50 RFIs each at four (4) hours each (400 hours total) for this effort. This effort assumes overall

coordination, responses to questions, document management, and coordination between Stantec and BC&A throughout the 18-month construction project.

Task 2.5 – Assist with Construction Change Orders

Stantec and BC&A will prepare up to two (2) change orders. Stantec has budgeted 40 hours and BC&A has budgeted 25 hours for this effort.

Task 2.6 – Construction Support Services

Stantec and BC&A will provide the following support services during the construction phase of the project:

- Project Site Visits
    - Stantec's Project Technical Lead or Construction Inspector will visit the project site (separate from the progress meetings) and provide summary site visit reports. Each visit is assumed to be a full eight (8) hour day including travel.
        - Site Visit – Project Technical Lead or Construction Inspector assume 18 visits
    - BC&A's Construction Manager or Field Observation Engineer will typically visit the project twice a week for a half day (4 hours, separate from the progress meetings) and provide summary site visit reports.
        - Site Visit – Construction Manager or Field Observation Engineer assume 140 visits
    - Discipline Lead Inspections
        - Site Visit – Electrical (Stantec) assume 1 visit
        - Site Visit – I&C (Stantec) assume 1 visit
        - Site Visit – Structural (BC&A) assume 6 visits
        - Site Visit – Civil (BC&A) assume 60 visits
    - Special Inspections as shown below will be conducted by BC&A and account for a half-day each and will provide a summary site visit.
        - Site Visit – Concrete assume 12 visits
        - Site Visit – Masonry assume 8 visits
        - Site Visit – Steel assume 2 visits
    - Attend Final Project Walk Through and Assist with Punch List – Stantec's Project Manager and Project Technical Lead and BC&A's Project Manager, Construction Manager and Field Observation Engineer will attend the final project walk-through and assist MWD in the preparation of the punch list.

Task 2.7 – I&C Coordination

Stantec has budgeted 14 hours for their I&C engineer to conduct an initial virtual controls kickoff meeting and coordinate with the integrator to review Controls Strategy Narratives and normal facility operation, including:

- The operation of the facility including equipment, logic behind the operation of the equipment, sequencing of equipment, design, and operating pressures, design, and operating flows.

BC&A has budgeted to be part of this virtual meeting and has included up to 10 hours to coordinate with the Contractor and their integrator to review Controls Strategy Narratives and normal facility operation.

Task 2.8 – Facility Operations Manual

The Contractor will lead the production of required O&M manuals for the project. Stantec has budgeted 24 hours and BC&A has budgeted 16 hours to assist Stantec with the production of these manuals.

Task 2.9 – Start-up Services

Stantec has budgeted 40 hours and BC&A has budgeted for 36 hours to assist the Contractor in project start-up (the budget assumes no additional trips for non-local staff). Support would be virtual or by local staff members only.

Task 2.10 – Record Drawings

Stantec and BC&A will provide record drawing updates for sheets with changes that have occurred during construction.

- Assumes record drawings will be based on one combined set of redlined markups provided by the Contractor at the completion of the project.
- The budget assumes 40 hours each for Stantec and BC&A.

Assumptions:

Documents transmitted in the construction phase will be electronic rather than hard copies.

VPO construction management software will be provided by BC&A.

All documents will be prepared by the Contractor to conform to the Contract Documents prior to being forwarded to Stantec for review.

The contractor will provide as-built drawing markups within 30 days of completion of construction.

FEE ESTIMATE - Magna Influent Design

Name	Project Controls	Project Manager	P/TL/Process Mechanical	Construction Inspector	Structural	I&C	Electrical	Structural	Architectural	A/C/Plumbing	Mileage	BC&A
	Fardal, Lisa	Rogers, Clint	Bertoch, Madison	Yorgason, Steven	Marshall, Robert	Herrera, Barbara	Smith, Keith	Zahawi, Benan	Voorhies, Audrey	Saptarishy, Shivani Amol		
Project Billing Rate	$230.00	$278.00	$208.00	$208.00	$219.00	$244.00	$244.00	$269.00	$208.00	$219.00	$0.75	$1.05
Total Units	44.00	76.00	470.00	146.00	48.00	142.00	215.00	142.00	179.00	138.00	5,246.00	349,730.00
Fee	$10,120.00	$21,128.00	$97,760.00	$30,368.00	$10,512.00	$34,648.00	$52,460.00	$38,198.00	$37,232.00	$30,222.00	$3,934.50	$367,216.50

Summary				
Hours	Labor	Expense	Subs	Total
1,600.00	$362,648.00	$3,934.50	$367,216.50	**$733,799.00**

WBS Code	Task Name	Start Date	End Date	Units											Hours	Labor	Expense	Subs	Total
1	**PROJECT MANAGEMENT**	**2024-07-01**	**2026-01-31**												**99.00**	**$23,310.00**	**$0.00**	**$37,949.03**	**$61,259.03**
1.1	Update Logs	2024-07-01	2026-01-31		15.00	20.00								31,202.00	35.00	$8,330.00	$0.00	$32,762.10	$41,092.10
1.2	Invoicing, General PM	2024-07-01	2026-01-31	44.00	10.00	10.00								4,939.93	64.00	$14,980.00	$0.00	$5,186.93	$20,166.93
2	**CONSTRUCTION MANAGEMENT & ENGINEERING SERVICES DURING CONSTRUCTION**	**2024-07-01**	**2026-01-31**												**1,501.00**	**$339,338.00**	**$3,934.50**	**$329,267.47**	**$672,539.97**
2.1	Pre-construction Meeting	2024-07-01	2024-07-31		5.00	8.00		16.00					86.00	2,886.00	29.00	$6,558.00	$64.50	$3,030.30	$9,652.80
2.2	Progress Meetings	2024-07-01	2026-01-31		6.00	120.00	60.00						3,870.00	44,489.00	186.00	$39,108.00	$2,902.50	$46,713.45	$88,723.95
2.3	Submittal Reviews	2024-07-01	2025-12-31		8.00	148.00			76.00	140.00	112.00	144.00	108.00	62,281.00	736.00	$169,444.00	$0.00	$65,395.05	$234,839.05
2.4	Requests for Information	2024-07-01	2025-12-31		8.00	42.00			20.00	35.00	30.00	35.00	30.00	33,866.00	200.00	$46,300.00	$0.00	$35,559.30	$81,859.30
2.5	Change Orders	2024-07-01	2025-12-31		4.00	16.00	4.00		8.00	8.00				4,474.00	40.00	$9,176.00	$0.00	$4,697.70	$13,873.70
2.6	Construction support services	2024-07-01	2025-12-31		8.00	80.00	72.00		16.00	16.00			1,032.00	148,385.00	192.00	$41,648.00	$774.00	$155,804.25	$198,226.25
2.7	I&C coordination	2024-07-01	2025-12-31		2.00	2.00			8.00	2.00				1,999.00	14.00	$3,412.00	$0.00	$2,098.95	$5,510.95
2.8	Facility Operations Manual	2025-01-01	2025-12-31		2.00	8.00	2.00		6.00	6.00				2,472.00	24.00	$5,564.00	$0.00	$2,595.60	$8,159.60
2.9	Startup Services	2025-01-01	2025-12-31		8.00	8.00	8.00		8.00	8.00			258.00	6,391.00	40.00	$9,456.00	$193.50	$6,710.55	$16,360.05
2.10	Record Drawings	2025-01-01	2025-12-31			8.00		32.00						6,345.07	40.00	$8,672.00	$0.00	$6,662.32	$15,334.32

2023 FINANCIAL AUDIT

MAGNA WATER DISTRICT

FINANCIAL STATEMENTS

DECEMBER 31, 2023

MAGNA WATER DISTRICT
TABLE OF CONTENTS

GILBERT & STEWART
CERTIFIED PUBLIC ACCOUNTANTS
A PROFESSIONAL CORPORATION
ESTABLISHED 1974

RANDEL A HEATON, CPA
LYNN A. GILBERT, CPA
JAMES A. GILBERT, CPA
BEN H PROBST, CPA
RONALD J. STEWART, CPA

SIDNEY S. GILBERT, CPA
JAMES E. STEWART, CPA

INDEPENDENT AUDITOR'S REPORT

Board of Trustees
Magna Water District
Magna, Utah

Opinion

We have audited the accompanying financial statements of Magna Water District (the District), as of and for the year ended December 31, 2023, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Magna Water District as of December 31, 2023, and the respective changes in financial position, and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the District and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management discussion and analysis, schedule of changes in net pension liability and related ratios, and schedule of required employer contributions be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Magna Water District's basic financial statements. The schedule of revenues, expenses, and changes in net position and the schedule of revenues, expenses, and changes in net position – compared with budget, listed in the table of contents, is presented for the purpose of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of revenues, expenses, and changes in net position and the schedule of revenues, expenses, and changes in net position – compared with budget are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 31, 2024 on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.

Gilbert & Stewart

Gilbert & Stewart, CPA, PC
Provo, Utah
May 30, 2024

MAGNA WATER DISTRICT
MANAGEMENT DISCUSSION AND ANALYSIS

The Management Team of Magna Water District offers readers of the District's financial statements this narrative overview and analysis of the financial activities of the District for the fiscal year ended December 31, 2023.

Financial Highlights

The assets of the District exceeded its liabilities at the close of the most recent fiscal year by $127,976,960 (net position). Of this amount, $24,986,563 (unrestricted net position) may be used to meet the District's ongoing obligations to citizens and creditors.

The District's total net position increased by $18,375,796. This increase is reflective of the Increased capital assets of $11,188,772, or 8.7% from 2022, totaling approximately $103 million, and an increase in current assets of 2,513,203. The District continues its annual repair and replacement program on culinary water lines and sewer collection lines. The District completed a Zone 3 Secondary Booster Pump Station and upgraded a culinary pump station for that same zone. The 7200 W secondary water line project was completed also. The District started a well replacement project in our Haynes wellfield, Haynes Well #8 and refurbished and upgraded Haynes Well #2. The District's meter replacement project continued and will continue each year, as it is the goal of the District to have no meters in the system older than 10 years. There was over $8.9 million of assets contributed to the District from developers. New developments within the District installs water, secondary and sewer lines then those lines are contributed to the District when the development has been accepted.

The District's operating revenue increased by $1,943,558 an increase of 16% from 2022 to 2023. This increase is attributable to growth in the District, and a 4% increase in user rates beginning in January 2023. Additional connections to our sewer distribution system have increased also. The District is experiencing a high volume of growth each year.

Part of the increase in the net position is due from the non-operating revenue, which totals approximately $13.3 million in 2023, an increase of $3,418,624 from 2022. The non-operating revenue consists of property tax collections for debt service and operation and maintenance revenue, and connection and impact fees the District charges to new development. The District's total overall expenses increased by 22% from 2022, this increase is shown mostly in salaries and benefits, and materials and supplies, these expenses increased by a total of $2,360,281. which is a 44% increase from 2022. This increase can be attributable to an increase in the economy, but it also shows with additional maintenance staff, the District is being able to perform additional maintenance to our facilities than in the past. This maintenance schedule shows the proactive approach the District has devoted itself to in the last few years. Other operating expenses increased by 9% and most of this increase is reflected in depreciation expense, utilities, and other contractual services. This increase demonstrates the rise in the economy overall, and how the Districts infrastructure is aging. The District's Management and Staff are very mindful of maintaining costs and make every effort to control costs.

The District's total long-term debt decreased by $1,485,369 during the current fiscal year, as represented in Note 4 to the financial statements. The decrease is primarily a result of the District making their annual payments for outstanding GO bonds, revenue bonds, loans, leases, and notes.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the District's basic financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves. The financial statements are designed to provide readers with a broad overview of the District's finances, in a manner similar to a private-sector business.

The statement of net position presents information on all the District's assets and liabilities, with the difference between the two reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the District is improving or deteriorating.

The statement of revenues and expenses and changes in net position presents information showing how the District's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, some revenues

and expenses reported in this statement, may result in cash flows in future fiscal periods (e.g., uncollected taxes earned and not received and unused sick leave for employees).

The District maintains one type of proprietary fund, an enterprise fund. A fund is a grouping of related accounts that are used to maintain control over resources that have been segregated for specific activities or objectives. The District, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance related legal requirements.

Notes to the financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the financial statements.

Other information. In addition to the basic financial statements and accompanying notes, this report also presents certain supplementary information concerning the District's budget and actual amounts.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. In the case of the District, assets exceeded liabilities by $127,976,960 at the close of the most recent fiscal year.

By far the largest portion of the District's net position (68.7%) reflects its investment in capital assets (e.g., land, buildings, pipelines, machinery, and equipment); net of any related debt used to acquire those assets that are still outstanding. The District uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending. Although the District's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

	2023	2022
Current and other assets	$ 45,676,610	$ 38,815,949
Capital assets	114,509,754	103,320,982
Total Assets	160,186,364	142,136,931
Deferred outflow of resouces	1,283,499	1,218,366
Long-term liabilities outstanding	29,746,984	30,669,403
Other liabilities	2,927,268	2,138,829
Total Liabilities	32,674,252	32,808,232
Deferred inflow of resources	818,651	945,901
Net investment in capital assets	87,967,723	75,293,584
Restricted	15,022,674	11,713,290
Unrestricted	24,986,563	22,594,290
Total Net Position	$ 127,976,960	$ 109,601,164

The restricted portion of the District's net position of $15,022,674 represents resources that are subject to external restrictions on how they may be used, such as bonding requirements, Impact Fee regulations, and property tax levy regulations. There is an unrestricted fund balance amount of $24,986,563. The unrestricted fund balance amount consists of cash and receivables to be collected less debt to be paid that is not affiliated with any of the capital assets (operation and maintenance).

There was an increase of $3,309,384in restricted net position reported by the District. This resulted primarily from collecting additional impact fees that can only be used for capital improvements outlined in the District's Impact Fee Facilities Plan.

The District's net position increased by $18,375,796 during the current fiscal year, as the District's operating and nonoperating revenues exceeded all expenses for the year. As noted earlier, factors contributing to the increase in net position include investment in capital assets, increase in operating revenues and impact fees collected by new subdivisions, and contributed water and sewer lines by contractors.

	2023	2022
Operating revenues	$ 13,488,254	$ 11,544,696
Non-operating revenues	13,357,723	9,939,099
Total Revenues	26,845,977	21,483,795
Depreciation and amortization expense	5,275,511	4,758,772
Other operating expenses	10,123,165	7,557,511
Non-operating expenses	2,067,232	1,977,242
Total Expenses	17,465,908	14,293,525
Income before capital contributions	9,380,069	7,190,270
Capital contributions	8,995,727	7,688,994
Change in Net Position	18,375,796	14,879,264
Total Net Position, Beginning of Year	109,601,164	94,721,900
Total Net Position, End of Year	$ 127,976,960	$ 109,601,164

Major sources of revenue for the District consist of charges for services, property taxes, impact fees collected from new subdivisions, and other non-operating revenues. These sources account for approximately 91% of the Districts revenues before capital contributions.

Total revenues increased by approximately 42% from the prior year, total expenses also increased by approximately 22%, leading to an increase in income before capital contributions of $9,380,069. The capital contributions increased 16% from 2022 due to a significant increase of new development accepted and closed out. The District is experiencing tremendous growth and recognizes new developments when the projects are complete and out of warranty periods. Although 2023 appears to be recognizing substantial contributions, the developments could have been in process for years before the contribution is recognized.

The increase in total revenues is primarily due to additional growth in the District, and an increase in user rates beginning January 2023. The additional growth and new connections to the District results in higher utilization of the sewer collection and treatment systems, along with the culinary and secondary water systems. The District continues to add connections to the secondary water system so the demand on the culinary system remains sustainable and prevents large costly upgrades to the culinary water system. The increase in expenses is primarily due to the increase in operational repairs and maintenance expenses, including materials, and supplies, chemicals, power and administrative services. Management of the District is focused on a proactive repair and replacement program versus a reactive program and continues to develop maintenance and replacement projects in order to keep the system in good working condition. The maintenance and replacement projects include replacement of valves, meters, and water and sewer pipelines on a timely basis and not on a "when it breaks" approach. Although every year we do have situations where breaks happen, the District evaluates and prioritizes distribution line replacements. Usually, this type of program will save the District money in further years down the road.

Capital Asset and Debt Administration

Capital Assets. The District's investment in capital assets as of December 31, 2023, amounts to $114,509,754 (net of accumulated depreciation). This investment in capital assets includes land, structures and improvements, wells and springs, supply and transmission mains for water distribution and sewer collection, construction in progress, plant and sewer systems, and machinery and equipment. The total increase in the District's investment in capital assets for the current fiscal year was approximately 10.82%.

	2023	2022
Land	$ 3,489,792	$ 3,489,942
Buildings and improvements	4,210,121	4,060,500
Water system	79,679,570	73,297,784
Secondary system	20,316,225	16,710,285
Sewer treatment plant	38,154,631	37,531,571
Sewage collection lines	23,046,100	19,769,864
Machinery and equipment	4,369,119	4,007,615
Water rights and easements	2,458,202	2,458,202
Construction in progress	6,059,996	4,779,995
Total Capital Assets	181,783,756	166,105,758
Less accumulated depreciation	(67,274,002)	(62,784,776)
Total Capital Assets, net of depreciation	$ 114,509,754	$ 103,320,982

Additional information on the District's capital assets can be found in Note 3 to the financial statements.

Long-term debt. At the end of the current fiscal year, the District had total long-term debt outstanding of $29,746,982. Of this amount, $4,407,000 is outstanding as revenue bond debt, $300,037 relates to amounts outstanding on a water resource loan, $23,373,145 is outstanding as general obligation bond debt, and $382,903 relates to amounts outstanding on leases. Pursuant to a new GASB Ruling, the District also now recognizes a long-term debt for OPEB Obligations in the amount of $1,713,763, and a debt for pension liability in the amount of $492,555.

	2023	2022
General obligation bonds	$ 21,787,543	$ 23,373,145
Revenue bonds	4,177,000	4,407,000
Water resource loan	249,637	300,037
Capital lease	763,536	382,903
Net OPEB obligations	1,921,301	1,713,763
Net Pension Liability	847,965	492,555
Total	$ 29,746,982	$ 30,669,403

Additional information of the District's long-term debt can be found in Note 4 to the financial statements.

Reserve Funds
The District held $592,020 in reserve and replacement funds at the end of the current fiscal year, which are mandated by the District's revenue bonds.

Reserve and Fee Structure
In 2021 the District adopted a new Master Plan, Impact Fee Facilities Plan (the Plan), and performed a rate study to evaluate the capital facility and revenue needs of the water, sewer, and secondary systems to continue to service the District's residences. The Plan looks at the condition of the District through the projected year of 2030. The District adopted the Impact Fee Facility Plan, an Impact Fee Analysis, and an Impact Fee Enactment in January of 2021, and

adopted the new rates and fees structure in April 2021. The District adopted a small annual increase in rates that began January 1, 2022. The small annual increases will happen at the beginning of each year continuing through 2025. Before 2022, the District had not had an increase in user rates since 2019.

Planned Future Capital Improvements

The District is currently in the process of designing and constructing a water reuse system to utilize the effluent water from the wastewater treatment facility as a secondary source to its secondary water distribution system. The District is extremely excited to begin the project in 2023 with an anticipated completion date of 2024 and putting the reuse water into the secondary system by Spring 2025. The project has been strategically thought out and planned for several years. The District has been awarded a federal grant in the amount of approximately $4,900,000 from Title XVI of the Bureau of Reclamation which will help in this water reuse project. In the upcoming year, the District has many construction plans for their facilities. Those Construction plans include continuing the installation of a new sewer collection pipeline to increase the capacity to collect additional sewer along the west side of the District, expansion to their meter replacement project, culinary and secondary water line and sewer collection line repair and replacement schedule, a Zone 3 secondary water reservoir, wastewater influent facility upgrade, screw press building expansion, and maintenance and upgrade to various District's culinary water well sources.

As always, the Board of Trustees, the Management Team, and Staff do their best to satisfy our customers and to improve our system. The District follows a master plan that is reviewed each year.

Requests for Information

This financial report is designed to provide a general overview of the District's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Magna Water District, Attention: District Manager, PO Box 303, Magna, Utah 84044.

BASIC FINANCIAL STATEMENTS

MAGNA WATER DISTRICT
STATEMENT OF NET POSITION
DECEMBER 31, 2023

Assets

Current Assets:		
Cash and cash equivalents	$	24,898,958
Investments		2,616,834
Receivables:		
Property Tax		-
Customers, net		849,708
Other		459,669
Due from other governmental units		-
Prepaid expenses		71,650
Inventories		1,151,611
Total Current Assets		30,048,430
Noncurrent Assets:		
Restricted cash and cash equivalents		15,624,620
Capital Assets		
Capital assets not being depreciated		12,007,990
Capital assets being depreciated, net of accumulated depreciation		102,501,764
Total Capital Assets, net of accumulated depreciation		114,509,754
Water rights and shares held for sale		3,560
Total Noncurrent Assets		130,137,934
Total Assets	$	160,186,364
Deferred Outflow of Resources		
Assumption changes related to Pensions		1,283,499
Total Deferred Outflow of Resources	$	1,283,499

The accompanying notes are an integral part of these financial statements.

MAGNA WATER DISTRICT
STATEMENT OF NET POSITION (Continued)
DECEMBER 31, 2023

Liabilities		
Current Liabilities:		
Accounts payable	$	1,570,293
Accrued liabilities		695,721
Compensated absences		125,158
Retainage payable		196,352
Deferred revenue		209,196
Accrued interest payable		130,548
Capital lease obligations - current		88,885
General obligation bonds payable - current		1,555,000
Revenue bonds payable - current		233,000
Notes payable - current		50,904
Total Current Liabilities		4,855,057
Noncurrent Liabilities		
Net other postemployment benefits obligation		1,921,301
Capital lease obligations		674,651
General obligation bonds payable		20,232,544
Revenue bonds payable		3,944,000
Notes payable		198,734
Net pension liability		847,965
Total Noncurrent Liabilities		27,819,195
Total Liabilities	$	32,674,252
Deferred Inflow of Resources		
Changes to earnings on pension plan investments		818,651
Total Deferred Inflow of Resources	$	818,651
Net Position		
Net investment in capital assets		87,967,723
Restricted:		
Debt service		1,084,757
Capital projects		13,937,917
Unrestricted		24,986,563
Total Net Position	$	127,976,960

The accompanying notes are an integral part of these financial statements.

MAGNA WATER DISTRICT
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2023

Operating Revenues:		
Water sales	$	5,176,097
Sewer service charges		4,674,227
Connection fees and other income		3,637,930
Total Operating Revenues		13,488,254
Operating Expenses:		
Salaries and benefits		4,760,032
Contractual services		653,559
Materials and supplies		3,020,175
Utilities		952,177
Depreciation and amortization		5,275,511
Lease expense		24,582
Other operating expense		712,640
Total Operating Expenses		15,398,676
Operating Income (Loss)		(1,910,422)
Nonoperating Revenues (Expenses):		
Property tax revenue		5,503,910
Non-resident fee in lieu of property tax		158,033
Impact fees		5,205,149
Gain (loss) on sale of assets		541,810
Other non-operating income		195,526
Interest income		1,753,295
Interest expense		(656,497)
Payments to RDA's		(1,410,735)
Total Nonoperating Revenues (Expenses)		11,290,491
Income Before Capital Contributions		9,380,069
Capital Contributions		8,995,727
Change in Net Position		18,375,796
Total Net Position, Beginning of Year		109,601,164
Total Net Position, End of Year	$	127,976,960

The accompanying notes are an integral part of these financial statements.

MAGNA WATER DISTRICT
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2023

Cash Flows From Operating Activities		
Receipts from customers and users	$	13,156,315
Payments to suppliers		(5,025,574)
Payments to employees		(3,989,376)
Net Cash From Operating Activities		4,141,365
Cash Flows From Noncapital Financing Activities		
Property tax collected for maintenance and operations		2,429,607
Property tax paid to RDA's		(1,410,735)
Net Cash From Noncapital Financing Activities		1,018,872
Cash Flows From Capital and Related Financing Activities		
Receipts from impact fees		5,205,149
Property tax collected for debt service		3,296,547
Fee in lieu of property tax		158,033
Receipts of non-operating revenues		195,526
Principal paid on capital debt		(1,770,398)
Principal paid on lease		(189,385)
Interest paid on capital debt		(748,588)
Purchases and construction of capital assets		(6,897,967)
Proceeds from sale of capital assets		294,200
Net Cash From Capital and Related Financing Activities		(456,883)
Cash Flows From Investing Activities		
Interest income		1,790,006
Net change in Investments		2,325,883
Net Cash From Investing Activities		4,115,889
Net Increase (Decrease) in Cash and Cash Equivalents		8,819,243
Cash and Cash Equivalents, Beginning of Year		31,704,335
Cash and Cash Equivalents, End of Year	$	40,523,578

The accompanying notes are an integral part of these financial statements.

MAGNA WATER DISTRICT
STATEMENT OF CASH FLOWS (Continued)
FOR THE YEAR ENDED DECEMBER 31, 2023

Reconciliation of Operating Income to Net Cash From Operating Activities:

Operating Income (Loss)	$	(1,910,422)
Adjustments to reconcile operating income (loss) to net cash provided by operating activities:		
Depreciation and amortization		5,275,511
Non cash expenses related to OPEB		210,326
Changes in operating assets and liabilities:		
(Increase) Decrease in Current Assets :		
Receivables		(297,615)
Prepaid expenses		(29,247)
Inventories		(262,684)
Increase (Decrease) in Current Liabilities and Other Operating effects:		
Accounts payable		575,744
Accrued liabilities		114,746
Compensated absences		75,019
Retainage payable		53,747
Deferred revenue		(34,324)
Deferred outflows		(65,133)
Deferred inflows		(127,250)
Net pension liability		355,410
Net other postemployment benefits obligation		207,537
Net Cash From Operating Activities	$	4,141,365
Noncash Investing, Capital, and Financing Activities		
Capital assets aquired through issuance of lease		826,479.00
Capital assets donated by developers		8,995,727
	$	9,822,206

The accompanying notes are an integral part of these financial statements.

MAGNA WATER DISTRICT
NOTES TO FINANCIAL STATEMENTS

NOTE 1 SUMMARY OF ACCOUNTING POLICIES

Reporting Entity

Magna Water District, Utah (the District) is a local district governed by an elected three member board. Generally accepted accounting principles require that these financial statements present the government and its component units, entities for the government is considered to be financially accountable. The District was created July 7, 1949 by a resolution of the Board of County Commissioners of Salt Lake County. Salt Lake County has no oversight responsibility over the District and the District is not reported as a component unit of Salt Lake County. The District has no blended or discretely presented component units.

Measurement Focus and Basis of Accounting

The District is an enterprise fund, which is reported using the *economic resources measurement focus* and the *accrual basis of accounting.* Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows.

Proprietary funds distinguish *operating* revenues and expenses from *nonoperating* items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the District are charges to customers for water and sewer services. Operating expenses include the costs of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the District's policy to use restricted resources first, then unrestricted resources as they are needed.

Budgetary Procedures and Budgetary Accounting

Budgetary procedures for the District have been established by the Uniform Fiscal Procedures Act adopted by the State of Utah, which requires the legal adoption of a budget for all funds. Furthermore, in accordance with state law, all appropriations lapse at the end of the budget year; accordingly, no encumbrances are recorded. The basis of accounting to the budget is the same basis as the financial statements.

A formal budget has been adopted and used as a control device during the year ended December 31, 2023.

The District follows the following procedures in its budgetary process:

1. During November of each year the District adopts a tentative annual budget for the upcoming calendar year.

2. The tentative budget is a public record and is available for public inspection.

3. At least ten (10) days prior to the second Thursday in December of each year, the District publishes a notice of public hearing for the purpose of adopting a budget on the District's website and on the State's public notice website publicnotice.utah.gov.

4. On the second Thursday in December, the budget is formally adopted after consideration of public comment.

No budget is required to be presented with these financial statements. State law allows the District to amend the proprietary fund budget without public hearing or public notice.

NOTE 1 SUMMARY OF ACCOUNTING POLICIES (Continued)

Statement of Cash Flows
The District considers all highly liquid investments with a maturity of three months or less when purchased to be "cash equivalents". All restricted and non-restricted cash amounts are considered to be cash and cash equivalents for statement of cash flow purposes.

Allowance for Doubtful Accounts
Accounts receivable are stated net of allowance for doubtful accounts of $9,211. The allowance for doubtful accounts is based on the District's prior collection experience.

Inventories
The District maintains inventories of pipe, repair parts, hydrants, and water meters. Inventories are stated at the lower of cost or market using the first in/first out (FIFO) method.

Property and Equipment
Property and equipment include land, buildings and improvements, water and sewer systems, water shares, and machinery and equipment. Property and equipment are defined by the District as assets with an initial, individual cost of more than $5,000 and an estimated useful life in excess of two years. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at estimated fair market value at the date of donation.

The cost of normal maintenance and repairs that do not add to the value of the asset or materially extend asset lives are not capitalized. Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets is reflected in the capitalized value of the asset constructed, net of interest earned on the invested proceeds over the same period. No interest was capitalized during the current year.

Property, plant, and equipment of the District is depreciated using the straight-line method over the following useful lives:

Water utility plant	20 to 50 years
Sewer utility plant	30 to 50 years
Buildings and structures	30 to 40 years
Equipment	3 to 15 years
Furniture and fixtures	5 to 10 years

Employee Benefits and Compensated Absences
The District provides pension, medical, dental, vision, and life insurance to its employees, most of which are negotiated by contract with the Teamsters Union. Employees are also provided paid holidays and vacation pay, which does not accumulate from year to year, but a maximum of 80 hours can be cashed out at the end of each year. Sick leave accumulates at a rate of two hours per pay period, can be carried over from year to year without limitation, and is paid out in full upon termination of employment to the extent that an employee is not terminated for cause.

Property Tax Revenues
Property taxes are assessed and become a lien against the property on January 1st. Property taxes become delinquent after November 30th. The District's tax rate for 2023 was .001558 which is comprised of .000571 for operations and maintenance, and .000987 for debt service. The statutory maximum set by the state for operations and maintenance is 0.000800. There is no statutory maximum for the reduction of general obligation bonds.

NOTE 1 SUMMARY OF ACCOUNTING POLICIES

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires the District to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results may differ from those estimates.

Leases

For the year ended December 31, 2022, the financial statements include the adoption of GASB Statement No. 87, Leases. The primary objective of this statement is to enhance the relevance and consistency of information about governments' leasing activities. This statement establishes a single model for lease accounting based on the principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The lease liability or receivable is the present value of the payments that will be made to the lessor over the lease term.

NOTE 2 CASH AND CASH EQUIVALENTS

Following are the components of the District's cash and Investments at December 31,2023:

Cash, cash equivalents, and investments	$	24,898,958
Restricted cash and cash equivalents		15,624,620
Investments		2,616,834
	$	43,140,412

The District follows the requirements of the Utah Money Management Act (Utah Code Annotated 1953, Section 51, Chapter 7) (the Act) in handling its depository and temporary investment transactions. This law requires the deposit of District funds in a "qualified depository." The Act defined a "qualified depository" as any financial institution whose deposits are insured by an agency of the Federal Government and which has been certified by the Commissioner of Financial Institutions as meeting the requirements of the Act and adhering to the rules of the Utah Money Management Council. However, the District does not have a separate deposit and investment policy that addresses the specific types of deposit and investment risk to which the District is exposed.

Custodial credit risk – deposits is the risk that in event of a bank failure, the District's deposits may not be returned to it. At December 31, 2023, the carrying amount of the District's deposits was $1,754,867, and the bank balance was $2,069,581. Deposits are not collateralized nor are they required to be by state statute. However, the State Commissioner of Financial Institutions monitors financial institutions and establishes limits for deposits of public money at individual financial institutions, and the District follows these recommendations. Of the amounts held in deposit at December 31, 2023, $1,819,581 was uninsured and uncollateralized.

Custodial credit risk – investments is the risk that in the event of the failure of a counterparty, the District will not be able to recover the value of its investments that are in the possession of an outside party. The District's investment in the Utah Public Treasurer's Investment Fund (PTIF) has no custodial credit risk.

Interest Rate Risk is the risk that changes in the interest rates will adversely affect the fair value of an investment. As a means of limiting its exposure to fair value losses arising from rising interest rates, the District invests in the PTIF and by adhering to the Money Management Act. The Act requires that the remaining term to maturity may not exceed the period of availability of the funds to be invested.

Credit Risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The District's policy for limiting the credit risks of investments is to comply with the

Money Management Act. The Act requires investment transactions to be conducted only through.

qualified depositories, certified dealers, or directly with issuers of the investment securities. Permitted investments include deposits of qualified depositories; repurchase agreements; commercial paper that is classified as "first tier" by two nationally recognized statistical rating organizations, one of which must be Moody's Investment Services or Standard and Poors; banker acceptance obligations of the U.S. Treasury and U.S. government sponsored enterprises; bonds and notes of political subdivisions of the State of Utah; fixed rate corporate obligations and variable rate securities rated "A" or higher by two nationally recognized statistical rating organizations as defined by the Act.

Concentration of Credit Risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The District's investment in the PTIF has no concentration of credit risk.

The District invests in the Utah Public Treasurer's Investment Pool (PTIF) which is a voluntary external Local Governmental Investment Pool managed by the Utah State Treasurer's Office and is audited by the Utah State Auditor. No separate report as an external investment pool has been issued for the PTIF. The PTIF is not registered with the SEC as an investment company and is not rated. The PTIF is authorized and regulated by the Utah Money Management Act, (Utah Code Title 51, Chapter 7). The PTIF invests in high-grade securities which are delivered to the custody of the Utah State Treasurer, assuring a perfected interest in the securities, and therefore, there is very little credit risk except in the most unusual and unforeseen circumstances. The maximum weighted average life of the portfolio does not exceed 90 days. Deposits in the PTIF are not insured or otherwise guaranteed by the State of Utah, and participants share proportionally in any realized gains or losses on investments. The PTIF operates and reports to participants on an amortized costs basis. The income, gains, and losses, net of administration fees, of the PTIF are allocated to participants on the ratio of the participants' share to the total funds in the PTIF based on the participants' average daily balance. The PTIF allocates income and issues statements on a monthly basis. Twice a year, at June 30 and December 31, which are the accounting periods for public entities, the investments are valued at fair value and participants are informed of the fair value valuation factor. Additional information is available from the Utah State Treasurer's Office.

The District measures its investments using fair value measurement guidelines established by generally accepted accounting principles. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1: Quoted prices for identical investments in active markets.
- Level 2: Observable inputs other than quoted market prices; and
- Level 3: Unobservable inputs

	Carrying Amounts	Fair Value	Fair Value level	Weighted Average Maturity (Years)	Credit Rating (1)
Cash on hand and on deposit:					
Cash on hand	$ 1,300	$ 1,300	N/A	N/A	N/A
Cash on deposit	1,917,845	1,917,845	N/A	N/A	N/A
Total cash on hand and deposit	$ 1,919,145	$ 1,919,145			
Investments					
State of Utah Public Treasurer's Investment Fund	$ 38,204,639	$ 38,262,783	2	N/A	N/A
Money Market Funds	399,794	234,915	1		N/A
Zions liquidity Management U.S. Obligations	2,616,834	2,616,834	1	1	AAA
Total Investments	$ 41,221,267	$ 41,114,532			

(1) Ratings are provided where applicable to indicate associated **Credit Risk**. N/A indicates not applicable.

NOTE 3 CAPITAL ASSETS

The District depreciates its capital assets using the straight-line method. A summary of the capital asset activity for the year ended December 31, 2023 is as follows:

	Balance 12/31/2022	Additions	Deletions	Balance 12/31/2023
Capital Assets, not being depreciated:				
Land	$ 3,489,942	$ -	$ (150)	$ 3,489,792
Water rights, water shares, and easements	2,458,202	-	-	2,458,202
Construction in progress	4,779,995	5,852,136	(4,572,135)	6,059,996
Total Capital Assets, not being depreciated	10,728,139	5,852,136	(4,572,285)	12,007,990
Capital Assets, being depreciated:				
Buildings and improvements	4,060,500	149,621		4,210,121
Water system	73,297,784	6,870,435	(488,649)	79,679,570
Secondary water system	16,710,285	3,612,800	(6,860)	20,316,225
Sewer treatment plant	37,531,571	623,060	-	38,154,631
Sewage collection lines	19,769,864	3,276,236	-	23,046,100
Machinery and equipment	4,007,615	908,020	(546,516)	4,369,119
Total Capital Assets, being depreciated	155,377,619	15,440,172	(1,042,025)	169,775,766
Total Capital Assets	166,105,758	21,292,308	(5,614,310)	181,783,756
Less Accumulated Depreciation:				
Buildings and improvements	(759,142)	(138,498)	-	(897,640)
Water system	(31,504,203)	(2,564,550)	488,649	(33,580,104)
Secondary water system	(3,187,869)	(610,775)	6,860	(3,791,784)
Sewer treatment plant	(17,066,095)	(922,771)	-	(17,988,866)
Sewage collection lines	(8,005,649)	(699,162)	-	(8,704,811)
Machinery and equipment	(2,261,818)	(339,755)	290,776	(2,310,797)
Total Accumulated Depreciation	(62,784,776)	(5,275,511)	786,285	(67,274,002)
Capital Assets, net	$ 103,320,982	$ 16,016,797	$ (4,828,025)	$ 114,509,754

NOTE 4 LONG TERM OBLIGATIONS

The following is a summary of long-term debt obligations of the District for the year ended December 31, 2023:

	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Bonds Payable					
General obligation bonds - Direct Placements	$ 11,370,000	$ -	$ (585,000)	$ 10,785,000	$ 610,000
General obligation bonds - Other	10,660,000	-	(905,000)	9,755,000	945,000
Premiums	1,343,145	-	(95,602)	1,247,543	-
Revenue bonds - Direct Placements	4,407,000	-	(230,000)	4,177,000	233,000
Total bonds payable	27,780,145	-	(1,815,602)	25,964,543	1,788,000
Notes Payble - Direct Placements	300,037	-	(50,400)	249,637	50,904
Leases Payable	382,903	826,479	(445,846)	763,536	88,885
Total Long-Term Liabilities	$ 28,463,085	$ 826,479	$ (2,311,848)	$ 26,977,716	$ 1,927,789

General Obligation Bonds

The District issues general obligation bonds to provide funds for the acquisition and construction of major capital facilities. The original amount of general obligation bonds that were issued in prior years with amounts still outstanding as of December 31, 2023 was $30,245,000.

General Obligation bonds are direct obligation and pledge the full faith and credit of the District. General obligation bonds currently outstanding are as follows:

Purpose	Issue Date	Original Borrowing	Interest Rates	Final Maturity	Amount
Refunding	2013	$ 8,245,000	2.00 - 3.00%	2029	$ 2,850,000
Water treatment facilities	2017	13,975,000	2.00 - 3.00%	2037	10,785,000
Various capital projects	2019	8,025,000	2.00 - 5.00%	2039	6,905,000
					$ 20,540,000

Annual debt service requirements to maturity for general obligation bonds are as follows:

Year Ending December 31,	GO Bonds - Direct Placement Principal	Interest	Total	GO Bonds - Other Principal	Interest	Total
2024	$ 610,000	$ 336,263	$ 946,263	$ 945,000	$ 283,353	$ 1,228,353
2025	635,000	311,363	946,363	975,000	249,175	1,224,175
2026	660,000	285,463	945,463	1,010,000	212,550	1,222,550
2027	690,000	258,462	948,462	670,000	180,150	850,150
2028	715,000	244,662	959,662	700,000	152,000	852,000
2029-2033	3,905,000	888,960	4,793,960	2,500,000	457,500	2,957,500
2034-2038	3,570,000	271,950	3,841,950	2,435,000	192,881	2,627,881
2039-2041	-	-	-	520,000	5,850	525,850
Total	$ 10,785,000	$ 2,597,123	$ 13,382,123	$ 9,755,000	$ 1,733,459	$ 11,488,459

NOTE 4 LONG TERM OBLIGATIONS (Continued)

Covenant Requirements
Both the 2013, 2017 and the 2019 bond agreements require the District to levy all taxable property, in addition to all other taxes, a direct annual tax sufficient to pay the principal and interest on these bonds.

Revenue Bonds
The District also issues bonds where the District pledges income derived from the acquired or constructed assets to pay debt service. The original amount of revenue bonds issued in prior years with amounts still outstanding as of December 31, 2023 was $7,100,000. Revenue bonds outstanding at year end are as follows:

Purpose	Issue Date	Original Borrowing	Interest Rates	Final Maturity	Amount
Water treatment plant	2007	$7,100,000	1.50%	2039	4,177,000
					$ 4,177,000

Annual debt service requirements to maturity for revenue bonds are as follows:

Year Ending December 31,	Principal	Interest	Total
2024	$ 233,000	$ 62,655	$ 295,655
2025	236,000	59,160	295,160
2026	240,000	55,620	295,620
2027	244,000	52,020	296,020
2028	247,000	48,360	295,360
2029-2033	1,293,000	185,040	1,478,040
2034-2038	1,393,000	85,155	1,478,155
2039-2041	291,000	4,365	295,365
Total	$ 4,177,000	$ 552,375	$ 4,729,375

Reserve requirements
The District is required to establish reserve accounts to provide proper service of the 2007 Water Revenue Bonds. The following is a description of these reserve accounts.

The District is required to make monthly contributions to a Reserve Account to be used to pay principal due on the 2007 Bonds at any time when there are not sufficient funds to pay the same. Required monthly contributions to this Reserve Account are $4,935 until the account balance reaches $296,105. As of December 31, 2023, required reserve fund balances were fully funded.

The District is also required to set aside funds sufficient to cover debt service principal and interest payments for the succeeding year. As of December 31, 2023, required reserve fund balances were fully funded.

Required reserve fund balances as of December 31, 2023 are as follows:

	2007 Series	
	Amount Required	Amount on Deposit
Reserve accounts	$ 296,105	$ 300,205
Debt service accounts	295,915	343,497
Total reserve requirements	$ 592,020	$ 643,702

NOTE 4 LONG TERM OBLIGATIONS (Continued)

Notes Payable

The District entered into an agreement with the State of Utah Division of Water Resources (State) for the construction of a secondary water system. The State agreed to advance the District $1,175,000 at an annual interest rate of 1.00% to fund construction on the project.

Annual debt service requirements to maturity for Notes Payable are as follows:

Year Ending December 31,	Principal	Interest	Total
2024	$ 50,904	$ 2,496	$ 53,400
2025	51,413	1,987	53,400
2026	51,927	1,473	53,400
2027	52,446	954	53,400
2028	42,947	429	43,376
Total	$ 249,637	$ 7,339	$ 256,976

Leases Payable

The District has entered into lease agreements as lessee for financing the acquisition of various vehicles. The leases carry an interest rate of 1.30% and maturity dates in 2025 Due to the implementation of GASB 87, Leases, the District has recorded these as a financed purchase and the assets will be depreciated over their useful lives. There are no residual value guarantees in the lease provisions. The lease was terminated in 2023 and the related assets were sold back to the lender. The outstanding balance at December 31, 2023 was $0.

In 2023 the District entered into lease agreements as lessee for financing the acquisition of various vehicles. The leases carry an interest rate of 1.30% and maturity dates in 2027 with a present value at December 31, 2023 of $763,533. Due to the implementation of GASB 87, Leases, the District has recorded these as a financed purchase and the assets will be depreciated over their useful lives. There are no residual value guarantees in the lease provisions.

A summary of the principal and interest amounts for remaining lease is as follows:

Year Ending December 31,	Principal	Interest	Total
2024	$ 88,885	$ 37,077	$ 125,962
2025	93,385	32,578	125,963
2026	283,429	25,562	308,991
2027	297,834	11,213	309,047
Total	$ 763,533	$ 106,430	$ 869,963

NOTE 5 UNION EMPLOYEES PENSION PLAN

Most full-time District employees are members of the Western Conference Teamsters Pension Plan (the Plan, or WCTPP). The Plan is a multiple-employer defined benefit pension plan. The Plan is administered by the Board of Trustees of the Plan, who have authority to amend the benefits provided by the Plan. The Plan provides retirement, disability, and death benefits to plan members and beneficiaries. As of December 31, 2023 there were 24 employees participating in the Plan. Participants in the Plan normally must be vested over a five-year period prior to receiving benefits.

The District makes pension contributions to the Plan, on behalf of covered employees at the rate of $5.05 $5.20 and $5.35 an hour for the years ended December 31, 2019, 2020, 2021, and 2022. The contribution rates of the district are determined pursuant to a collective-bargaining agreement, covering the period June 1, 2019 through May 31, 2023. The Plan has no minimum contribution requirements. If the District withdraws from the Plan, they will be liable to the Plan in the amount determined under the Plan's Agreement & Declaration of Trust: Employer Withdrawal Liability Rules and Procedures of the Western Conference of Teamsters Pension Trust Fund – A Supplement to the Western Conference of Teamsters Pension Plan, section 10 which can be found at http://www.wctpension.org/forms-documents-webcasts/plan-documents.

The WCTPP issues a publicly available financial report which can be obtained at http://www.wctpension.org/forms-documents-webcasts/plan-documents. Additional information regarding the Plan may be obtained by accessing the aforementioned audited financial report.

District contributions to the Plan were $291,710, $286,702, $229,185, and $204,482, for 2022, 2021, 2020, and 2019, respectively.

NOTE 6 NON-UNION EMPLOYEES PENSION PLAN

Plan Description. The Magna Water District Defined Benefit Plan (the Plan) is a single-employer defined benefit plan. The Plan's provisions were adopted by a resolution of the Water District's Board of Trustees, which appoints those who serve as trustees of the Plan. Any amendments to the plan are adopted by a resolution of the Water District's Board of Trustees.

NOTE 6 NON-UNION EMPLOYEES PENSION PLAN (Continued)

Benefits provided. The Plan covers all eligible employees and provides retirement benefits to plan members and their beneficiaries. Eligible employees are the executive employees who do not qualify to participate in the Union Employees Pension Plan described in the previous note. Retirement benefits are as follows:

Years of service required	Age eligibility for benefit	Monthly Benefit amount per year
5 years	Must be age 55 or older	$204.38 per year of credited service

Participation. As of December 31, 2023, there were six active participants, no inactive participants and no retirees and beneficiaries.

Contributions. Through December 31, 2023, contributions to the Plan were recommended by the annual actuarial report and are approved by the Water District's Board of Trustees. As of January 1, 2014 a contribution bases on a fixed dollar amount was approved by the Water District's Board of Trustees. The dollar amount will be reviewed by the Board of Trustees annually as updated actuarial valuation reports become available. The Board of Trustees approved a contribution of $100,408 for 2020, $110,259 for 2021, $132,972 for 2022, $134,062 for 2023, and $156,604 from 2024 through 2038. This contribution rate is consistent with the Water District's adopted Plan funding policy which is focused on keeping the Plan's funding at 100% within 7 years. Post 2038 contributions are assumed equal to the $156,604 from the January 1, 2024 plan funding valuation. The actual amount contributed by the employer during the 2023 fiscal year was $134,062.

Reporting. The Plan does not issue a publicly available financial report.

Net Pension Liability: At December 31, 2023, the District reported a net pension liability of $847,965. The net pension liability was measured as of December 31, 2023 and was determined by an actuarial valuation as of January 1, 2023 and rolled-forward using generally accepted actuarial procedures.

Deferred outflows of resources and deferred inflows of resources: At December 31, 2023, the District reported deferred outflows of resources and deferred inflows related to pensions from the following sources:

	Deferred inflows of resources	Deferred outflows of resources
Differences between expected and actual experience	$ -	$ 399,195
Changes in assumptions	-	180,008
Net difference between projected and actual earnings	-	11,758
Contributions made subsequent to measurement date	-	-
Total	$ -	$ 590,961

Average remaining service as of the beginning of the year is: 16

Year ended December 31,	Deferred outflows (inflows of resources)
2023	$ 74,957
2024	74,957
2025	74,957
2026	74,957
Thereafter	291,131

NOTE 6 NON-UNION EMPLOYEES PENSION PLAN (Continued)

Actuarial assumptions. The total pension liability in the December 31, 2023, actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	0%
Salary increases	0%
Investment rate of return	5%
Mortality	1994 Group annuity mortality table using blended rate No pre-retirement mortality was used.

Long-term rate of return. The long-term rate of return is selected by the Plan's Pension Committee after a review of expected inflation and long-term real returns, reflecting volatility and correlation. Best estimates of arithmetic real rates of return for major asset class included in the Plan's target asset allocations as of December 31, 2023, is summarized in the table below:

Asset Class	Target Asset Allocation	Real Return Arithmetic Basis	Long-Term Expected Return
Cash & Fixed Income	90%	2.67%	2.40%
Mutual Funds	10%	6.00%	0.60%
Total	100%		3.00%
		Inflation	2.00%
		Expected arithmetic nominal return	5.00%

The 5% assumed investment rate of return is comprised of an inflation rate of 2% and a real return of 3%.

Discount rate. The discount rate used to measure the total pension liability was 5%. The projection of cash flows used to determine the discount rate assumed contributions rates as recommended by the District's Pension Committee and approved by the Board of Trustees. Based on the assumptions, the pension plan fiduciary net position was projected to be available to make all projected future benefit payments on current active and inactive participants. Therefore, the Long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following sensitivity analysis assumes rate volatility of plus and minus one percent of the discount rate of 5%.

	1% Decrease 4%	Discount Rate 5%	1% Increase 6%
Total pension liability	$ 2,441,473	$ 1,956,917	$ 1,588,513
Fiduciary net position	1,108,951	1,108,951	1,108,951
Net pension liability	1,332,521	847,965	479,561

NOTE 6 NON-UNION EMPLOYEES PENSION PLAN (Continued)

Schedule of funding progress. The following tables show the pension plan's funding progress as of December 31, 2023 and over the preceding 10 years.

Year ended	Actuarial determined contribution	Actual employer contribution	% of actual to actuarial contribution	Balance net pension obligation/ prepaid
12/31/2023	$ 142,330	$ 134,062	94.19%	$ (8,268)
12/31/2022	116,693	132,972	113.95%	16,279
12/31/2021	111,890	110,259	98.54%	(1,631)
12/31/2020	135,460	100,408	74.12%	(35,052)
12/31/2019	108,487	118,000	108.77%	9,513
12/31/2018	110,308	143,000	129.64%	32,692
12/31/2017	130,018	120,419	92.62%	(9,599)
12/31/2016	92,570	188,030	203.12%	95,460
12/31/2015	101,980	257,245	252.25%	155,265
12/31/2014	79,336	119,526	150.66%	40,190
12/31/2013	87,908	91,092	103.62%	3,184
12/31/2012	93,980	18,778	19.98%	(75,202)

Actuarial valuation date	Actuarial value of assets	Actuarial accrued liability	Unfunded AAL (UAAL)	Funded ration	Approximate covered payroll	UAAL as a % of covered payroll
12/31/2023	$ 1,108,951	$ 1,956,917	$ 847,965	56.67%	$ 837,411	101.26%
12/31/2022	933,280	1,425,835	492,555	65.45%	627,946	78.44%
12/31/2021	1,199,319	1,495,746	296,427	80.18%	633,687	46.78%
12/31/2020	1,064,594	1,552,470	487,876	68.57%	463,429	105.28%
12/31/2019	1,178,101	1,427,016	248,915	82.56%	591,171	42.11%
12/31/2018	1,037,450	1,449,224	411,774	71.59%	537,984	76.54%
12/31/2017	951,912	1,337,682	385,770	71.16%	544,150	70.89%
12/31/2016	814,575	1,017,441	202,866	80.06%	404,799	50.12%
12/31/2015	613,688	955,070	341,382	64.26%	407,340	83.81%
12/31/2014	416,028	462,164	46,136	90.02%	355,160	12.99%
12/31/2013	455,985	431,710	(24,275)	105.62%	368,051	-6.60%
12/31/2012	356,836	222,149	(134,687)	160.63%	354,104	-38.04%

NOTE 7 UNION EMPLOYEES OTHER POSTEMPLOYMENT BENEFITS

In accordance with the Union contract, the District contributes at the rate of $111.66 per active employee per month to the Utah-Idaho Teamsters Security Fund, which in turn provides post-retirement healthcare benefits to all eligible retired employees. Contributions to the fund amounted to $34,614 for 2023.

NOTE 8 NON-UNION EMPLOYEES OTHER POSTEMPLOYMENT BENEFITS

Plan Description. The District administers a single-employer defined benefit healthcare plan (the "OPEB Plan"). The plan provides lifetime healthcare insurance for eligible retirees and their spouses by purchasing health insurance. It also provides life and long-term care insurance for eligible retirees through age 75. Benefit provisions are established by the Board of Trustees and are defined in the District's Administrative Rules and Regulations. No assets are accumulated in a trust that meets the criteria of paragraph 4 of Statement 75. The OPEB Plan does not issue a publicly available financial report.

Funding Policy. The District contributes 100 percent of the cost of current-year premiums for eligible retired plan members and their spouses. For fiscal year 2023, the District contributed $49,996 to the OPEB Plan. The OPEB Plan is financed on a pay-as-you-go basis. It is the current policy of the District to set aside funds in a separate interest-bearing account, which is held by the District, in order to help meet, at least partially, the anticipated obligations of the OPEB Plan. As of December 31, 2023, the District had set aside $2,701,073 for the purpose of funding current and future OPEB obligations. However, as these funds are not held in trust and are unrestricted assets of the District, as no external restriction has been placed upon them, they are not considered assets of the OPEB Plan.

Schedule of Changes in Total OPEB Liability for the Year Ended December 31, 2023

The components of the Magna Water District's Total OPEB Liability as of December 31, 2023 were as follows:

Total OPEB Liability (TOL)		
Service cost	$	95,760
Interest cost		77,990
Benefit payments		49,996
Increase (decrease) due to actual experience being greater than expected		(12,694)
Increase (decrease) due to changes in benefit terms		-
Increase (decrease) due to changes in assumptions		96,478
Net Change in Total OPEB Liability		207,538
Total OPEB Liability - beginning		1,713,763
Total OPEB Liability - ending	$	1,921,301
Annual covered employee payroll	$	888,931
Total OPEB Liability as a percet of annual covered employee payroll		216.1%

Schedule of Collective Deferred Inflows and Deferred Outflows for the Year Ended December 31, 2023

The current balances of collective deferred outflows and deferred inflows of resources as of December 31, 2023 were as follows:

	Deferred Outflows of resources	Deferred Inflows of resources
Balance as of 12-31-22	$ 769,230	$ 945,901
Difference between expected and actual experience	(75,013)	7,168
Changes in assumptions	(1,679)	(134,418)
Net difference between projected and actual earnings on OPEB plan investments	-	-
Balance as of 12-31-23	$ 692,538	$ 818,651

NOTE 8 NON-UNION EMPLOYEES OTHER POSTEMPLOYMENT BENEFITS (Continued)

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ended December 31:	Deferred Outflows of resources	Deferred Inflows of resources
2024	$ 173,170	$ 139,944
2025	173,170	139,944
2026	173,170	139,944
2027	64,512	139,944
2028	62,628	129,280
2028	33,827	128,871
2030+	12,058	1,585

The average of expected remaining service lives was 10.1079 as of December 31, 2022 the measurement date. This was rounded to 10.0 for purposes of determining annual expense and deferral amounts.

A detailed schedule of the components of the deferrals, including date of creation, initial balance, and outstanding balance for each base, is given below:

Outflows / Inflows Base Type	Description	Base Amount	Base Date Established	Amortization period (years)	Fiscal year end of last amortization amount	Annual amortization amounts Regular	Last year	Current Year	Balance amounts As of 12/31/2022	As of 12/31/2023
Outflows	Changes in assumptions	$ 287,980	12/31/2019	10	2028	$ 28,798	$ 28,798	$ 28,798	$ 172,788	$ 143,990
Outflows	Expected vs actual experience (2)	359,515	1/1/2020	7	2026	51,359	51,359	51,359	205,438	154,079
Outflows	Changes in assumptions	129,425	1/1/2020	7	2026	18,489	18,489	18,489	73,958	55,469
Outflows	Changes in assumptions	271,669	12/31/2020	7	2026	38,810	38,809	38,810	155,239	116,429
Outflows	Expected vs actual experience (2)	13,188	12/31/2021	7	2027	1,884	1,884	1,884	9,420	7,536
Outflows	Expected vs actual experience (2)	174,157	12/31/2022	8	2029	21,770	21,767	21,770	152,387	130,617
Outflows	Expected vs actual experience (2)	96,478	12/31/2023	8	2030	12,060	12,058	12,060	-	84,418
Totals for Outflows								$ 173,170	$ 769,230	$ 692,538
Inflows	Expected vs actual experience (1)	$ 4,100	12/31/2019	10	2028	410	410	410	2,460	2,050
Inflows	Expected vs actual experience (1)	6,019	12/31/2020	7	2026	860	859	860	3,439	2,579
Inflows	Changes in assumptions	68,628	12/31/2021	7	2027	9,804	9,804	9,804	49,020	39,216
Inflows	Expected vs actual experience (1)	21,355	12/31/2022	8	2029	2,669	2,672	2,669	18,686	16,017
Inflows	Changes in assumptions	996,910	12/31/2022	8	2029	124,614	124,612	124,614	872,296	747,682
Inflows	Changes in assumptions	12,694	12/31/2023	8	2030	1,587	1,585	1,587	-	11,107
Totals for Inflows								$ 139,944	$ 945,901	$ 818,651

Note 1- This type of base results from actual benefits being different from expected benefits
Note 2 - This type of base results in the OPEB liability produced by the valuation as of the first day of the year being different from the liability reported as of the end of the prior year

Annual OPEB Expense For the Year Ended December 31, 2023

The annual OPEB Expense recognized by the District can be calculated as the changes in the amounts reported on the Statement of Net Position that are not attributable to employer contributions. It is the change in Total OPEB Liability minus the changes in deferred outflows plus the changes in deferred inflows plus employer contributions.

NOTE 8 NON-UNION EMPLOYEES OTHER POSTEMPLOYMENT BENEFITS (Continued)

The components of the annual OPEB Expense for the District as of December 31, 2023 were as follows:

(1) Total OPEB Liability as of December 31, 2022	$	1,713,763
(2) Total OPEB Liability as of December 31, 2023		1,921,301
(3) Change in Total OPEB Liability [(2)-(1)]	$	207,538
(4) Change in Deferred Outflows		(76,692)
(5) Change in Deferred Inflows		(127,250)
(6) Employer Contributions*		49,996
(7) OPEB Expense	$	206,976

*Actual pay-as-you-go.

(8) Annual covered employee payroll	$	888,931
(9) Total OPEB expense as a percent of annual covered employee payroll		23.3%

Total OPEB Liability

The district's Total OPEB Liability of $1,713,763 was based on the actuarial valuation as of January 1, 2022 and a measurement date of December 31, 2022 and a discount rate of 4.31%.

Actuarial Assumptions. The Total OPEB Liability was determine using the following actuarial assumptions:

Inflation	2.96%
Salary increases	3.00%, average, including inflation
Discount rate	4.31%, net of investment expense, including inflation
Healthcare cost trend rates	8.00% for 2018, decreasing to 5.00 % for 2021 and after
Retirees' share of cost	Retirees pay the balance of the premium after District percentage that depends on classification, year of hire, and years of service at retirement

The discount rate was based on the S&P Municipal Bond 20 Year High Grade Rate Index.

Mortality rates were based on the RP-2014 Employee and Healthy Annuitant Mortality Tables for Males or females, as appropriate, projected using a generational projection based on 100% of scale MP-2016 for years 2014 through 2029, 50% of MP-2016 for years 2030 through 2049. And 20% of MP-2016 for 2050 and thereafter.

All actuarial assumptions used in measuring the Total OPEB Liability are described in the December 31, 2022 actuarial valuation performed by J. Richard Hogue, F.S.A. The assumptions were based on plan experience through December 31, 2022. The actuarial cost method used for measuring the Total OPEB Liability for purposes of GASB 75 was Entry Age, Level Percent of Pay.

NOTE 8 NON-UNION EMPLOYEES OTHER POSTEMPLOYMENT BENEFITS (Continued)

Sensitivity of Total OPEB Liability to changes in the discount rate. The following presents the District's Total OPEB Liability as of December 31, 2023 calculated using the discount rate of 4.31%, as well as what the District's Total OPEB Liability would be if it were calculated using a discount rate that is 1 percentage point lower (3.31%) or 1 percentage point higher (5.31%) than the current rate:

	1% Decrease (3.31%)	Current Rate (4.31%)	1% Increase (5.31%)
Total OPEB Liability	$ 2,270,209	$ 1,921,301	$ 1,645,210

Sensitivity of the Total OPEB Liability to changes in the healthcare trend rates. The following presents the District's Total OPEB Liability as of December 31, 2023, as well as what the District's Total OPEB Liability would be if it were calculated using healthcare trend rates that are 1 percentage point lower (4.0%) or 1 percentage point higher (6.0%) than the current healthcare cost trend rates:

	1% Decrease (4.0%)	Current Rate (5.0%)	1% Increase (6.0%)
Total OPEB Liability	$ 1,669,803	$ 1,921,301	$ 2,238,892

Other Required Information
As of December 31, 2023 there were ten covered employees, six of which are active, four are inactive currently receiving benefits, there are no inactive employees which are not receiving benefits.

Please see the December 31, 2023 actuarial report prepared by PCA, meant to be used as a companion document for these disclosures, for the following additional information:

A) Detail of number of covered members, active and inactive. This data is given as of the valuation date and has not changed sufficiently to warrant a revision of the Total OPEB liability.
B) Summary of plan provisions.
C) Detail of actuarial assumptions, subject to the following changes:
    a. Discount rate as of December 31, 2023 is 4.31%
D) Actuarial Certification.

NOTE 9 DEFINED CONTRIBUTION PLAN

Eligible (non-union) employees of the District may participate in the Magna Water District 401(k) Plan. The 401(k) Plan permits additional matching contributions up to three percent of eligible employee compensation. The District contributed $26,814, $18,190 $18,169, $15,500, and $16,532 for the years ended December 31, 2023, 2022, 2021, 2020, and 2019, respectively.

NOTE 10 RISK MANAGEMENT

The District is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omission; and natural disasters for which the District purchased insurance through commercial policies. There were no significant reductions in coverage from the prior year, and there have not been any claims settled in excess of coverage for the past three years.

NOTE 11 COMMITMENTS

The District has entered into an agreement with the Jordan Valley Water Conservancy District to purchase a minimum of 800-acre feet of water annually. During the year ended December 31, 2023 the District purchased 813.38-acre feet, at a cost of $347,681.

As of December 31, 2023, the District had approximately $10,480,184 remaining to pay on contracts, for which no liability has been recorded because the contractor(s) have not yet performed the contract(s).

NOTE 12 CONTINGENCIES

Contamination of the groundwater aquifer by perchlorate, a potentially hazardous substance leaked into the groundwater by private industry and the federal government, has been studied and closely monitored by the District and the private industry firm currently involved. The private firm has been paying a portion of the District's costs of these efforts. The District and the firm entered into an agreement in December 2005 concerning the removal of perchlorate from water produced by three of the District's wells. Under the agreement, the firm agreed to pay for a substantial portion of the new treatment facility constructed by the District and for a portion of the operation and maintenance of that facility. The District receives funds from the private industrial firm for part of the maintenance costs of the facility each year, which is reflected as other non-operating income on the statement of revenues, expenses, and changes in net position. The agreement that was signed in 2005 has been renewed, having expired in 2015. The new agreement still states that the private industrial firm involved will make operation and maintenance contributions to assist on the ongoing maintenance of the treatment plant. The new agreement, as in the old agreement, has a provision for a partial refund to the firm if future perchlorate standards merit such a refund. There is also a limited waiver of liability for the firm, subject to the terms and conditions of the agreement.

NOTE 13 IMPLEMENTATION OF NEW STANDARD

For 2023, the District implemented Governmental Accounting Standards Board (GASB) statement No. 96, *Subscription-Based Information Technology Arrangements* (SBITAs). GASB Statement No. 96 requires entities to record a right-of-use asset, and a subscription liability for any qualifying SBITAs. The District evaluated all potential SBITAs and determined that none met the requirements to be reported under GASB 96, therefore no adjustments to the current or prior financial statements were necessary as a result of implementing this new standard.

REQUIRED SUPPLEMENTAL INFORMATION

MAGNA WATER DISTRICT
REQUIRED SUPPLEMENTAL INFORMATION
Years ended December 31, 2023 and seven preceding years

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS - 10 YEARS

	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability									
Service cost	$ 60,595	$ 47,552	$ 41,218	$ 63,010	$ 40,551	$ 45,688	$ 47,685	$ 32,718	$ 34,243
Interest on total pension liability	95,358	77,165	79,684	74,501	74,489	69,169	53,257	49,389	24,820
Effect on economic/demographic (gains) or losses	(225,605)	34,089	(382,436)	13,110	(370,833)	(179,274)	(62,648)	(333,724)	65,248
Effect of assumption changes and inputs	180,008	192,009	204,809	222,166	233,585	254,441	281,948	313,988	368,595
Benefit payments	-	-	-	(247,333)	-	(78,482)	-	-	-
Net change in total pension liability	$ 110,356	$ 350,815	$ (56,725)	$ 125,454	$ (22,208)	$ 111,542	$ 320,242	$ 62,371	$ 492,906
Total pension liability, beginning	1,846,560	1,495,746	1,552,471	1,427,017	1,449,225	1,337,683	1,017,441	955,070	462,164
Total pension liability, ending (a)	1,956,917	1,846,560	1,495,746	1,552,471	1,427,017	1,449,225	1,337,683	1,017,441	955,070
FIDUCIARY NET POSITION									
Employer contributions	$ 134,062	$ 134,062	$ 110,259	$ 100,408	$ 118,000	$ 143,000	$ 120,419	$ 188,030	$ 257,245
Investment income net of investment expenses	41,609	41,609	24,465	33,419	22,650	21,020	16,919	12,857	9,629
Benefit payments	-	-	-	(247,333)	-	(78,482)	-	-	-
Administrative expenses	-	-	-	-	-	-	-	-	-
Net change in plan fiduciary net position	$ 175,671	$ 175,671	$ 134,724	$ (113,506)	$ 140,650	$ 85,538	$ 137,338	$ 200,887	$ 266,874
Fiduciary net position, beginning	$ 1,108,951	$ 1,199,319	$ 1,064,595	$ 1,178,101	$ 1,037,451	$ 951,913	$ 814,575	$ 613,688	$ 346,814
Fiduciary net position, ending (b)	1,108,951	1,108,951	1,199,319	1,064,595	1,178,101	1,037,451	951,913	814,575	613,688
Net pension liability, ending (a) - (b)	847,966	737,609	296,427	487,876	248,916	411,774	385,770	202,866	341,382
Fiduciary net position as a %of total pension liability	56.67%	60.05%	80.18%	68.57%	82.56%	71.59%	71.16%	80.06%	64.26%
Covered payroll	$ 837,411	$ 627,946	$ 633,687	$ 463,429	$ 591,171	$ 537,984	$ 544,150	$ 404,799	$ 407,340
Net pension liability as a %of covered payroll	101.26%	117.46%	46.78%	105.28%	42.11%	76.54%	70.89%	50.12%	83.81%

This schedule is intended to present 10 years of information. Subsequent yeas will be added as the information becomes available.

MAGNA WATER DISTRICT
REQUIRED SUPPLEMENTAL INFORMATION (Continued)
Years ended December 31, 2014 through 2023

SCHEDULE OF REQUIRED EMPLOYER PENSION CONTRIBUTIONS - 10 YEARS

Year	Actuarial determined contribution	Contributions in relation to actuarial determined contribution	Contribution deficiency (excess)	Covered-employee payroll	Contributions as a percentage of covered-employee payroll
2023	$ 142,330	$ 134,062	$ (8,268)	$ 837,411	16.01%
2022	116,693	132,972	16,279	627,946	21.18%
2021	111,890	110,259	1,631	633,687	17.40%
2020	135,460	118,000	17,460	463,429	25.46%
2019	108,487	118,000	(9,513)	591,171	19.96%
2018	110,308	143,000	(32,692)	537,984	26.58%
2017	130,018	120,419	9,599	544,150	22.13%
2016	92,570	188,030	(95,460)	404,799	46.45%
2015	101,980	257,245	(155,265)	407,340	63.15%
2014	79,336	119,526	(40,190)	355,160	33.65%

NOTES TO THE PENSION REQUIRED SUPPLEMENTAL INFORMATION

Note 1 - Valuation Date

The valuation date is January 1, 2022. This is the date as of which the actuarial valuation was performed. The Measurement Date is December 31, 2022. This is the date as of which the net pension liability is determined. The Reporting Date is December 31, 2023. This is the employer's fiscal year ending date.

Note 2 - Methods and Assumptions used to determine contribution rates

Actuarial cost method	Entry Age Normal
Asset valuation method	Current Asset Values
Discount rate	5.00%
Expected long-term rate of return on plan assets	5.00%
Projected salary increases incorporated into the calculation	0
Projection inflation rate increases	0
Projected rate of post-retirement benefit cost increases	0
Mortality table	1994 GAM Blended

MAGNA WATER DISTRICT
REQUIRED SUPPLEMENTAL INFORMATION (Continued)
Years ended December 31, 2023 and five proceeding years

Schedule of Changes in Net OPEB Liability and Related Ratios
Last 10 Years

	2023	2022	2021	2020	2019	2018
Total OPEB Liability						
Service cost	$ 95,760	$ 67,660	$ 46,390	$ 40,349	$ 38,349	$ 36,839
Interest cost	77,990	57,563	53,881	62,379	47,650	45,580
Benefit payments	(49,996)	(58,046)	(73,520)	(49,114)	(29,354)	(33,454)
Increase (decrease) due to actual experience being greater than expected	(12,694)	152,802	13,188	353,496	(4,100)	-
Increase (decrease) due to changes in benefit terms	-	-	-	230,089	-	-
Increase (decrease) due to changes in assumptions	96,478	(996,910)	(68,628)	401,094	287,980	-
Net change in Total OPEB Liability	207,538	(776,931)	(28,689)	1,038,293	340,525	48,965
Total OPEB Liability - beginning	1,713,763	2,490,694	2,519,383	1,481,090	1,140,565	1,091,600
Total OPEB Liability - ending	$ 1,921,301	$ 1,713,763	$ 2,490,694	$ 2,519,383	$ 1,481,090	$ 1,140,565
Annual covered employee payroll	$ 888,931	$ 863,040	$ 541,580	$ 525,806	$ 591,171	$ 554,977
Total OPEB Liability as a percent of annual covered employee payroll	216.1%	198.6%	459.9%	479.1%	250.5%	205.5%

This schedule is intended to present 10 years of information. Subsequent years will be added as the information becomes available.

OTHER SUPPLEMENTAL INFORMATION

MAGNA WATER DISTRICT
SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For The Year Ended December 31, 2023

Operating Revenues:		
Charges for services:		
Water sales - culinary	$	4,634,433
Water sales - secondary		541,664
Sewer service charges		4,674,227
Connection fees and other income		3,637,930
Total Operating Revenues		13,488,254
Operating Expenses:		
Salaries and benefits:		
Salaries and wages - plant		1,707,410
Salaries and wages - office		1,170,584
Trustees' salaries		7,981
Payroll taxes and fringe benefits		1,874,057
Total salaries and benefits		4,760,032
Contractual services:		
Legal		53,514
Accounting		19,000
Engineering		394,939
Data processing services		65,512
Janitorial		18,851
Lab and testing		100,154
Payroll		1,589
Total contractual services		653,559
Material and supplies:		
Repairs, maintenance, and supplies		2,600,401
Office supplies and postage		72,093
Water purchased		347,681
Total materials and supplies		3,020,175
Utilities:		
Electricity and fuel for water production and sewer processing		879,003
Office and general, electricity and fuel		7,407
Telephone and paging		65,767
Total utilities		952,177
Depreciation and amortization		5,275,511

MAGNA WATER DISTRICT
SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (Continued)
For The Year Ended December 31, 2023

Lease expense	24,582
Other operating expenses:	
Transportation	244,529
Bad debts	5,710
Insurance	171,122
Training	123,723
Miscellaneous	167,556
Total other operating expenses	712,640
Operating Income (Loss)	(1,910,422)
Nonoperating Revenues (Expenses):	
Property tax revenue	5,503,910
Non-resident fee in lieu of property tax	158,033
Impact fees	5,205,149
Gain (loss) on sale of assets	541,810
Other non-operating income	195,526
Interest income	1,753,295
Interest expense	(656,497)
Payments to RDA's	(1,410,735)
Total Nonoperating Revenues (Expenses)	11,290,491
Income Before Capital Contributions	9,380,069
Capital Contributions	8,995,727
Change in Net Position	$ 18,375,796

MAGNA WATER DISTRICT
SCHEDULE OF REVENUES, EXPENSES
AND CHANGES IN NET POSITION – COMPARED TO BUDGET
For The Year Ended December 31, 2023

	Budgeted Amounts		Actual	Variance with
	Original	Final	Amounts	Final Budget
Operating Revenues:				
Water sales	$ 4,810,000	$ 4,810,000	$ 5,176,097	$ 366,097
Sewer service charges	4,485,000	4,485,000	4,674,227	189,227
Connection fees and other income	3,534,000	3,521,577	3,637,930	116,353
Total Operating Revenues	12,829,000	12,816,577	13,488,254	671,677
Operating Expenses:				
Salaries and benefits	4,890,200	4,890,200	4,760,032	130,168
Contractual services	1,065,300	1,065,300	653,559	411,741
Materials and supplies	2,886,500	2,886,500	3,020,175	(133,675)
Utilities	1,011,000	1,011,000	952,177	58,823
Depreciation and amortization	5,175,000	5,175,000	5,275,511	(100,511)
Lease expense	25,000	25,000	24,582	418
Other operating expenses	564,550	564,550	712,640	(148,090)
Total Operating Expenses	15,617,550	15,617,550	15,398,676	218,874
Operating Income (Loss)	(2,788,550)	(2,800,973)	(1,910,422)	890,551
Nonoperating Revenues:				
Property tax revenue	5,141,942	5,154,365	5,503,910	349,545
Non-resident fee in lieu of property tax	100,000	100,000	158,033	58,033
Impact fees	4,300,000	4,300,000	5,205,149	905,149
Gain (loss) on sale of assets	20,000	20,000	541,810	521,810
Other non-operating income	7,000	7,000	195,526	188,526
Interest income	250,000	250,000	1,753,295	1,503,295
Total Nonoperating Revenues	9,818,942	9,831,365	13,357,723	3,526,358
Nonoperating Expenses:				
Interest expense	650,283	650,283	656,497	(6,214)
Payments to RDA's	1,270,000	1,270,000	1,410,735	(140,735)
Debt issuance costs	-	-	-	-
Total Nonoperating Expenses	1,920,283	1,920,283	2,067,232	(146,949)
Income Before Capital Contributions	5,110,109	5,110,109	9,380,069	4,269,960
Capital Contributions	6,000,000	6,000,000	8,995,727	2,995,727
Change in Net Position	$ 11,110,109	$ 11,110,109	$ 18,375,796	$ 7,265,687

GILBERT & STEWART
CERTIFIED PUBLIC ACCOUNTANTS
A PROFESSIONAL CORPORATION
ESTABLISHED 1974

RANDEL A HEATON, CPA
LYNN A. GILBERT, CPA
JAMES A. GILBERT, CPA
BEN H PROBST, CPA
RONALD J. STEWART, CPA

SIDNEY S. GILBERT, CPA
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INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Board of Trustees
Magna Water District
Magna, Utah

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the Standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statement of Magna Water District (the District), as of and for the year ended December 31, 2023, and the related notes to the financial statements, which collectively comprise the District's basic financial statements, and have issued our report thereon dated May 30, 2024.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit the attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the District's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Gilbert & Stewart

Gilbert & Stewart, CPA, PC
Provo, Utah
May 30, 2024

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INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE AS REQUIRED BY THE *STATE COMPLIANCE AUDIT GUIDE*

Board of Directors
Magna Water District
Magna, Utah

Report On Compliance

We have audited Magna Water District's (the District) compliance with the applicable state compliance requirements described in the *State Compliance Audit Guide,* issued by the Office of the Utah State Auditor that could have a direct and material effect on the district for the year ended December 31, 2023.

State compliance requirements were tested for the year ended December 31, 2023, in the following areas:

Budgetary Compliance
Fund Balance
Fraud Risk Assessment
Government Fee's
Cash Management
Open and Public Meetings Act

Management's Responsibility

Management is responsible for compliance with the state requirements referred to above.

Auditor's Responsibility

Our responsibility is to express an opinion on Magna Water District's compliance based on our audit of the state compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States; and the State Compliance Audit Guide. Those standards and the State Compliance Audit Guide require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the state compliance requirements referred to above that could have a direct and material effect on a state compliance requirement occurred. An audit includes examining, on a test basis, evidence about on Magna Water District's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each state compliance requirement referred to above. However, our audit does not provide a legal determination of Magna Water District's compliance with those requirements.

Opinion on Compliance

In our opinion, Magna Water District complied, in all material respects, with the state compliance requirements referred to above for the year ended December 31, 2023.

REPORT OF INTERNAL CONTROL OVER COMPLIANCE

Management of Magna Water District is responsible for establishing and maintaining effective internal control over compliance with the state compliance requirements referred to above. In planning and performing our audit of compliance, we considered on Magna Water District's internal control over compliance with the state compliance requirements referred to above to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance with those state compliance requirements and to test and report on internal control over compliance in accordance with the *State Compliance Audit Guide*, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of Magna Water District's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent or to detect and correct noncompliance with a state compliance requirement on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a state compliance requirement will not be prevented or detected and corrected on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a state compliance requirement that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control and compliance and the results of that testing based on the requirements of the *State Compliance Audit Guide*. Accordingly, this report is not suitable for any other purpose.

Gilbert & Stewart

Gilbert & Stewart, CPA, PC
Provo, Utah
May 30, 2024

INTERLOCAL AGREEMENT

INTERLOCAL COOPERATION AGREEMENT

between

THE REDEVELOPMENT AGENCY OF SALT LAKE COUNTY

and

MAGNA WATER DISTRICT

Arbor Park Water Line Replacement

This Interlocal Cooperation Agreement (this "Agreement") is entered into by and between **THE REDEVELOPMENT AGENCY OF SALT LAKE COUNTY**, a community reinvestment agency created under Utah Code Title 17C (the "Agency"); and **MAGNA WATER DISTRICT**, a special district created under Utah Code Title 17B (the "District"). The Agency and the District may each be referred to herein as a "Party" and collectively as the "Parties."

R E C I T A L S:

A. The Agency and the District are "public agencies" as defined by the Utah Interlocal Cooperation Act, UTAH CODE §§ 11-13-101 to -608 (the "Interlocal Act"), and as such, are authorized to enter into agreements to act jointly and cooperatively in a manner that will enable them to make the most efficient use of their resources and powers. Additionally, Utah Code § 11-13-215 authorizes a county, city, town, or other local political subdivision to share its tax and other revenues with other counties, cities, towns, local political subdivisions, or the state.

B. On June 16, 2009, the Agency adopted a project area plan known as the Magna/Arbor Park Project Area Urban Renewal Plan. The plan contemplated the use of tax increment to help finance the development of the project area including, among other things, the installation of public infrastructure such as roads, curb, gutter and sidewalk, water lines, sewer lines and storm water facilities.

C. On October 9, 2012, the Agency entered into a tax increment reimbursement agreement with Arbor Park Associates, L.C. (the "Developer"), whereby the Agency agreed to reimburse the Developer for certain of its costs in developing the project area. The Agency and the Developer also agreed to share the costs, up to $294,030, to reimburse the District for replacing 1,725 linear feet of water lines in the project area.

D. The District is the local authority for supplying water and wastewater treatment in the project area. Accordingly, the District has installed the necessary water lines, a portion of which costs shall be borne by the Agency and the Developer as set forth in the tax increment reimbursement agreement.

E. The Parties now desire to provide for the payment to the District for the water line replacement costs as set forth herein.

A G R E E M E N T:

NOW, THEREFORE, in consideration of the mutual representations, warranties, covenants and agreements contained herein, the sufficiency of which is hereby acknowledged, the Parties represent and agree as follows:

ARTICLE 1 — WATER LINE REPLACEMENT AND PAYMENT

1.1. Water Line Replacement. The District warrants that it has completed the replacement of a secondary water line sufficient to provide full service to the Arbor Park Development.

1.2. Payment. The Agency shall make seven payments to the District as follows:

(a) On or before September 6, 2024, the Agency shall pay the District $176,418.
(b) On or before December 31, 2024, the Agency shall pay the District $19,602.
(c) On or before December 31, 2025, the Agency shall pay the District $19,602.
(d) On or before December 31, 2026, the Agency shall pay the District $19,602.
(e) On or before December 31, 2027, the Agency shall pay the District $19,602.
(f) On or before December 31, 2028, the Agency shall pay the District $19,602.
(g) On or before December 31, 2029, the Agency shall pay the District $19,602.

ARTICLE 2 — COVENANTS AND AGREEMENTS

2.1. Indemnification and Liability.

(a) Governmental Immunity. Both Parties are governmental entities under the Governmental Immunity Act of Utah, UTAH CODE §§ 63G-7-101 to -904 (the "Immunity Act"). There are no indemnity obligations between these Parties. Both Parties maintain all privileges, immunities, and other rights granted by the Immunity Act and all other applicable law. Consistent with the terms of the Immunity Act, as provided therein, it is mutually agreed that each Party is responsible for its own wrongful or negligent acts which are committed by its agents, officials, or employees. No Party waives any defense otherwise available under the Immunity Act nor does any Party waive any limit of liability currently provided by the Immunity Act.

(b) Indemnification. Subject to the provisions of the Immunity Act, each Party agrees to indemnify and hold harmless the other, as well as the other Party's agents, officers and employees from and against any and all actions, claims, lawsuits, proceedings, liability, damages, losses and expenses (including attorney's fees and costs), arising out of or resulting from the conduct of this Agreement to the extent the same are caused by its own negligent or wrongful act, error or omission or those of its own officers, agents and or employees.

(c) Insurance. Each Party shall maintain insurance or self-insurance coverage sufficient to meet its obligations hereunder and consistent with applicable law.

ARTICLE 3 — MISCELLANEOUS

3.1. Interlocal Cooperation Act. For the purpose of satisfying specific requirements of the Interlocal Act, the Parties agree as follows:

(a) This Agreement shall be approved by each Party pursuant to Utah Code § 11-13-202.5.

(b) This Agreement shall be reviewed as to proper form and compliance with applicable law by duly authorized attorneys on behalf of each Party pursuant to and in accordance with Utah Code § 11-13-202.5.

(c) A duly executed original counterpart of this Agreement shall be filed immediately with the keeper of records of each Party pursuant to Utah Code § 11-13-209.

(d) Except as otherwise specifically provided herein, each Party shall be responsible for its own costs of any action taken pursuant to this Agreement, and for any financing of such costs.

(e) No separate legal entity is created by the terms of this Agreement. Pursuant to Utah Code § 11-13-207, to the extent this Agreement requires administration other than as set forth herein, the Chairperson of the Agency's Board of Directors and the Chairman of the District's Board of Trustees are hereby designated as the joint administrative board for all purposes of the Interlocal Act.

(f) No real or personal property shall be acquired jointly by the Parties as a result of this Agreement. To the extent a Party acquires, holds, or disposes of any real or personal property for use in the joint or cooperative undertaking contemplated by this Agreement, such Party shall do so in the same manner that it deals with other property of such Party.

3.2. Term of Agreement. This Agreement shall take effect immediately upon the approval of this Agreement by both Parties as provided in Utah Code § 11-13-202.5 and shall expire upon the earlier of: a) the date the Parties have performed all of the material obligations described herein; or b) January 31, 2030.

3.3. Non-Funding Clause.

(a) The Agency has requested or intends to request an appropriation of funds to be paid to the District for the purposes set forth in this Agreement. If funds are not appropriated and made available beyond December 31 of the Agency's fiscal year in which this Agreement becomes effective, the Agency's obligation for performance of this Agreement beyond that date will be null and void. This Agreement places no obligation on the Agency as to succeeding fiscal years and shall terminate and become null and void on the last day of the Agency's fiscal year for which funds were budgeted and appropriated, except as to those portions of payments agreed upon for which funds are budgeted and appropriated. The Parties agree that such termination of the Agency's

obligation under this Paragraph will not be construed as a breach of this Agreement or as an event of default under this Agreement, and that such termination of the Agency's obligation under this Paragraph will be without penalty and that no right of action for damages or other relief will accrue to the benefit of the District, its successors, or its assigns as to this Agreement, or any portion thereof, which may terminate and become null and void.

(b) If funds are not appropriated for a succeeding fiscal year to fund performance by the Agency under this Agreement, the Agency shall promptly notify the District of such non-funding and the termination of this Agreement. However, in no event, shall the Agency notify the District of such non-funding later than thirty days following the expiration of the Agency's fiscal year for which funds were last appropriated to fund performance by the Agency under this Agreement.

3.4. Force Majeure. Neither Party will be considered in breach of this Agreement to the extent that performance of their respective obligations is prevented by an Event of Force Majeure that arises after this Agreement becomes effective. "Event of Force Majeure" means an event beyond the control of the Agency or the District that prevents a Party from complying with any of its obligations under this Agreement, including but not limited to: a) an act of God (such as, but not limited to, fires, explosions, earthquakes, drought, tidal waves and floods); b) war, acts or threats of terrorism, invasion, or embargo; or c) riots or strikes. If an Event of Force Majeure persists for a period in excess of sixty days, the Agency may terminate this Agreement without liability or penalty, effective upon written notice to the District.

3.5. Ethical Standards. The District represents that it has not: a) provided an illegal gift in connection with this Agreement to any Agency officer or employee, or former Agency officer or employee, or to any relative or business entity of a Agency officer or employee, or relative or business entity of a former Agency officer or employee; b) retained any person to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, other than bona fide employees of bona fide commercial agencies established for the purpose of securing business; c) breached any of the ethical standards in connection with this Agreement set forth in State statute or Salt Lake County Code of Ordinances § 2.07, Salt Lake County Code of Ordinances; or d) knowingly influenced, and hereby promises that it will not knowingly influence, in connection with this Agreement, any Agency officer or employee or former Agency officer or employee to breach any of the ethical standards set forth in State statute or Salt Lake County ordinances.

3.6. Entire Agreement. This Agreement constitutes the entire Agreement between the Parties with respect to the subject matter hereof and shall supersede and replace any prior or existing agreements, statements, promises, or inducements made by either Party, or agents for either Party.

3.7. Amendment. This Agreement may be amended, changed, modified or altered only by an instrument in writing signed by the Parties.

3.8. Governing Law and Venue. The laws of the State of Utah govern all matters

arising out of this Agreement. Venue for any and all legal actions arising hereunder will lie in the District Court in and for Salt Lake County, State of Utah.

3.9. No Obligations to Third Parties. The Parties agree that the District's obligations under this Agreement are solely to the Agency and that the Agency's obligations under this Agreement are solely to the District. The Parties do not intend to confer any rights to third parties unless otherwise expressly provided for under this Agreement.

3.10. Agency. No officer, employee, or agent of the District or the Agency is intended to be an officer, employee, or agent of the other Party. None of the benefits provided by each Party to its employees including, but not limited to, workers' compensation insurance, health insurance and unemployment insurance, are available to the officers, employees, or agents of the other Party. The District and the Agency will each be solely and entirely responsible for its acts and for the acts of its officers, employees, or agents during the performance of this Agreement.

3.11. No Waiver. The failure of either Party at any time to require performance of any provision or to resort to any remedy provided under this Agreement will in no way affect the right of that Party to require performance or to resort to a remedy at any time thereafter. Additionally, the waiver of any breach of this Agreement by either Party will not constitute a waiver as to any future breach.

3.12. Severability. If any provision of this Agreement is found to be illegal or unenforceable in a judicial proceeding, such provision will be deemed inoperative and severable, and, provided that the fundamental terms and conditions of this Agreement remain legal and enforceable, the remainder of this Agreement shall remain operative and binding on the Parties.

3.13. Exhibits and Recitals. The Recitals set forth are incorporated herein to the same extent as if such items were set forth herein in their entirety within the body of this Agreement.

3.14. Counterparts. This Agreement may be executed in counterparts and all so executed will constitute one agreement binding on all the Parties, it being understood that all Parties need not sign the same counterpart. Further, executed copies of this Agreement delivered by facsimile or email will be deemed an original signed copy of this Agreement.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the Parties execute this Agreement as of the latest date indicated below.

THE REDEVELOPMENT AGENCY OF SALT LAKE COUNTY:

_____
Chairperson
Board of Directors

Date:_____

Recommended for Approval:

By:_____
Executive Director

Date: _____

Reviewed as to Form:

By:_____

MAGNA WATER DISTRICT:

By: _____

Name:_____

Title:_____

Date:_____

Reviewed as to Form:

By:_____
Attorney for the District

Date: _____

FINISH & FEED TANK STUDY

June 4, 2024

Clint Dilley, P.E.
Magna Water District
8885 West 3500 South
Magna, UT 84044

Subject: **EDR Plant Finish and Feed Study RFQ – Recommendation for Selection of Consulting Firm**

Clint,

Qualifications were received from two engineering consulting firms (Advanced Engineering and Environmental Services, LLC, and Bowen Collins & Associates) to provide engineering services for the EDR Plant Finish and Feed Study. After a detailed review of the submissions by a five-person selection committee, we recommend that Advanced Engineering and Environmental Services, LLC (AE2S) be selected to provide these services.

The committee conducted a thorough evaluation, scoring, and discussion of the submissions. Based on their assessment, AE2S was determined to be the most suitable firm for this project.

We request that the board approve this selection. Additionally, we seek the board's approval to proceed with the study immediately, while concurrently finalizing the scope of work and negotiating a fair and reasonable fee for services.

We will work diligently with AE2S to finalize the scope and fee and will present the agreed terms to the board for final consideration and award.

Please let me know if you have any questions or concerns.

Sincerely,

Trevor Andra, P.E.
District Engineer
Magna Water District

STATEMENT OF QUALIFICATIONS FOR

ENGINEERING SERVICES

FOR WATER TREATMENT PLANT STORAGE TANKS

Magna Water District

May 2, 2024

AE2S

www.ae2s.com

May 2, 2024

Trevor Andra, PE
Magna Water District
8885 West 3500 South
Magna, UT 84044

Re: Delivering a Responsive Water Treatment Plant Storage Tank Project

Dear Mr. Andra,

Magna Water is committed to preparing for and supplying reliable water for one of the fastest growing communities in the state. The EDR plant provides a much-needed water resource for the City of Magna and is a critical cog in the overall water delivery system. Recent projects have exposed a vulnerability in the operations of the raw water and effluent water storage system at the EDR plant that needs to be addressed to provide uninterrupted deliveries under certain operational conditions. We are confident that we can provide a solution that will:

- provide operational flexibility,
- create redundancies, and
- increase storage capacity.

As you embark on this project, you need a partner with an experienced and local team, specialized I&C expertise, proven track record of utility design, and outstanding culture of extreme communication and client service. By selecting the AE2S team you will realize the following benefits:

Peace of Mind through Responsiveness and Delivery. The bottom line is we are here to serve you. Outstanding client service is a hallmark of our firm. We have strived to show our dedication and commitment to helping you accomplish your objectives in other disciplines and are excited to offer our infrastructure design experience as well. We will listen to you and work together as a collaborative team to make sure you receive exactly the project you desire and that your project goals are met. In addition, you will have access to staff members and their specialized expertise from our various office locations. Our dedication to client service includes your best interests, building a relationship as your trusted advisor, and doing whatever it takes to meet your schedule. All in all, cultivating relationships to deliver exceptional results is what we do best.

In-House Instrumentation & Controls Experts. AE2S is not a controls firm that can do water system work, we specialize in water system engineering and have more than a decade of experience providing instrumentation and control services to the water industry. We have worked with nearly all the commercially available SCADA systems and understand how to integrate the intent of the design into your existing system control to maximize your success. We also have in-house electrical services to make sure that any adjustments that may be needed to incorporate this new tank will be caught and addressed to protect the electrical needs of the EDR plant.

Approach to Creative Ideas to Provide Multiple Benefits. Innovative thinking will be required to develop solutions that are customized to your exact needs and maximize the value of the efforts of this project. AE2S has a proven track record of delivering innovative, yet practical, solutions that help clients maximize their budgets. Examples include the Deer Creek Intake Project, the South Jordan Pump Station Project, the Herriman City Hamilton Well Rehabilitation, and the Quail Creek WTP Expansion Strategy. We're committed to approaching your project with this same innovative mindset to ensure you get the right solution customized for your utility and community.

AE2S is confident that we will exceed expectations for both the near-term objectives and your long-term vision for the District. We are truly excited to work with you on this project! Should you have any additional questions, please contact me at 801-331-8489 or on my cell phone at 801-889-9286.

Submitted in Service,
AE2S

Sam Fankhauser, PE
Project Manager

1. FIRM

QUALIFICATIONS

Advanced Engineering and Environmental Services, LLC (AE2S) is a specialized civil engineering firm that provides professional services and our unique brand of extreme client service to municipal, rural, and industrial clients.

Our primary service is water - meaning drinking water, wastewater, and water resources consulting, which represents over 70 percent of our business. We have 20 office locations with a staff of over 325 professionals who are experts in their field and passionate about what they do.

Established 1991 | **WATER Focused Firm** | **325+ Professionals** | **20 Offices in Upper Midwest & Rocky Mtn Region**

CULINARY STORAGE

SERVICES
- Condition Assessments
- Siting Analysis
- New/Reconditioning
- Redundancy & Resiliency
- Hydraulic Modeling
- Associated Meter/Valve Vaults
- Site Security and Access Control
- Water Quality Optimization
- Seismic Design

50k-16M Gallon Water Storage

450+ Storage Projects

CULINARY WATER

SERVICES
- Planning
- Supply
- Treatment
- Residuals Management
- Distribution
- Redundancy & Resiliency
- Hydraulic Modeling
- Optimization
- Regulatory Compliance

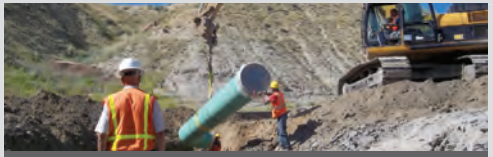
100+ WTP Design & Improvement Projects

25+ WTP Optimization Projects

CIVIL/SITE DESIGN

SERVICES
- Stormwater Management
- Site Grading
- Site Access & Security
- Pavement Design
- Landscaping
- Utility Planning
- Site Planning

75+ Large Stormwater Master Plans & Designs Within Last Decade



LARGE AND SMALL DIAMETER PIPELINES

SERVICES
- Condition Assessments
- Risk/Consequence of Failure
- Pipeline Material Selection
- Pipe Pre-Procurement
- Trenchless Installation Methods
- Pipe Replacement/Rehabilitation
- Hydraulic Modeling
- Cathodic Protection
- Pressure Management & Regulation

6" - 72" Diameter pipelines

5,000+ Miles of pipeline

ELECTRICAL

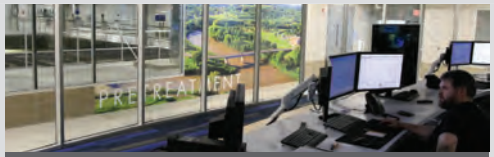
SERVICES
- Power Service
- Motor Control Centers
- Variable Frequency Drives
- Automated Valves
- Arc Flash Studies
- Harmonics Assessment
- Standby Power Generation

800+ Electrical Projects Completed

CONSTRUCTION MANAGEMENT

SERVICES
- Constructability Reviews
- Alternate Project Delivery
- Value Engineering
- Progress Meetings
- Construction Progress Reports

Construction Project CHANGE ORDERS
-1 - 2%* AVERAGE
*Industry Avg = 10%



INSTRUMENTATION AND CONTROLS (SCADA)

SERVICES
- Needs Assessments
- System Upgrade Planning and Implementation
- Design and Programming
- Hardware and Software Support
- Radio Path Analysis
- Process and Instrumentation Diagrams
- Commissioning and Startup Services

24/7/365 On-Call Support

Fast Response Times

PARTNERSHIPS

» GEOTECHNICAL
Gerhart Cole, Inc.

» SURVEY
David Evans & Associates

2. PROJECT

TEAM

Simply put, you need a team that knows their stuff and will be right by your side to guide you every step of the way. We've assembled a team of experts that are energized to work with your team and get this project completed. Sam Fankhauser, will serve as your Project Manager, and he will be supported by Nate Weisenburger who will provide QA/QC. Sam and Nate will work closely with your team and the project team to make sure the recommendations, design, and implementation serve your goals and seamlessly meet your expectation.

A snapshot of the key team members that will dig into this project is provided on the following pages. **In the interest of your time reviewing these proposals, we have provided a condensed version of each team member's experience.** If you would like to see a full resume for these team members or any members of our team, we would be more than happy to share that with you.

Sam Fankhauser, PE
Project Manager

Key Project Experience

- JVWCD 3600 West 10200 South Booster Pump Station
- SERWTP Bridging Polymer System Improvements
- Rosecrest Pump Station
- WBWCD South Pump Station

Education: Master of Business Administration, Finance, University of Nebraska, MS, Engineering, Purdue University; BS, Mechanical Engineering, Utah State University

Nate Weisenburger, PE
QA/QC

Key Project Experience

- Rocky Boy NCMRWS Water Facilities Storage
- Great Falls Storage Improvements
- WAWSA Water Storage Facilities

Education: Master of Engineering, Civil Engineering with Environmental Emphasis, University of North Dakota; BS, Civil Engineering, University of North Dakota

KEY PROJECT TEAM

Alec Bry, PE
Process Engineer

Charles Haupert, PE
Electrical/Instrumentation & Controls Engineer

Jason Whitesock
Controls Expert

Kirk Ehlke, PE
Structural Engineer

Andrew Pratt, SE
Seismic Engineer

POOL OF **325+** ADDITIONAL RESOURCES

Alec Bry, PE - Process Engineer

Key Project Experience

- WBWCD South Pump Station
- JVWCD 3600 West 10200 South Booster Pump Station
- SRWD Tank Siting Study
- SERWTP Bridging Polymer System Improvements

Education: BS, Civil Engineering, North Dakota State University

Why Alec? Alec has over 10 years of experience in planning, design, construction, and commissioning of municipal water treatment storage/ facilities and distribution projects.

Charles Haupert, PE - Electrical/Instrumentation & Controls Engineer

Key Project Experience

- WBWCD South Pump Station
- JVWCD 3600 West 10200 South Booster Pump Station
- SERWTP Bridging Polymer System Improvements

Education: BS, Electrical & Computer Engineering, University of Minnesota Duluth

Why Charles? Charles is a water, wastewater, and distribution power and controls design specialist. In addition to electrical design, he is also well versed in instrumentation and controls, and his knowledge of system operations will be a valuable resource in the development of solutions that work seamlessly with existing infrastructure and processes.

Kirk Ehlke, PE - Structural Engineer

Key Project Experience

- WBWCD South Pump Station
- JVWCD 3600 West 10200 South Booster Pump Station
- Bozeman Lyman and Sourdough Tank Condition Assessment
- Granger Hunter Accord Tank Structural Assessment
- SERWTP Bridging Polymer System Improvements

Education: MS, Civil and Environmental Engineering, SD School of Mines and Technology; BS, Civil and Environmental Engineering, SD School of Mines and Technology

Why Kirk? Kirk brings knowledge, experience, and practical solutions to structural design, and has a proven track record of ensuring his designs meet all codes, safety, and owner needs.

Andrew Pratt, SE - Seismic Engineer

Key Project Experience

- Alpine Grove Culvert, Alpine, UT
- Pleasant Grove Culverts & Open Channel, Pleasant Grove, UT
- American Fork River Diversion Structure, American Fork, UT
- Jones BLVD Open Channel, Las Vegas, NV
- Reno Spaghetti Bowl Project-Drainage Boxes, Reno, NV
- Harry Reid International Airport-Drainage Boxes, Las Vegas, NV

Education: MS, Structural Engineering, Brigham Young University; Bachelor of Science, Civil and Environmental Engineering, Brigham Young University

Why Andrew? Andrew has extensive experience designing structures in high seismic areas with unique loading requirements, specifically in the Rocky Mountain Region and West Coast.

Jason Whitesock - Controls Expert

Key Project Experience

- Magna Water District SCADA Needs Assessment
- SLCDPU Little Dell Dam Controls
- Rocky Boy's/North Central Montana Regional Water System
- Regional Water Service Phase I Pipeline, Western Area Water Supply Authority, Williston, ND

Education: Studied Industrial Technologies, University of North Dakota

Why Jason? Jason is the "go-to" guy for technical assistance for water or wastewater system controls. He knows control system technology inside and out and is ready to assist our clients in a moment's notice. He has a keen ability to analyze the situation and acute problem-solving skills.

3. PROJECT

CONSIDERATIONS

During a recent tank rehabilitation, the District discovered a need for more redundancy in the feed and finished water storage system at the Electrodialysis Reversal Water Treatment Plant (EDRWTP). There are two main problems: (1) the feed tank can only be bypassed for approximately one day, and (2) there is no way to currently bypass the finished water blending tank. Maintaining adequate storage in these systems for scheduled or emergency shutdowns will allow the District to continue treating the incoming well water and meet its contractual obligations.

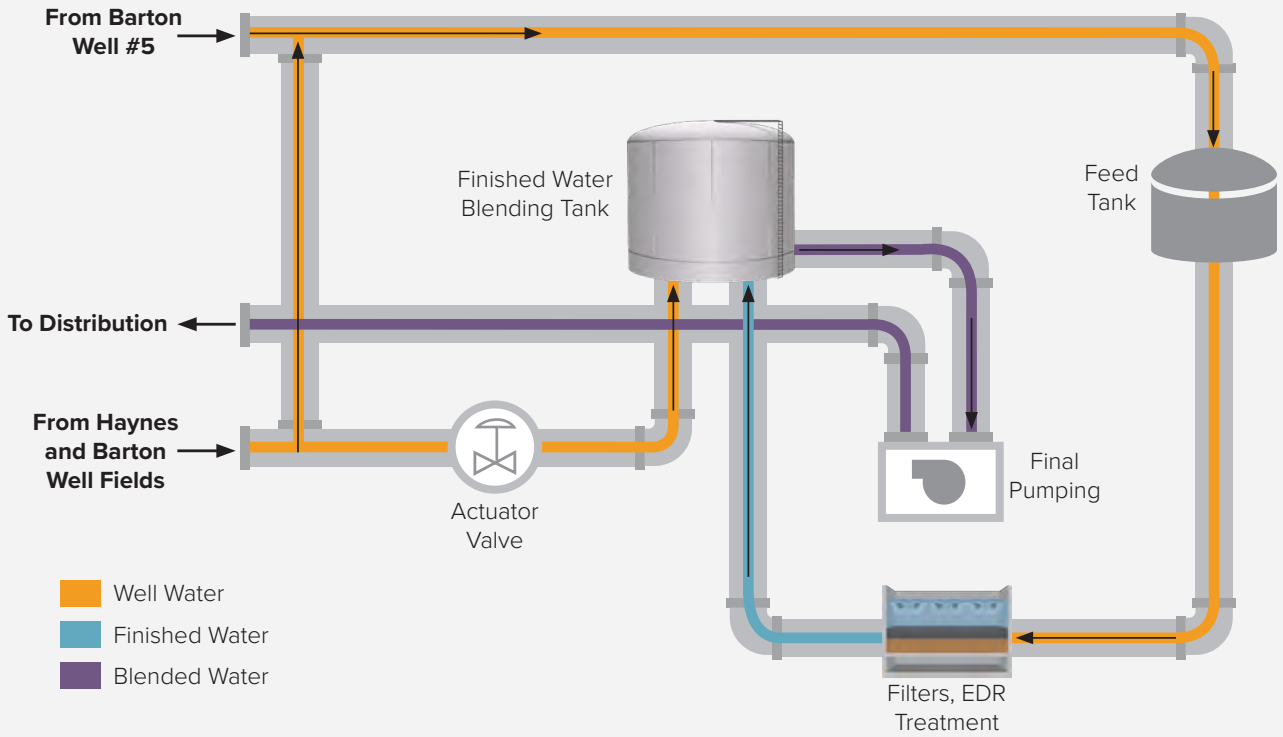
Typical water flows through the EDRWTP differ based on time of year. The following data provides an estimated range of flows, which will be important to consider as we identify appropriate solutions for redundancy:

- Winter (minimum) flows: 2-3 MGD
- Summer (maximum) flows: 7-8 MGD

Some of the incoming well water bypasses the EDRWTP. Based on our conversations with your operations team, the level in the feed tank determines the position of an actuator valve that controls the amount of water that is sent directly to the finished water blending tank instead of going through the treatment process. Barton Well #5 has its own supply line directly to the EDRWTP. This well contains high levels of perchlorate contamination and must be treated through the EDR process.

The diagram below shows the existing process flow diagram. Understanding the basic flow path provides us with a head start to help the District identify the best way to optimize your storage system redundancy and resiliency.

EXISTING PROCESS FLOW DIAGRAM



Based on our knowledge of the existing plant processes, we propose several considerations be included in the alternatives analysis of this project.

Plant Hydraulics

Whenever new equipment or processes are inserted into a system that operates on an existing hydraulic profile, a new hydraulic analysis should be performed. Tank and pipe elevations will be important to ensure proper directional flow for gravity lines and adequate net positive suction head for the final pump station to prevent cavitation in the pumps. Alec Bry has helped many of our clients ensure good plant hydraulics through head loss analysis and detailed design.

Tank Sizing & Material

In the initial stages of the project, we recommend looking closely at how much additional feed and finished blend storage the District needs. Additional storage could provide full or partial redundancy depending on factors such as expected length of shutdown periods and available capital budget. Similar to tank sizing, tank material also affects the cost of the new storage infrastructure. The existing tanks are steel, but that does not necessarily limit the District to what the new tank material should be. There are a variety of options and the material has an effect on the longevity of the tank and the frequency in which maintenance would be required.

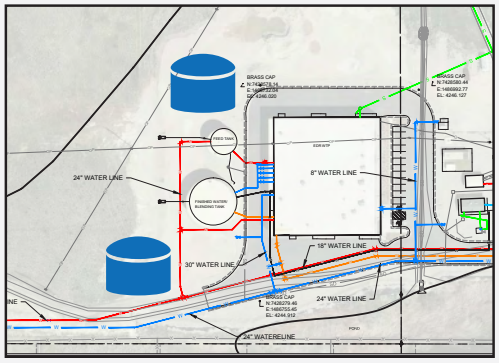
Water Quality

Related to tank sizing, the turnover time of the stored water should be considered. If new tanks are added to the process, operations should include rotation of tank usage or maintaining use of all tanks continuously. This will help avoid any water quality issues that become common in tanks that do not turnover frequently. Additionally, AE2S has significant expertise in blending of water sources and helping our clients achieve water quality targets. We recommend as part of the alternatives analysis that we discuss the existing plant water quality parameters to confirm that the storage improvements maintain the target water quality sent to the District's distribution system.

SITING CONSIDERATIONS

As tank alternative concepts are evaluated, locations for new storage facilities will be reviewed for yard piping, construction staging, maintenance, access, and other considerations.

= Potential Siting Options



Construction Sequencing

It is critical even at this stage to be thinking about the feasibility of construction for the various alternatives. Current facility operations must be maintained with minimal interruption while the new improvements are being constructed. AE2S takes pride in designing with construction in mind and will often consult with construction experts during the study phase of a project. We recommend going through a constructability exercise during the alternatives analysis. Additionally, if schedule becomes accelerated or the construction of the new facilities becomes complex, AE2S recommends the District consider the Construction Manager/General Contractor (CM/GC) procurement method. The CM/GC is typically brought into a project between the 30% to 60% stage to identify innovative means and methods of construction and provide strategies for saving money and accelerating schedule.

Process Integration

The proposed AE2S team includes electrical and controls experts to help the District decide the level of automation preferred for system operations. The existing SCADA system at the plant is robust and has the capability of monitoring tank levels, valve positions, pressures, flows, etc. in order to automatically manage flow splits. There may be items the District wishes to maintain manual operation of only. We have the right expertise and experience to help determine the right control philosophy for you specifically.

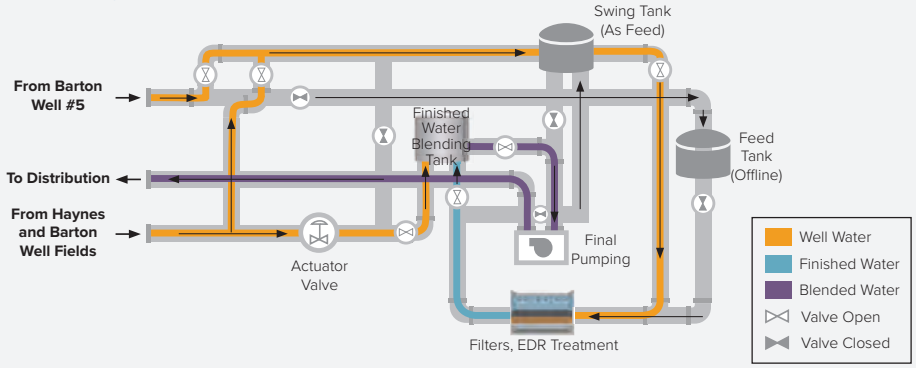
Geotechnical Analysis

For the detailed design phase of the project, we highly recommend the District obtain as much geotechnical information about soils in the proposed locations for new facilities. Tank foundations can only be properly designed with this information. Both vertical (gravity) and horizontal (seismic) loading must be considered. We have a strong seismic design team to ensure infrastructure resiliency in the event of an earthquake.

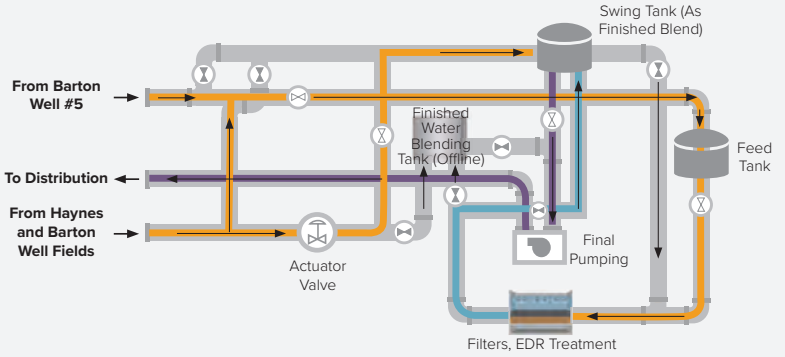
STEP 1: Assess potential vulnerabilities in redundancy. AE2S has a strong understanding of current operations at the EDR plant. We propose an on-site workshop to review schematics, test SCADA functions, and discuss challenges and strategies associated with past and potential future plant shutdowns. This process may uncover additional concerns or opportunities to address for overall function and resiliency.

STEP 2: Identify and evaluate alternatives to improve redundancy and operational reliability. AE2S has already developed three alternatives to consider in this proposal: (1) a swing tank that can serve as either a feed tank or a finished blend tank, (2) a partitioned tank that can serve as dual feed and finished blend, and (3) two new tanks, one for feed and the other for finished blend. The schematics below show these alternatives with system integration options to increase the amount of storage and reliability in case of scheduled or emergency shutdowns of the existing tanks. All options utilize existing supply for the Haynes and Barton well fields and the existing final pumping from the EDR plant to distribution.

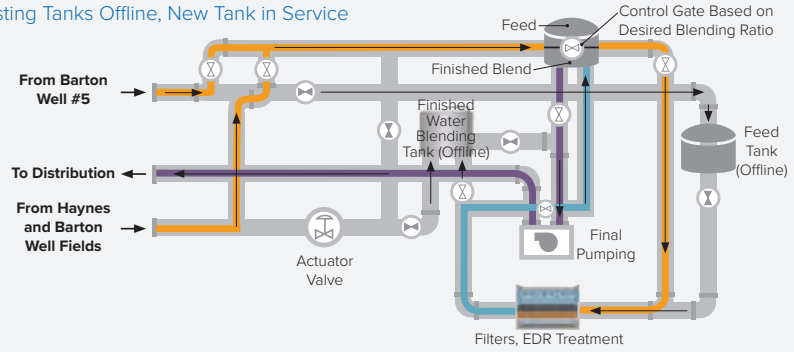
ALTERNATIVE 1 (OPERATIONAL SCENARIO A) - NEW SWING TANK (FEED OR FINISHED BLEND)
Feed Tank Configuration



ALTERNATIVE 1 (OPERATIONAL SCENARIO B) - NEW SWING TANK (FEED OR FINISHED BLEND)
Finished Blend Tank Configuration

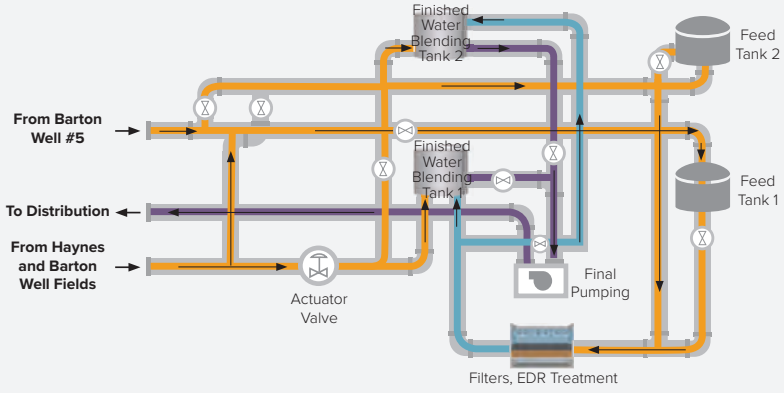


ALTERNATIVE 2 - DUAL FEED AND FINISHED BLEND TANK (PARTITIONED TANK)*
Existing Tanks Offline, New Tank in Service



**The partitioned tank could normally be operated as a feed tank or finished water blend tank to supplement existing storage volume deficiencies and operated in partition mode when necessary.*

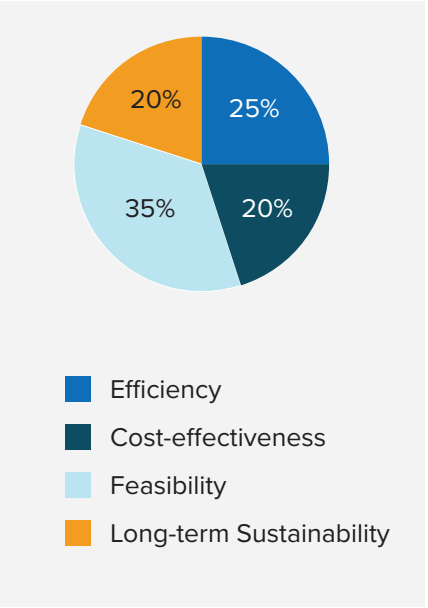
ALTERNATIVE 3 - TWO NEW TANKS
All Tanks in Service



STEP 3: Provide a comparative analysis of the proposed solutions, considering efficiency, cost-effectiveness, feasibility, and long-term sustainability.

AE2S proposes to conduct an Alternatives Analysis Workshop to discuss the importance of each of the evaluation criteria and provide an opportunity for operations staff to provide input, express concerns, and share critical information that could impact feasibility. A weight should then be assigned to each based on importance, with the cumulative weight adding up to 100%. *See the pie chart for an example.*

We will then rank each alternative on a scale of 1 to 5 (5 being the best) based on each of these four categories. Multiply the weight of each criterion by the score received, and then add the products to calculate a final score for each alternative. The overall high score represents the preferred alternative. *See the arbitrary example below.* This process provides justifiable conclusions and recommendations to present to District management and the Board of Directors in order to move forward with design and construction of the best solution to achieve redundancy and operational reliability.



		ALTERNATIVES ANALYSIS	
CRITERIA		ALTERNATIVE 1	ALTERNATIVE 2
		SCORE (1-5)	SCORE (1-5)
Efficiency	25%	1	3
Cost-effectiveness	20%	5	4
Feasibility	35%	5	2
Long-term sustainability	20%	4	5
Normalized Scores		3.80	3.25
Rank		**1**	**2**

STEP 4: Create a comprehensive report that includes a technical analysis, cost estimation, assessment of operational impacts, and an implementation schedule.

PROPOSED PROJECT SCHEDULE	
DESCRIPTION	TIMELINE
Project Kickoff & EDR Plant On-site Workshop	July 8, 2024
Alternatives Analysis Workshop	August 7, 2024
Draft Report Submittal	August 21, 2024
Receive Report Comments from District	September 4, 2024
Final Report Submittal	September 18, 2024
Detailed Design	October 2024 - April 2025
Contractor Procurement	May 2025 - June 2025
Construction	July 2025 - December 2026

5. PAST

PERFORMANCE

KEY EXPERIENCE

450+ Water Storage Projects

5,000+ Miles of Pipe

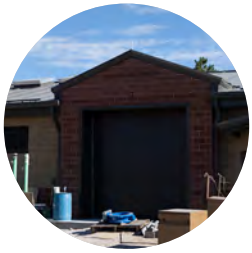
2,500+ Miles of Easements

WBWCD SOUTH PUMP STATION

CLIENT/CLIENT CONTACT
Weber Basin Water Conservancy District

Shane McFarland, PE
Engineering Manager
801-771-1677

- ✓ Overall pumping demand projections based on the various receiving reservoirs and corresponding hydraulic requirements
- ✓ Suction head analysis from 4.3 MG supply reservoir for proper placement of the facility to eliminate need for gallery level to reduce overall facility costs.



JVWCD 3600 WEST 10200 SOUTH BOOSTER PUMP STATION

CLIENT/CLIENT CONTACT
Jordan Valley Water Conservancy District

Travis Christensen
Project Manager
801-565-4300

- ✓ 51.7 MGD pump station design.
- ✓ Existing water storage tank for pump station supply.
- ✓ Hydraulic analysis, surge modeling, and flow control.

ROCKY BOY'S NCMRWS PROJECT

CLIENT/CLIENT CONTACT
Chippewa Cree Construction Corporation

Jody Hellegaard
General Manager
406-945-4343

- ✓ 3 million gallon prestressed concrete GSR.
- ✓ 80,000 - 300,000 gallon bolted steel tanks.
- ✓ Tank material based on size and application.

SRWD TANK SITING STUDY

CLIENT/CLIENT CONTACT
Snake River Water District

Scott Price
Executive Director
970-468-0328

- ✓ Utilized hydraulic modeling to assess sites with best tank performance for water age, pressures, and available fire flow rates to narrow site options.
- ✓ Analyzed multiple criteria beyond tank performance in a weighted factor analysis to rank the best sites.
- ✓ Provided opinion of probable construction costs for the first ranked tank site for 1 MG Tank volume and transmission main.

BOZEMAN LYMAN AND SOURDOUGH TANK CONDITION ASSESSMENT

CLIENT/CLIENT CONTACT
City of Bozeman

- ✓ Assessment of two concrete reservoirs, Sourdough Tank (4 MG) and Lyman Tank (5 MG).
- ✓ Condition assessment evaluation included alternatives.
- ✓ Life cycle cost analysis.

GRANGER HUNTER ACCORD TANK STRUCTURAL ASSESSMENT

CLIENT/CLIENT CONTACT
Infinity Corrosion Group

Erik Llewellyn
801-834-1159

- ✓ Structural assessment of a 2 MG steel potable water reservoir.
- ✓ Recommendations summarized structural modifications were required to extend the life of the structure.

SERWTP BRIDGING POLYMER SYSTEM IMPROVEMENTS

CLIENT/CLIENT CONTACT
Jordan Valley Water Conservancy District

Conor Tyson
Project Manager
385-236-2510

- ✓ Chemical feed system redundancy.
- ✓ Operational considerations to design.
- ✓ Alternatives analysis.
- ✓ Tank sizing and feeder rate sensitivity.
- ✓ Electrical/SCADA design.

HERRIMAN ROSECREST RESERVOIR FILL CAPACITY UPGRADES

CLIENT/CLIENT CONTACT
City of Herriman

Justun Edwards
Public Works Director
801-446-5323

- ✓ Design of an upsized reservoir fill line.
- ✓ New control scheme.
- ✓ Electronic actuated butterfly valves.

WESTERN AREA WATER SUPPLY AUTHORITY

CLIENT/CLIENT CONTACT
Western Area Water Supply Authority

Mark Owan
701-570-4581

- ✓ Seven steel, glass fused tanks totaling 9.5 million gallons.
- ✓ (4) 2 million gallon tanks.
- ✓ (2) 500,000 gallon tanks.

MAGNA WATER DISTRICT

WATER TREATMENT PLANT STORAGE TANKS PROJECT

STATEMENT OF QUALIFICATIONS MAY 2024

BOWEN COLLINS & ASSOCIATES

MAGNA WATER DISTRICT

BOWEN COLLINS & ASSOCIATES

154 EAST 14075 SOUTH • DRAPER, UTAH 84020
TEL: (801) 495-2224 • FAX: (801) 495-2225

May 2, 2024

Mr. Trevor Andra, P.E.
District Engineer
Magna Water District
8885 West 3500 South
Magna, UT 84044

Subject: Statement of Qualifications – Water Treatment Plant Storage Tanks Project

Dear Trevor:

Enclosed for your review and consideration is our Statement of Qualifications (SOQ) for the project referenced above. The following SOQ outlines our team's key personnel, key project considerations, project approach, and similar completed projects. We believe this proposal demonstrates that Bowen, Collins & Associates (BC&A) is clearly the best choice for Magna Water District (District) for this project for the following reasons.

- **Project Understanding:** BC&A recently assisted the District in developing a Water Master Plan that identifies the future service needs and necessary improvements so that the District is well prepared to provide water services to existing and future customers. The EDR Treatment Facility and water storage is a key element in meeting the future water demands. **BC&A's understanding of the District's water system including storage reservoirs will help in identifying solutions that provide the operational flexibility desired while maximizing use of existing assets.**
- **Complete In-House Local Team:** BC&A proposes a local project team of in-house professionals that provide extensive experience in three areas critical to the success of this project; water supply planning, treatment optimization, and storage tank evaluation and design**. Every member of our team has worked with the District on past projects and has established a proven and trusted relationship with District staff.**
- **Service:** Technical expertise and client responsiveness are the key to any successful project. **Our commitment to continue to provide technical expertise in a personable and responsive manner will help ensure that the project objectives are achieved effectively and efficiently.**

We would greatly appreciate the opportunity to work with you on this important project. If there are any questions, or if additional information is needed, please contact us at your first opportunity.

Best Regards
Bowen Collins & Associates

Keith Larson, P.E.
Project Manager
154 E 14075 S, Draper, UT 84020
801-495-2224
Email Contact: klarson@bowencollins.com
Website: www.bowencollins.com

1. PROJECT SPECIFIC QUALIFICATIONS

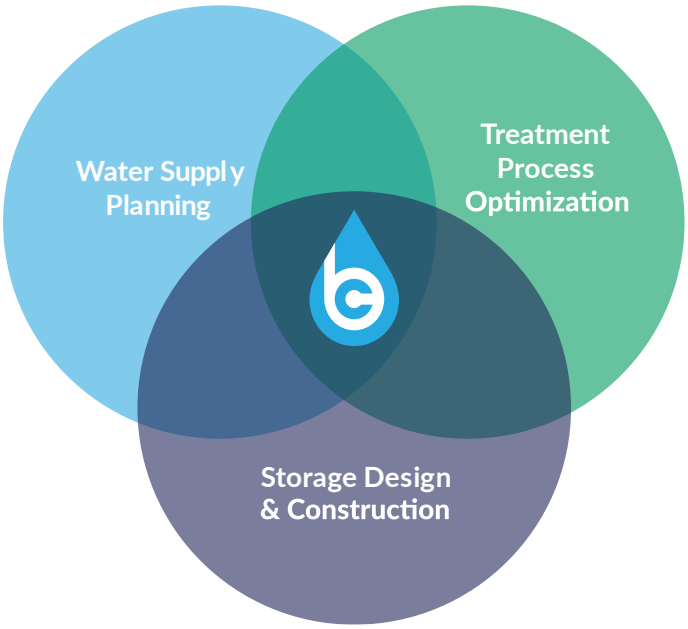
Bowen Collins & Associates (BC&A) is a local engineering firm that specializes in water and wastewater resources. Our firm is comprised of the largest staff of local water professionals in the State of Utah, including engineers and support staff with decades of experience providing planning, engineering, and construction management services for water resources projects throughout the Intermountain West.

The Magna Water District (MWD) Water Treatment Plant Storage Tanks Project is unique in that it will require technical knowledge and expertise from several different areas. In its initial phases, the most important aspect of the project will be to identify how and where additional storage should be constructed. This will require a detailed understanding of system operation and water supply planning. What purposes does this storage have? How does it interact with other storage facilities in the system? How will it be affected by growth?

In evaluating the need and optimum location for storage, it will not be adequate to look only at the delivery side of the system. It will be imperative to also understand and evaluate how operation of the EDR treatment process affects the need for storage. Could providing more storage in a specific location allow the plant to operate more steadily (i.e. without having to turn trains on and off)? How might redundancy and operational flexibility associated with operations inside the plant affect how storage is constructed and operated?

Once the planning and treatment process aspects of the project are understood, a third area of expertise is needed. A tank must be designed and constructed, and issues associated with the cost and feasibility of construction may affect decisions on how to move forward. What type of tank will best accomplish the District's goals? How might constructability affect the location of the tank? What configuration alternatives exist that would maximize flexibility and reliability of storage and treatment plant operation?

Ultimately, this project is not just a water supply planning project, a treatment process optimization project, or a storage design and construction project. It is all three. For the best project outcome, the District needs a consultant who can provide expertise in all these areas.



BC&A is just such a consultant. As will be demonstrated in the following pages, BC&A brings together the specific qualifications and experience necessary to consider all the issues associated with this project:

- ***Water Supply Planning Expertise*** - Our proposed project team members have spent a significant portion of their time working on various master plans, computer models, and storage evaluations during the last several years. Master planning efforts in the

past few years include projects for clients such as Salt Lake City, Granger-Hunter Improvement District, Kearns Improvement District, Sandy City, Murray City, and Jordan Valley Water Conservancy District. In short, no other consultant has experience with master planning efforts that affect a larger number of residents in the State of Utah than BC&A. Even more importantly, we are the same team that completed the District's most recent water master plan. We can use the knowledge we have gained to help you achieve accurate and useful results in the way that is most efficient and cost effective.

- ***Treatment Process Optimization Expertise*** - BC&A has provided engineering services for large and small wastewater and water treatment facilities throughout Utah for over 26 years. Some of our recent treatment plant experience includes the JSSD Fisher Ranch WTP, Confluence Park WRF, Manga Reuse Facility, and the St George WRF Expansion Project. Each of these projects included detailed evaluation and understanding of the various treatment processes, redundancy requirements, operational flexibly and water quality optimization. BC&A works closely with the Owners and their operations staff to understand the challenges and to develop solutions that not only exceed the regulatory requirements, but that are also easy to operate and maintain.

- ***Storage Design and Construction Expertise*** - Our tank design project manager and lead structural engineer have combined drinking water tank design experience of more than 30 tanks totaling over 290 MG in capacity, in circular, rectangular, and dual-cell configurations. We are one of very few firms that can offer complete in-house structural design of tanks of standard reinforced concrete, prestressed concrete (AWWA D110), post-tensioned concrete (AWWA D115), and welded steel varieties. In addition, we have evaluated, designed and constructed more than 35 MG in new storage at water treatment plants for Central Utah WCD, Jordan Valley WCD, and Weber Basin WCD to provide operational flexibility, redundancy, and water quality enhancement (e.g. baffling for improved C-T compliance). We will draw on our technical tank expertise to understand your objectives and to evaluate, select and recommend the best tank solution for your project.

In summary, our in-house team of professionals has the familiarity with MWD and experience on similar projects that gives us a clear understanding of your needs and objectives, and the ability to provide successful solutions.

2. PROJECT TEAM

People are the critical element to the successful completion of any project, and BC&A offers a highly experienced and personable team that is ready to go to work for MWD. Our proposed team is outlined in the organization chart. Members of the team have been selected to bring together each of the areas of expertise needed for this project to be successful.

Keith Larson, PE - Project Manager/Lead Planning Engineer. Keith Larson is our proposed project manager. Keith recently completed the water and sewer master plans for MWD and is familiar with the District's water supplies, distribution system, and operational scenarios. Keith's background knowledge will allow our team to jump right into the project as will we not need to spend time learning about how this project will fit into the bigger picture. This will ultimately save MWD both time and money.

Keith's greatest strength is in master planning and hydraulic analysis. He has served as project manager or project engineer for water, wastewater, and storm drain master planning for a large number of clients including Magna Water District, Salt Lake City, Sandy City, Park City, Provo City, Lehi City, and dozens of other cities and service districts. In each of these projects, his work has included developing system flow projections, hydraulic modeling, developing recommendations for capital improvements, asset management evaluation, cost estimates, project scheduling, and training. He has also conducted larger, regional master plans, including supply and demand or major conveyance evaluations for Metropolitan Water District of Salt Lake & Sandy, Jordan Valley WCD, Washington County WCD and Weber Basin WCD. His work on these projects has included the evaluation and optimization of supply and/or transmission facilities for some of the largest wholesale water providers in the intermountain west.

Jason Luettinger, PE – Principal in Charge. Jason Luettinger will serve as principal in charge and has completed numerous projects with MWD. This will allow Jason to bring a detailed understanding of the District's design preferences and standards to the team to ensure that this project meets expectations. Jason has over 26 years of experience with the planning, design, and construction management of large water transmission pipelines, pump stations, and treatment facilities in Utah. As project manager for the Brine Pipeline Project and Brine Pump Station Project, Jason assisted the District in separating the brine waste stream from the sanitary sewer system and conveying it directly to the WWTP to free up capacity in both the collection system and wastewater treatment facility. He has also recently served as Principal-in-Charge for a number of MWD's recent secondary waterline projects including the 8400 West Pipeline and the 2019 Secondary Waterline.

Jeff Beckman, PE – Lead Treatment Engineer. Jeff Beckman will be our lead treatment engineer and brings extensive management experience on many types of water and wastewater projects including treatment evaluation, reuse, and detailed designs. Jeff has over 26 years of experience in water treatment projects throughout the state of Utah. His broad range of experience includes master planning, treatment process evaluation and optimization, treatment plant design, reuse evaluation and design, lift station design and permitting. His project management experience includes the Moab Water Reclamation Facility Project. This recent project included planning, evaluation, permitting and design of a new $13.0 million wastewater treatment facility for the City of Moab. Jeff also served as the project manager for the St. George Water Reclamation Facility Reuse Project which allowed the City to utilize treated effluent for irrigation of a golf course, city parks, etc. The project included design and construction of 10 MGD tertiary filtration, disinfection, and pump stations.

Greg Loscher, PE – Lead Storage Tank Engineer. Greg has been included on the team to assist with understanding issues specific to storage design and construction. He has unparalleled experience in designing tanks and reservoirs and can work with MWD staff to decide which storage options are right for the District. Greg has over 24 years of experience in water resources projects, specializing in storage tank design. He has managed the design of concrete water storage tank projects ranging in size from 2 to 28 million gallons, of standard reinforced, prestressed, and post-tensioned types. Greg's professional experience also includes extensive permitting and construction management services associated with public works projects. He has managed construction projects as small as $1 million and as large as $37 million. Greg has successfully completed projects for clients including Murray City, Sandy City, West Jordan City, Highland City, Metropolitan Water District of Salt Lake & Sandy, Jordan Valley Water Conservancy District, Provo River Water Users Association, and Central Utah Water Conservancy District.

Josh Bean, PE – Project Engineer. Josh has over 12 years of experience in the civil engineering profession. His primary focus has been on water related projects. That experience includes design, bidding, and construction services for pipelines, control vaults, meter vaults, wells, spring developments, and water tanks. Highlights of his water related design, bidding, and construction services includes the Brine Pipeline Project, 8400 West Secondary Waterline Project, and 2019 Secondary Waterline projects for Magna Water District. Those projects include almost 4 miles of pipeline with multiple trenchless crossings of canals and UDOT roads.

Nate Rogers, PE – Project Engineer. Nate has experience in equipment design, project management, and construction management of water and wastewater projects for municipal and industrial applications. Nate has assisted in the design for multiple well equipping projects throughout the state and surrounding areas. He has designed chlorination disinfection systems including concentrated sodium hypochlorite solutions, calcium hypochlorite tablet and on-site hypochlorite solutions generation systems. With varying surface and ground water sources, Nate has helped to design and install treatment systems focused on TOC removal, arsenic removal, iron and manganese removal and ensuring high performance during high turbidity events.

3. KEY PROJECT SPECIFIC CONSIDERATIONS

PROJECT UNDERSTANDING

MWD owns and operates an Electrodialysis Reversal (EDR) water treatment plant. This is the primary source of culinary water in the District, normally supplying more than 85 percent of culinary water used by District customers. The EDR plant has two storage tanks - a 150,000-gallon feed tank and a 500,000-gallon finished water tank. The EDR plant is supplied by two well fields, Barton and Haynes. Water produced from the well fields merge at the EDR plant for processing and mixing.

As part of recent maintenance activities, the District desired to take the feed tank off line to make repairs. At this time, they discovered there is no way to effectively remove the tank from service while still supplying water to the EDR plant. Without the tank, water from the well field can bypass the treatment plant and be pumped directly to the system, but this creates water quality problems for the District. To address this issue and consider other potential improvements that might be made at the same time, the District is seeking assistance in evaluating potential storage improvements at the plant.

KEY ISSUES

Based on our understanding of the project, we have identified a number of key project specific considerations that will need to be addressed. Our approach to the project will be centered on understanding, evaluating, and addressing the following key issues:

Consider All Facets of this Project Including Water Supply Planning, Treatment Process Optimization, and Storage Design and Construction: As highlighted previously, this project is a challenge because it will require ***technical knowledge and expertise in several different areas.*** Any solution that fails to consider all these various aspects may result in facilities that does not meet all the District's needs. Our team has been specifically assembled to make sure we are adequate covering all these areas and can provide you with the most comprehensive solution.

Providing Maximum Flexibility and Redundancy in Operations: The primary benefit that must be achieved through this project is improved operational flexibility and redundancy. With the improvements in place, it must be possible to operate the treatment plant while servicing either one of the feed or finished water tanks. The most straight forward solution to this challenge is to build redundant storage to duplicate the function of these tanks. However, there will be more and less cost-effective ways to accomplish this. Potential solutions to be considered include:

- ***Construction of a single dual-purpose tank.*** Perhaps a new tank could be constructed so that it could be used as redundant storage for either the feed or finished water tank depending on valving. This would reduce construction costs while still providing redundancy benefits.

- ***Consideration of Dual Cells.*** As a variation of the previous alternative, our preliminary design evaluation will include consideration of the potential to divide the new storage into dual cells for added flexibility. ***Many of our past reservoirs and tanks have included independent dual-cell functionality, and we are well-versed in the structural nuances to accommodate this.***

- ***Valve and Piping Improvements Only.*** Although less likely to be successful, we will fully vet potential options to provide redundancy via valve and piping improvements. For example, we could consider changes that would allow the finished water tank to provide redundancy for the

feed water tank or vice versa. While our initial brainstorming has identified several hurdles to this type of solution, it will be important to adequately review these alternatives so that decision makers can be confident that all possibilities were considered before reaching the final recommendation.

Each of these options can be evaluated based on both cost and their ability to achieve the District's goals for flexibility and redundancy.

Considering MWD's Full Range of Storage Needs: While operational flexibility and redundancy are the primary drivers of this project, the potential for adding storage at the plant provides an opportunity to achieve other benefits. As part of the evaluation, the District should ***consider the benefits of additional volume relative to overall operation of the water system.*** Based on our experience with the District's model and master plan, we will use our knowledge of the system and current operations to evaluate these potential benefits of additional storage.

Maintaining Service During Construction. Uninterrupted water delivery during construction is essential. ***It is critical that the existing tanks stay in service continuously throughout construction.*** Our project team specializes in tank replacement projects with limited space and rigorous supply constraints. In the past few years, we completed nearly a dozen projects that required new tanks to be constructed while maintaining existing storage and supply throughout construction. We will work with the District to identify construction schedule and constraints so that both a primary and a backup plan are in place to keep the existing tanks in service.

Tank Structural System Evaluation. Various tank structure types are viable for potential improvements. These options should be evaluated to identify the most cost-efficient and operationally sound alternative. Baffling options also differ based on structural type and configuration. Available structure types and configurations include steel, reinforced concrete, post-tensioned (AWWA D115), and prestressed (AWWA D110). There are different benefits and design considerations for each of these tank systems. As you will see in our project team and experience sections, our team has designed each of these types of tanks within the last five years (without relying on a prestressed or post-tensioned tank supplier). Our experience will ***ensure that the most efficient and best structural system will be selected for this project.***

Understanding Our Role in Your Plan: As with most infrastructure projects, this project will be a significant investment in the MWD water system and is vital to the reliable operation of your system and meeting customer demands. ***As planning and design decisions are made, it is important that the design team share the same long-term perspective and project understanding as MWD staff.*** You know your system better than anyone else and understand what is needed. Our approach will be to start with detailed interviews of your staff with the goal of understanding your needs and collaboratively reaching the best solution. You provide the vision and overall desired outcomes; we work through the technical details and provide support to make that vision a reality. This perspective, understanding, and communication help ensure that your project will be successful in the near future and for years to come.

4. WORK PLAN & APPROACH TO WORK

TASK 1 - ASSESS REDUNDANCY VULNERABILITIES

Objective: To assess the current storage system for potential vulnerabilities in redundancy.

Activities:

1. Prepare for and attend a project kickoff meeting to review the project objectives and schedule, develop project and data coordination procedures, and discuss questions regarding information to be provided by the District.
2. Meet with and interview District operations and engineering personnel to review system operation and identified reliability and operational challenges. Identify and document primary concerns and goals for project of each individual.
3. Review the following information that will be provided by MWD:
   - System master plan and model
   - EDR design drawings
   - Existing storage tank and yard piping design drawings
   - Historic water production and tank level data
4. Evaluate flow records and projected demand to identify needed storage for various scenarios as identified by the project team. This might include: treatment plant disruption, off-peak pumping only, optimized treatment train operation for various flow change scenarios, etc.
5. Assemble a list of potential vulnerabilities and desired improvements for further evaluation.

Products:

1. Meetings notes summarizing interviews with District personnel.
2. Prioritized list of system vulnerabilities to be addressed in evaluation and analysis.

TASK 2 - DEVELOP SOLUTIONS TO IMPROVE EDR PLANT REDUNDANCY

Objective: Identify and evaluate multiple solutions to improve redundancy and operational reliability of the EDR plant.

Activities:

1. Using the list of system vulnerabilities, assemble a comprehensive “long” list of potential solutions. This should include:
   a. Addition of storage capacity in multiple sizes and configurations
   b. Modification to the system configuration through the addition of pipelines and valves
   c. Integration of advanced monitoring and control technologies
2. Conduct a workshop with District personnel to identify benefits, challenges, and potential fatal flaws associated with each potential solution.
3. Based on criteria established jointly with the District team, narrow the potential solutions to a list of the most promising alternatives for further evaluation.

Products:

1. Comprehensive list of potential solutions considered.
2. Short list of alternatives recommended for further evaluation.

TASK 3 – EVALUATE ALTERNATIVE SOLUTIONS

Objective: Provide a comparative analysis of the proposed solutions, considering efficiency, cost-effectiveness, feasibility, and long-term sustainability.

Activities:

1. Establish criteria for the evaluation of each alternative. This will include defining minimum performance standards and developing methodology to quantify other benefits.
2. Conduct an analysis of each alternative selected for further evaluation based on the established criteria. This will include:
    - Complete description of the alternative including necessary features and how it would function.
    - Summary of how the alternative performs relative to each minimum performance standard.
    - Summary of other operational benefits
    - Summary of potential disadvantages
    - Detailed sizing information
3. Develop cost estimates for each of the evaluated alternatives.
4. Review results with District personnel and select a recommended solution.

Products:

1. Analysis of selected alternative solutions.
2. Recommended solution for implementation.

TASK 4 – DOCUMENT RESULTS

Objective: Provide a comprehensive report to MWD upon completion of the study to document the analysis contained in Tasks 1 through 3.

Activities:

1. Prepare a draft report that summarizes the results of the study and presents the recommended solution. The report will include a summary of all technical analysis conducted, a cost estimate for recommended improvement, a detailed assessment of operational impact, and a detailed implementation schedule for completing the recommended improvements. A section will be included that discusses the Impacts of not implementing the recommended improvements to assist decision makers in understanding how to prioritize the improvements.
2. Meet with City personnel to review comments on draft report. Review will focus on ensuring the document is logical, concise, and addresses issues brought up in the process.
3. Incorporate City comments into the final report.
4. Present the results of the plan at a District Board Meeting.

Products:

1. Electronic copy of the draft report.
2. One electronic and ten hard copies of the final report.
3. One copy of a technical appendix (if any) that contains pertinent technical data used in developing the report.
4. Technical exhibits as required for the Board meeting.

5. PAST PERFORMANCE

BC&A has successfully completed many projects similar to the MWD Water Treatment Plant Storage Tanks Project. Below are several representative examples of past projects performed by our team.

WATER SUPPLY PLANNING

Water, Secondary, and Sanitary Sewer Master Plan, IFFP, and IFA – Magna Water District. Magna Water District retained Bowen Collins & Associates (BC&A) to prepare a Collection System Master Plan, Water Master Plan, and Secondary Water Master Plan along with associated IFAs and IFFPs. The purpose of the Collection System Master Plan is to identify all known future capital improvements identified in the District's collection system. This plan will include an evaluation of the District's wastewater collection system and its ability to convey wastewater from where it is generated to where it will be treated. MWD also desires to develop an updated master plan for its water system.

Salt Lake City Major Conveyance/Supply and Demand Update - Salt Lake City Department of Public Utilities. Salt Lake City has used BC&A to provide water master planning assistance for the last several decades. Most recent efforts included the completion of two separate reports – a supply and demand master plan, and a storage and conveyance master plan. The supply and demand master plan included projection of future growth and evaluation of City water use patterns and future conservation goals to determine needed supply. The storage and conveyance master plan then evaluated the City's ability to meet future demands using its existing water system. This included updating and calibrating the City's existing water system model, optimizing the location of new ground water development, and examining alternatives for future improvements to the system. As part of the project, BC&A examined water movement throughout the system to identify any inefficient flow patterns and look for opportunities to decrease energy consumption.

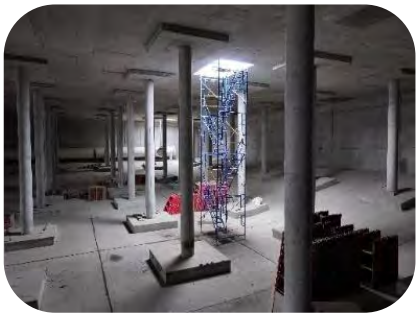
TREATMENT PROCESS OPTIMIZATION

Fisher Ranch Water Treatment Plant – Jordanelle Special Service District. BC&A provided design of a new 8 MGD (expandible to 16 MGD) water treatment plant facility in Heber, Utah. JSSD contracted with BC&A to perform the design of a new surface water treatment plant taking raw water from the Provo River, just downstream of Jordanelle Reservoir. The project included two large pumping stations, one for raw water that is 2,700 hp and the other is a 1,500 hp finished water pump station. The pump stations have specialty controls/valving and surge protection facilities. The design portion included the initial treatment evaluation study, water quality testing programs, 3 months of pilot testing, budgetary planning, preliminary design, and final design. The current phase of the project is to construct 8 MGD worth of treatment on the site using a conventional coagulation/sedimentation and filtration treatment approach. Total construction costs are estimated to be $20 million and is currently under construction.

St. George Regional Water Reclamation Facility – St. George City. This project expanded treatment capacity of the SGRWRF from 17.0 to 25.0 mgd average annual daily flowrate by converting the existing

extended aeration oxidation ditch process to a staged aeration A2O treatment process. BC&A completed a detailed evaluation of the condition and capacity of each of the existing key treatment processes to determine the most efficient method for expanding capacity. Additionally, BC&A developed a calibrated model that was used to identify an innovative design approach allowing the WRF to increase treatment capacity utilizing the existing concrete aeration basins without constructing additional basin volume. Each basin was converted to a plug flow reactor by adding baffle walls, diffused air system with high-speed blowers and process monitoring and control equipment. The project also included additional secondary clarification and solids holding basins. The improvements will allow the WRF to meet newly adopted effluent phosphorus regulations with equal or better overall treatment performance and effluent quality.

STORAGE DESIGN AND CONSTRUCTION



North Shore Terminal Reservoir – Central Utah Water Conservancy District. The District retained BC&A to design a new 15 MG storage reservoir as part of the second phase of the North Shore Terminal Reservoir. This facility provides wholesale storage for the communities of Saratoga Springs, Lehi, and Eagle Mountain. The project included evaluation and selection of reservoir structural type, design of the new reservoir, structural seismic analysis of Phases 1, 2 and future Phase 3, CFD modeling to optimize inlet and outlet configuration, yard piping, and site improvements.

Fort Douglas 3 MG Tank Project – Salt Lake City Public Utilities. BC&A designed the new Fort Douglas Tank for Salt Lake City Public Utilities. This new 3 MG tank supplements the storage capacity provided by the existing 1 MG Fort Douglas Tank to the City's East Bench High Pressure Zone. Preliminary evaluation included sizing and conceptual design of the proposed 3 MG tank based on system demands and growth, evaluation of site alternatives, and consideration of geologic conditions. Planning and design services included inspection and review of the existing 1 MG tank, constructed in 1986, and included design of seismic retrofit measures to improve the performance of the existing tank. The tank is located on Forest Service property in a high-profile area above the University of Utah and required extensive public involvement and stakeholder coordination in the preliminary design, design, and construction phases.

5 MG Weber South WTP Storage Reservoir - Weber Basin Water Conservancy District. BC&A provided design engineering services and is currently providing construction management for a new 5 MG Tank at the Weber South Water Treatment Plant. Preliminary evaluation included evaluation of site alternatives, consideration of geologic conditions, and development of a feasible plan to replace the existing 1 MG and 4.3 MG tanks and associated yard piping with two new 5 MG tanks and new yard piping while maintaining WTP service and uninterrupted delivery of finished water to the distribution system. The current phase of the project includes design of a new 5.0 MG AWWA D115 post-tensioned, rectangular concrete tank to replace the existing 1 MG tank. The project also includes design of large diameter welded steel yard piping, ranging in size from 24-inch to 48-inch, two large concrete valve vaults, an underdrain vault, a drain/pump vault, an overflow box, valves, instrumentation and controls, and a new asphalt access road.

THANK YOU

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SCADA NEEDS ASSESSMENT

TECHNICAL MEMORANDUM

To: Magna Water District

From: Sam Fankhauser, PE

Re: **SCADA Needs Assessment**

Date: May 22, 2024

Magna Water District (District) has retained AE2S to assess the need for upgrades to their Supervisory Control and Data Acquisition (SCADA) system. The District recognizes the critical importance of employing advanced SCADA systems to ensure the reliability, safety, and sustainability of its water infrastructure.

This comprehensive report serves as a roadmap for evaluating the current state of the District's SCADA system, identifying existing strengths, pinpointing areas for improvement, and outlining strategic recommendations for future enhancements. By conducting this needs assessment, we aim to empower the District with actionable insights to optimize its SCADA infrastructure, enhance operational efficiency, and better serve the community.

There are various options to consider for your SCADA upgrade. AE2S recommends the District upgrade the existing SCADA system to include new programmable logic controllers (PLC's) at each of the 24 identified locations, replace the existing radio telemetry network with a cellular network, and add each of these sites to the Inductive Automation Ignition software platform that is currently used at the Electrodialysis Reversal (EDR) water treatment plant. This approach provides the District with a reliable, resilient solution to serve the District for many years to come.

Please contact me at sam.fankhauser@ae2s.com or by phone at 801-889-9286 if you have any questions about this document.

Sam Fankhauser, PE
Project Manager

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION

This report has been compiled to gather pertinent data regarding the components and functionalities of the SCADA system overseeing and regulating water distribution systems within the District. Its purpose is to assess whether these systems meet the current and anticipated future needs of the District. Input from the District staff has been integrated to identify improvements necessary for enhancing operational efficiency. This report also evaluates the suitability of the control system in terms of technical support availability, potential upgrades, and advancements in process controls.

The estimated costs provided reflect the implementation of all the recommended SCADA improvements. It should be noted that there are likely multiple options for phasing and varying levels of improvement to consider when planning for system improvements. Note that all estimated costs presented in this report are based on current rates and prices as of 2024.

SECTION 2 - BACKGROUND

The District has asked AE2S to assess the condition and functionality of SCADA equipment and provide recommendations for improvements at the following sites:

- Wells (13 sites)
  - Barton Wells 1 through 5
  - Haynes Wells 2, 4, 7, 8, and 9
  - Irrigation Wells 1 through 3
- Storage Tanks & Reservoirs (4 sites)
  - 3500 South Tanks
  - 4100 South Tanks
  - Zone 3 Tank
  - Irrigation Zone 1 Pond
- Booster Stations (5 sites)
  - 7600 West
  - 8000 West
  - Zone 3 Culinary
  - Irrigation
  - Zone 3 Secondary
- Other Monitoring Locations (2 sites)
  - Alliant Tech East
  - Alliant Tech West

All of these sites are combined into a single SCADA application for control and monitoring utilizing the following components:

- Remote Telemetry Units (RTU's): monitor and control equipment at each remote location
- SCADA Workstation: processing center located at the EDR water treatment plant that sends/receives data to/from RTU's
- SCADA Gateway: the communication interface between the RTU's and SCADA workstation, also located at the EDR water treatment plant
- Radio Telemetry: the means by which the SCADA Gateway is able to communicate with RTU's and the SCADA workstation

2.1 Remote Telemetry Units

The RTU's are used to communicate with the SCADA Workstation via the SCADA Gateway, giving the operators remote access to controls and process without having to be onsite. The RTU's are Abbey Systems Swamp Fox type and have a 32-bit CPU to store data. The RTU can use multiple communication channels over several different media including VHF/UHF radio, line, fiber optic, cellular and IP networks. The Swamp Fox also acts as a Programmable Logic Controller (PLC) to manage the operation of equipment at each site.

Figure 2-1: Swamp Fox SF-1 (left) SF-3 (right)

There are two RTU models used throughout the District's SCADA network: SF-1 and SF-3.

- The SF-1 has 12 digital inputs, 5 digital outputs, 4 analog inputs, and 1 alarm output.
- The SF-3 has 36 digital inputs, 15 digital outputs, 12 analog inputs, and 1 alarm output.

2.2 SCADA Workstation

The SCADA workstation is located at the EDR Water Treatment Plant and consists of the following:

- A HP Z4 G4 computer running Intel® Xeon® W-2104 CPU at 3.20GHz, 8GB RAM, 64-bit operating system, and x64-based processor running on Windows 10 Pro.
- Human Machine Interface (HMI) software by Aspex from Advanced Control Systems Ltd.
- Powerlink Telemetry Server software application
- LogMeIn software that gives mobile and remote access to the workstation computer where operators can acknowledge alarms, monitors site parameters, and control equipment
- A Dial Stat auto dialer that is triggered by an alarm condition and automatically dials one or more phone numbers with alarm notification
- Swamp Fox SCADA Gateway (see next section)

2.3 SCADA Gateway

The SCADA Gateway provides a communication interface between the SCADA workstation and the radio communication system with the RTU's at each remote site. Abbey System SCADA Gateway-Topcat Variant functions as the "master RTU" that collects all the data from the remote facilities and processes decisions based on logic that has been programmed within the device.

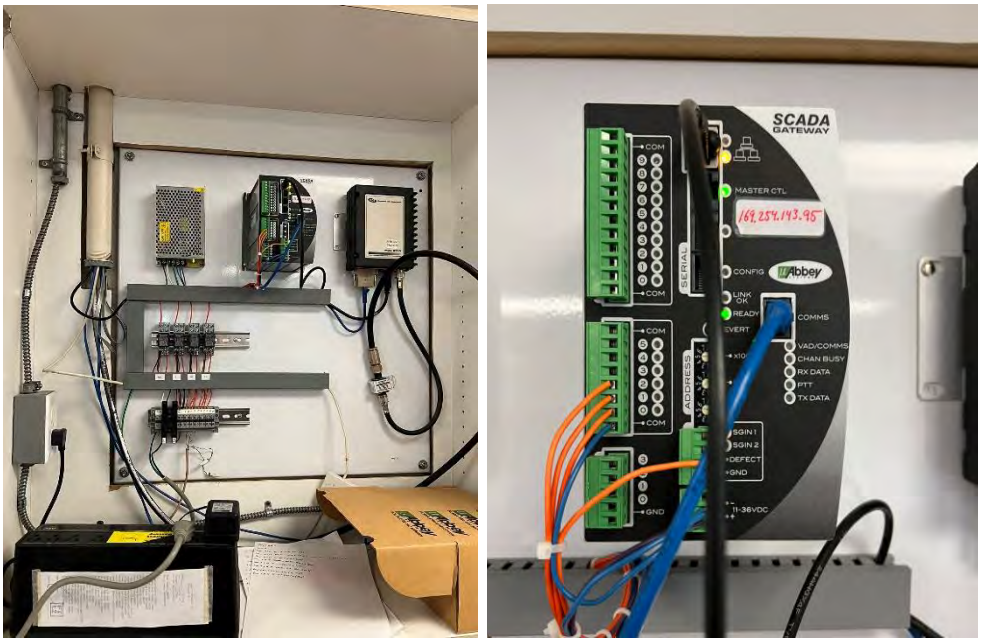

Figure 2-2: SCADA Gateway Master Controls

2.4 Radio Telemetry

Each of the remote RTU's communicates with the SCADA Gateway located at the EDR Treatment Plant using the Microwave Data Systems Inc. MDS 9710 radio transceiver and the MDS SD-9 radio transceiver. A cable runs from the transceiver to a directional antenna mounted on either the top of the building or control box.

Figure 2-3: MDS SD9 (left) MDS 9710 (right)

2.5 Site-Specific Controls

2.5.1 Wells

There are five wells surrounding the EDR plant, (Barton Wells) which are automatically activated based on plant demand. These wells are equipped with RTU's that monitor flow pressure and level.

Additionally, the five Haynes wells located approximately a mile east of the EDR plant are also set to pump automatically. Haynes well 2, 8, and 9 controls are located inside the control panel of the abandoned Haynes Booster Station. Haynes well locations 2 and 4 use a start sequence, flush to drain for 15 minutes, then send water to the plant. Well 7 has a 2-minute flush before sending to the treatment plant, and Well 8 does not have a flush sequence. The District is currently in the process of building a new well building for Well 8 that will mirror Haynes Well 4 designs.

There are 3 secondary wells (Lower Irrigation Well 1-3) that pump water to the Irrigation Zone 1 Pond. Two are automated and have remote RTU controls. The Lower Irrigation Well 3 does not have an RTU and needs to be turned on manually by an operator when demand is necessary.

2.5.2 Storage Tanks & Reservoirs

There are six storage tanks and reservoirs considered in this assessment, five culinary and one secondary.

- The 3500 South Tanks consist of two above ground steel tanks, one with 0.5 MG storage capacity and the other with 1.5 MG. Both utilize the SF-1 RTU to monitor tank level.
- The 4100 South Tanks consist of two above ground steel tanks, one with 0.5 MG storage capacity and the other with 2.5 MG. Both are connected to a single SF-1 RTU, measuring level and alarms for flood and tank entry.
- The Zone 3 tank is buried with 0.5 MG of storage capacity. It uses an SF-1 RTU on 24 VDC solar power to monitor tank level.
- The Irrigation Zone 1 Pond has a single control panel with an SF-1 RTU on solar power to monitor the reservoir level.

2.5.3 Booster Stations

There are five booster stations in total, three culinary and two secondary. The irrigation booster station is equipped with an SF-3 RTU controlling pumps, pressure, flow, and valves.

- The 7600 West Booster Station is equipped with an SF-3 RTU for pump control, pressure, level, and flow.
- The 8000 West Booster Station also has an SF-3 for pump control, pressure, level, and flow. Both 7600 West and 8000 West Booster Stations have fiber on site creating the ability for a security camera system.
- Zone 3 Booster Station (Bachus) has an 8MG underground storage tank (Bachus Tank) and utilizes an SF-3 RTU to monitor and control pumps, pressure, level, and flow.
- Zone 3 Secondary Booster Station also has an SF-3 RTU controlling pumps, pressure, level, and flow.

2.5.4 Other Monitoring Locations

The District also receives treated water from Jordan Valley Water Conservancy District, the flow from this pipeline is monitored at the Alliant Tech East monitoring house. At the east location an SF-1 monitors flow, pressure as well as waste flow. Alliant Tech West only monitors waste flow.

SECTION 3 - NEEDS ASSESSMENT

This report was necessitated by a combination of factors:

1. The obsolescence of the radio transceivers and local support for the Swamp Fox RTU system.
2. Having the ability to log data for reporting and future development.
3. Better control of water distribution and pump stations.
4. Update vulnerabilities with cybersecurity.
5. SCADA network and hardware longevity.

These factors raised concerns about the overall system reliability for the District. Over a series of site visits, AE2S was able to assess the state of the systems and speak with District staff about their needs in order to recommend improvements.

3.1 Remote Telemetry Units

The Swamp Fox RTU system was installed in 2009 and has been a reliable telemetry monitoring system. As technology advances, continuing to utilize this type of telemetry system only makes it harder to maintain and service. This system monitors the remote sites and relies on obsolete radio hardware technology that puts this monitoring at risk.

Using the Swamp Fox platform limits the data and information that the District needs to make the best decisions for future development.

Since this system is not common, there is only one company in the State of Utah that can service and repair the components. Without local or suitable service and no straightforward upgrade path for modern components, the system should be replaced.

3.2 SCADA Workstation

The computers that run the Aspex SCADA software and Powerlink Telemetry Server both run Windows 10 as their operating system. Though it has been a reliable operating system it is limited in the data collection that the District needs to assess future development. The current workstation at the EDR plant while in good working condition there are some advantages to upgrading to a new Windows 11 computer: improved performance with faster processors, more RAM, and better graphics cards, resulting in improved performance for SCADA controls.

Aspex SCADA software is still a viable software package, but it is not well supported by most local system integrators. In the best interest of local support, it would be prudent to change to software that is better supported, such as Ignition by Inductive Automation or InTouch HMI by AVEVA.

The District is currently using the LogMeIn platform to access their SCADA network. Recently multiple municipalities using the same platform have been victims of cyber-attacks. Assessing the risk associated with the current system we have identified a vulnerability that needs to be mitigated. Legacy systems and infrastructure lack necessary security updates and patches making them susceptible to exploitation by cybercriminals. We recommend implementing cybersecurity measures such as network monitoring, access control, employee training, regular software updates and contingency plans for incident response and recovery.

Dial Stat Alarm Dialer is linked to SCADA to alert operators over the phone to alarms that occur in the system. Changing settings, whether it be updating the list of alarms to be considered or updating the schedule and information for operators to be called, tends to introduce errors into the dialer. This decreases the reliability of the dialer, which is essential for quick resolution of issues that arise in the system. The operators are open to an updated version of WIN911 if it addresses these issues, but a new option with a higher degree of reliability can also be explored.

3.3 SCADA Gateway

The SCADA Gateway is a part of the Swamp Fox RTU system. The same reliability and serviceability concerns that applied to the RTU's also applies to the Gateway (see Section 3.1).

3.4 Radio Telemetry

The city uses a licensed 900 MHz radio signal and does not have any issues with the current system. However, the MDS 9710 radio transceivers used to communicate with the SCADA Gateway ares now obsolete and no longer supported. If a transceiver were to fail, the equipment would not be repaired but replaced instead with newer, fully supported radio equipment.

Hardware and network longevity are critical considerations for a SCADA system, as they directly impact the reliability, performance, and cost-effectiveness of the network infrastructure. The District currently has multiple locations with obsolete radio transceivers (MDS SD-9710) and antennas. Radio can be susceptible to interference from various sources such as electromagnetic interference, weather conditions, or physical obstructions.

3.5 Site-Specific Controls

3.5.1 Wells

The SCADA equipment for Haynes Wells 2, 8, and 9 are all located in the Haynes Booster Station. This booster station is not currently in service and could be abandoned if controls for these three wells were localized in each of their respective well houses.

The control panel enclosures for the RTU's at Lower Irrigation Wells 1 and 2 use a fan system for cooling internal components. This configuration tends to let dirt into the enclosure and potentially contaminate the electrical components inside the enclosures. An alternative solution to cooling system components could be the installation of sun shields to minimize solar gain and either filtered fans or sealed air conditioners to control temperature while preventing outside contamination. The VFDs for these irrigation wells also appear outdated and could be replaced along with surge protection and new controls. The Lower Irrigation Well 3 does not currently have an RTU and is turned on manually by an operator. We recommend this location be equipped with SCADA capability.

Figure 3-1: Lower Irrigation Well 2 Existing Control Panel Enclosure

3.5.2 Booster Stations

There are currently five booster stations throughout the Magna Water District. They are controlled with the Swamp Fox SF-3 RTU's controlling valve position, pump command, flow, level, and pressure. The booster stations provide distribution to the city of Magna. The 8000 West Booster Station provides pressurized culinary water to Zone 2. The 7600 West Booster Station pumps culinary water to Zone 3 tank 1, 2 and Bachus tank. Zone 3 booster station fills Zone 3 Tank. The Irrigation Booster Station has a high zone, pumping to 4100 South reservoir and low zone pumping to the Irrigation Pond Zone 1.

New controls systems often offer advanced features and capabilities, such as improved monitoring, automation, and remote access, which can optimize the performance of the booster stations. While there may be upfront costs associated with upgrading controls, the long-term benefits, such as improved efficiency, reliability, and reduced maintenance expenses, can result in significant cost savings over the life of the booster station.

SECTION 4 - RECOMMENDATIONS

Based on the information obtained during this needs assessment exercise, the following section details proposed updates for the District's SCADA system. All of the discussed recommendations will require remote access to the EDR plant network during the transition period to any of the proposed solutions. If remote access cannot be provided, additional on-site time will be required to accomplish the transition. Recommended SCADA upgrades include the following:

1. **Replace Swamp Fox RTU's with Allen Bradley CompactLogix PLC's**
2. **Replace radio telemetry with cellular telemetry equipment**
3. **Utilize existing Ignition software license to add visualizations, gather data, configure alarms, and generate reports for all remote locations**
4. **Upgrade cybersecurity protocols with new secure hardware and firewall service**

4.1 Programmable Logic Controllers

The Swamp Fox is often designed as a standalone unit suitable for smaller-scale applications or distributed control scenarios. It may offer limited scalability in terms of I/O (Inputs/Outputs) expansion or integration with other control systems. The Swamp Fox also limits the capabilities for automatic generated reporting and historical data.

The Allen Bradley CompactLogix PLC comes in various models with different I/O capacities, allowing for scalability to accommodate a wide range of applications. Additionally, they can be

integrated into larger control systems using communication networks such as Ethernet/IP or DeviceNet, enabling seamless data exchange with other PLC's and devices.

Upgrading from the Swamp Fox RTU to a PLC will offer a highly programmable device allowing to customize and adapt functionality to specific requirements that enables the implementation of complex control logic, sequence operations, and integration with various sensors, actuators, and other devices. PLC's provide robust diagnostic and troubleshooting capabilities, including real-time monitoring of I/O status, alarm notifications, fault detection, and historical data logging.

4.2 Cellular Telemetry

Multiple locations are using the MDS-9710 radio system. This model is no longer available and obsolete. Newer radio systems may offer additional features and functionalities that are not available in older systems. Allowing more simultaneous connections, higher throughput, and better scalability to support growing demand for data transmission. Upgrading to a newer radio system can help future-proof the network infrastructure by ensuring compatibility with emerging technologies and standards.

However, AE2S recommends the District consider using cellular telemetry instead of radio. Implementing a cellular network can utilize cellular technologies such as 4 GLTE or 5G offering wide coverage and reliable connectivity. Cellular signal is strong at all locations, well above the minimum required strength of -114 dB (see Appendis A). A cellular network allows a higher throughput of data than radio, which offers the District enhanced capabilities for remote monitoring and control and management of its water distribution and infrastructure. Upgrading from a radio-based telemetry network to a cellular-based telemetry network offers several compelling advantages, primarily revolving around enhanced reliability, scalability, security, and flexibility.

Cellular networks can also provide a more stable and consistent communication infrastructure compared to radio. Radio signals can be susceptible to interference from various sources such as weather conditions, geographical obstacles, and other electronic devices. Cellular facilitate remote management and monitoring of devices without the need for physical access to each node. Operators can remotely configure and troubleshoot devices over the cellular network.

It is recommended that the District transition the remote sites to cellular telemetry. Cellular equipment is less expensive than radios and remote access can allow for faster service and less need for on-site service visits. The current radio system is obsolete and no longer supported by equipment suppliers. The telemetry equipment requires replacement and we believe cellular technology is superior to what radio can provide you. The following sections provide a more detailed comparison between radio and cellular telemetry.

4.2.1 Radio

Benefits:

- Longer range less likely for interference.
- Typically, does better without line of sight.

Drawbacks:

- Low speeds.
- More upfront capital cost than cellular.
- Range limitations
- Data rate limitations.

Security:

- Radio communication can be vulnerable to interception or jamming if not properly secured.
- Encryption and other security measures need to be implemented to ensure the security of data transmission.

4.2.2 Cellular

Benefits:

- Generally fast and efficient to implement.
- High bandwidth capabilities on reliable networks (that can't afford downtime).
- Less limitations on location.
- Eliminates single points of failure for all sites or a group of sites.
- Sites can be converted to Ethernet without affecting the current Serial Radio network, allowing for the transition to take place over a longer period of time.
- Enables remote service for sites.

Drawbacks:

- Private network, rely on others to repair.
- Monthly fees.
- Generally, more IT intensive for secure connection to SCADA/network.

Security:

- Cellular networks typically offer better security features such as encryption and authentication protocols. However, they are not immune to security threats, and vulnerabilities in cellular networks have been exploited in the past.

4.3 SCADA Software Platform

The District currently uses the software platform Inductive Automation Ignition (Ignition) at the EDR water treatment plant. Leveraging the existing Ignition infrastructure, we propose the development of a new SCADA interface tailored to the District's specific needs. This will give the operator enhanced capabilities including comprehensive data logging, advanced reporting, and remote monitoring from any mobile phone or PC. Using the existing Ignition license, the District stands to realize significant cost savings, eliminating the necessity of acquiring a new software platform.

All the data inside and outside of the EDR treatment plant is monitored and controlled by the Magna Water District operators. Therefore, the systems at the EDR water treatment plant should be the most robust and reliable systems available. To improve reliability and sustainability, redundant systems and system independence should be implemented so that an outage of one system does not interfere with the operations of another.

The SCADA System should consist of a server computer and client workstations. The server would collect data from all the PLCs in the system. The server should also have a historian database that stores all the process data for trending and data queries. Historians should make regular backups to ensure longevity of the data.

Redundancy of the server with automated failover is recommended to reduce downtime of operations in case of computer failure. Redundancy can be achieved on many levels, such as a backup server, redundant power supplies, redundant hard drives, and automated backups to the Cloud.

4.4 Cybersecurity

Cybersecurity continues to be an important component to SCADA systems for water providers. Several attempts at cyberattacks are made daily, and water systems should be prepared to protect and prevent a breach of security. The following list contains three simple upgrades the District can perform to increase cybersecurity protections:

- Replace existing VPN Router with Cisco ASA or Forti-Gate hardware.
- Configure new hardware for remote access.
- Setup security with Firewall service, other security protocols

4.5 Additional Considerations

4.5.1 Signal Fire Ranger

Three sites in the District's system were identified as locations with minimal I/O points where the existing Swamp Fox RTU's could potentially be replaced with Signal Fire Rangers instead of Allen Bradley CompactLogix PLC's. The three sites are:

- Irrigation Zone 1 Pond
- Alliant Tech East
- Alliant Tech West

The Ranger can run off a single battery lasting up to 5 years as a standalone device. It can also run off solar power or 110vac power. As a standalone device, no cellular or radio modem would be needed at these locations. The Ranger has the capability of analog inputs and outputs as well as digital inputs and outputs.

The Ranger Node utilizes cellular communication technology to transmit data over long distances. It can be configured with different types and numbers of input and output channels, enabling monitoring and control of various sensors, meters, actuators, and equipment. Compatible with industry standard communication protocols and interfaces, Modbus, DNP3, OPC and others.

You will need a cellular data plan from a mobile network or cellular service provider, but the cost of installation and maintenance as well as the size of footprint associated with traditional PLC setups are reduced significantly with use of the Ranger units.

4.5.2 Control Panels

Sometimes a new control panel enclosure is less expensive to construct and install than retrofitting an existing control panel. This decision is typically left up to the discretion of the owner or equipment supplier/contractor, based on what is most cost-effective. During the needs assessment exercise, six sites were identified as potential candidates for a new control panel based on condition:

- Lower Irrigation Wells 1 and 2
- 3500 South and 4100 South Tanks
- Alliant Tech East and West

There are four sites identified where AE2S strongly recommends SCADA control panels be built where they currently do not exist:

- Haynes Wells 2, 8, and 9 (currently monitored at Haynes Booster Station, consider demolishing or abandoning this station and moving controls for these three wells into their respective well houses)
- Lower Irrigation Well 3 (currently not being monitored)

Currently, the Lower Irrigation Zone Well 1, 2, and 3 pump controls are using an air cooled enclosure. A fan on the outside pulls air into the panel from the outside. This introduces dirt and contaminants affecting the VFD and controls inside the enclosure. We recommend replacing the entire control panel and controls.

Replacing the existing enclosure with an updated control panel to provide sun shields, sealed climate control, improved surge protection that will protect the internal controls and VFD. The enclosure will be rated UL Type 3R to 4X depending on the client's preference to protect against corrosion, dust penetration, and UV radiation from sunlight.

4.5.3 Engineering Workstation

While the current computer is in good working order at the EDR water treatment plant, upgrading to a Windows 11 based platform can improve security, performance, and user experience while also ensuring long-term support and compliance with industry standards. AE2S recommends the District update the existing SCADA Workstation.

4.6 Site-by-Site Analysis

A comprehensive analysis of each site is included in the document in Appendix A.

SECTION 5 - IMPLEMENTATION

Modern SCADA systems with advanced data analytics and decision support capabilities allow operators the ability to analyze large volumes of operational data, identify trends, predict system behavior, and make informed decisions. These features enable proactive maintenance, optimization of processes, and efficient resource management.

The recommended upgrades allow for scalability and flexibility to accommodate growing needs and emerging technologies. With the growing threat of cyber criminals, upgrading will allow the District to implement features and protocols to protect against cyber threats such as malware, ransomware, and hacking attacks. With the increasing digitization and interconnectedness of SCADA systems, ensuring robust cybersecurity measures is essential to safeguard critical infrastructure and prevent unauthorized access or manipulation of sensitive data.

5.1 Opinion of Probable Cost

To summarize the detailed analysis in Section 4 and Appendix A, AE2S recommends the District implement the following SCADA upgrades:

1. Install Allen Bradley CompactLogix PLC's with associated cellular telemetry equipment at all listed culinary and secondary wells and booster stations as well as at culinary water tanks (3500 South, 4100 South, and Zone 3).
2. Install Signal Fire Ranger telemetry at the Irrigation Zone 1 Pond and Alliance Tech East and West sites.
3. Equipment will be installed in existing control panel enclosures, with the exception of the following locations where new enclosures are recommended. Note: we may discover the need for additional panel replacements in future phases of the project.
    a. Haynes Wells 2, 8, and 9
    b. Lower Irrigation Wells 1, 2, and 3
    c. 3500 South and 4100 South Tanks
    d. Alliant Tech East and West
4. Program monitoring and control schemes and develop SCADA screens for each remote site in the existing Ignition software platform used at the EDR plant. Upgrade the SCADA Workstation at the plant with more robust cybersecurity protocols.

The following list provides the initial capital investment cost estimates for design, bidding, equipment installation, and programming and commissioning of the new facilities. AE2S would be responsible for all phases except for installation & equipment. Design, bidding assistance, and programming and startup efforts from AE2S represent an estimated number of hours to perform to work. The installation costs are estimated contractor costs with contingencies that would be refined as the design phase progresses.

- Design: $140,500
- Bidding Assistance: $12,500
- Programming & Startup: $198,500
- Installation & Equipment: $309,000
- **TOTAL: $660,500**

The estimated monthly fee for cellular is $15.00 per site. Any location that currently has an Enternet connection will not need a cell modem. There should be no additional cost to bring the remote sites into the existing SCADA platform at the EDR plant under the existing license. On-going support can be provided by AE2S at standard hourly rates.

6.2 Preliminary Schedule

AE2S proposes the District begin the design process as soon as possible. The duration of each critical project phase is outlined below. We recommend the design include plans and specifications with detailed description of the work to be performed at each site, followed by a competitive bidding phase for electrical contractors to submit qualifications of similar completed projects as well as pricing for installation of all new equipment. AE2S will work with the selected contractor by performing SCADA programming and commissioning the new SCADA system. AE2S technicians will also provide training to District staff on how to navigate SCADA screens and operate the new system.

- Design: 12 weeks
- Bidding: 4 weeks
- Equipment
    - Procurement: 12 weeks
    - Installation: 16 weeks
- Programming, Commissioning, & Training: 4 weeks

If the District decides to move forward with the SCADA upgrades design in July 2024, the new SCADA system is estimated to be operational by July 2025.

APPENDIX A – DETAILED SITE ANALYSIS

A.1 Barton Well 1

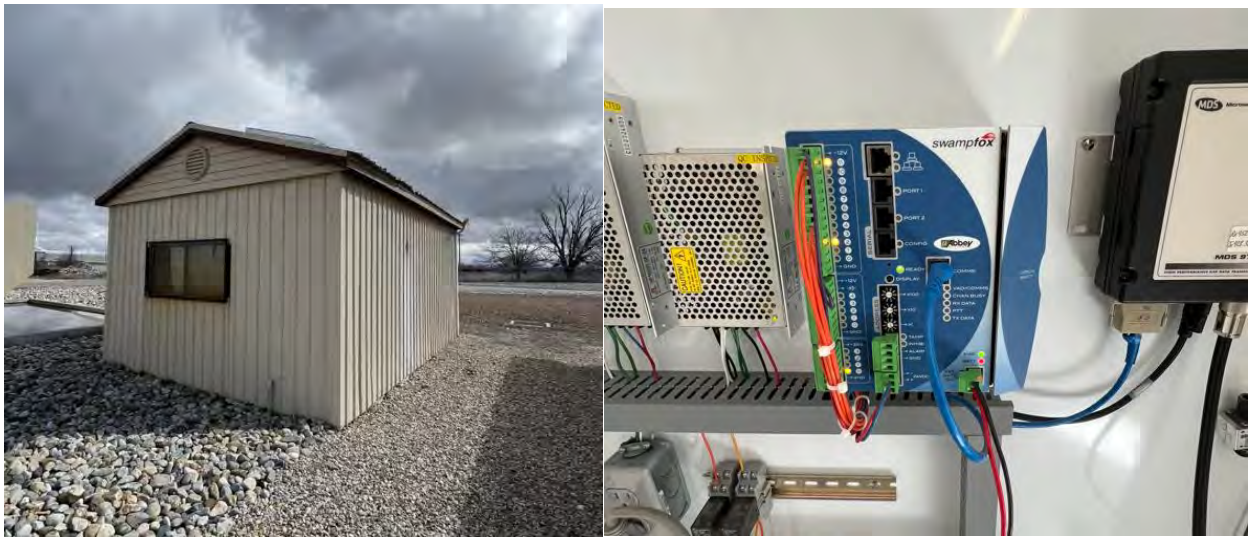

Figure A-1: Barton Well 1

Table A-1: Existing Barton Well 1 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-31dB

SCADA Evaluation

SF-1 controls are used to pump well water into the EDR treatment plant. The well pump turns on and off according to the treatment plant tank level. Flow, pressure, and tank level are monitored.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.2 Barton Well 2

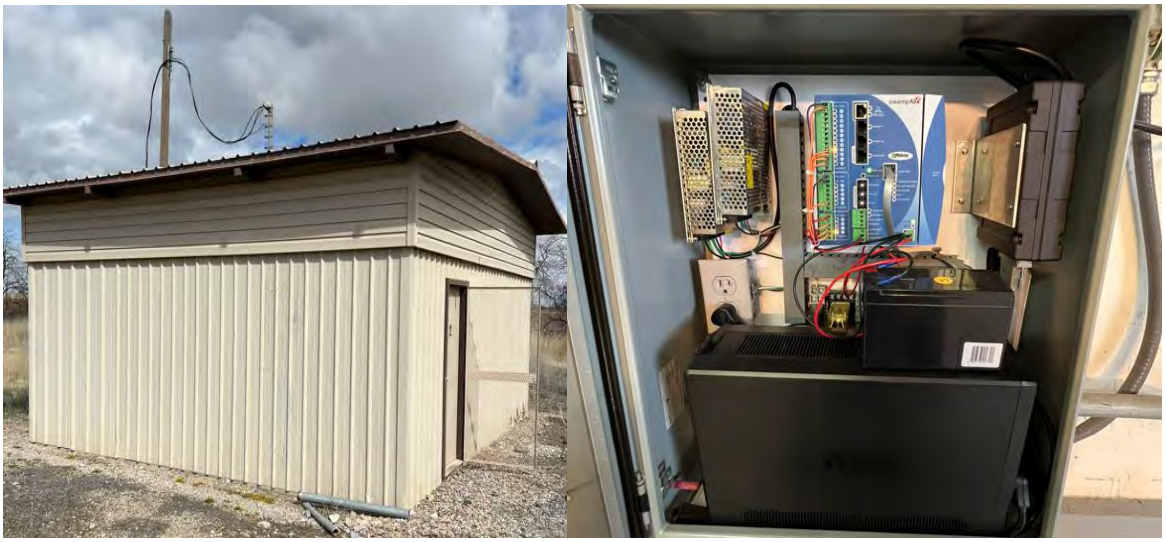

Figure A-2: Barton Well 2

Table A-2: Existing Barton Well 2 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-302dB

SCADA Evaluation

SF-1 controls are used to pump well water into the EDR treatment plant. The well pump turns on and off according to the treatment plant tank level. Flow, pressure, and tank level are monitored.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.3 Barton Well 3

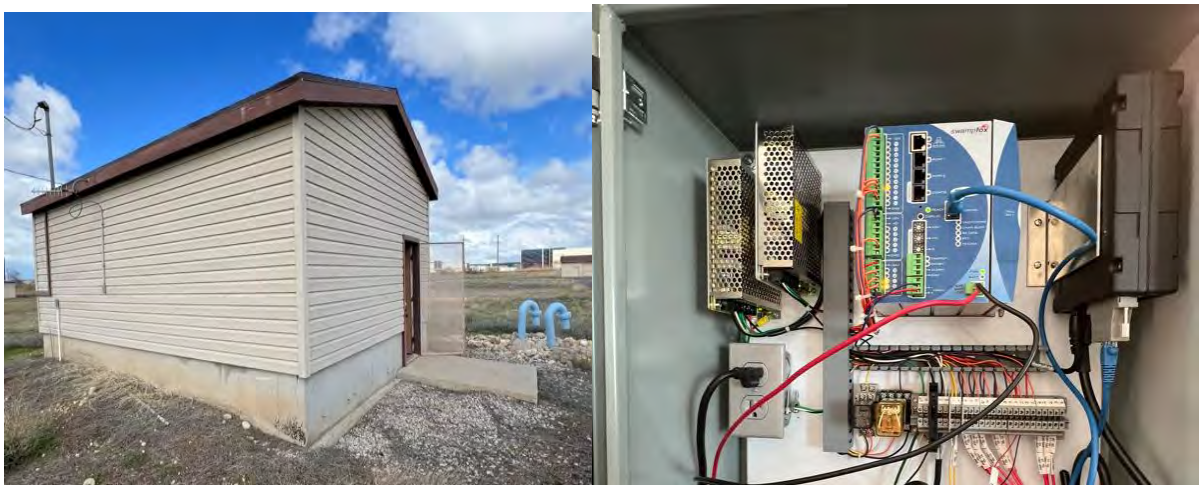

Figure A-3: Barton Well 3

Table A-3: Existing Barton Well 3 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-31dB

SCADA Evaluation

SF-1 controls are used to pump well water into the EDR treatment plant. The well pump turns on and off according to the treatment plant tank level. Flow, pressure, and tank level are monitored.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.4 Barton Well 4

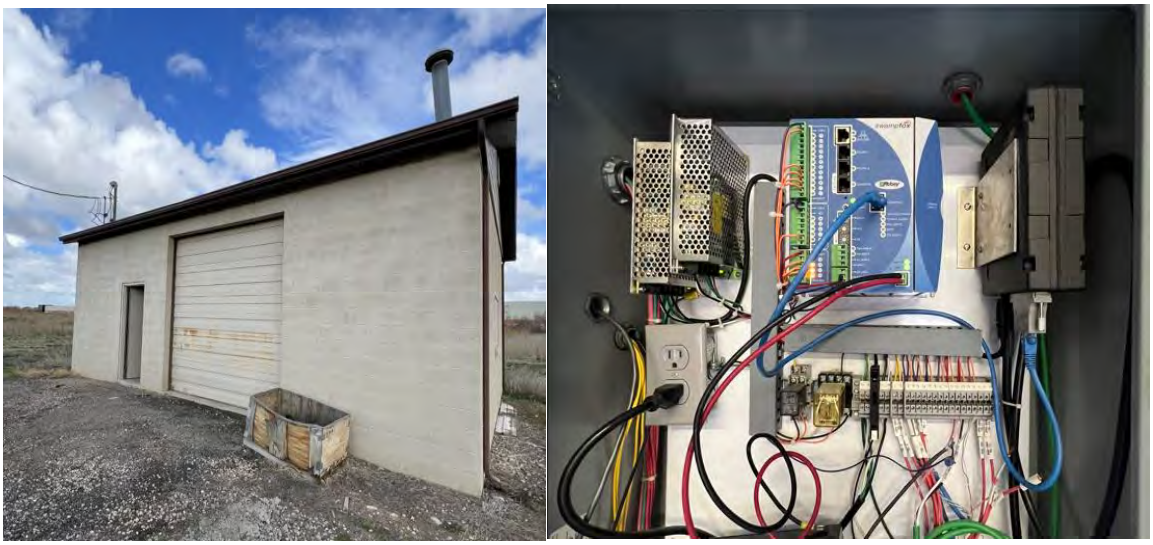

Figure A-4: Barton Well 4

Table A-4: Existing Barton Well 4 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-31dB

SCADA Evaluation

SF-1 controls are used to pump well water into the EDR treatment plant. The well pump turns on and off according to the treatment plant tank level. Flow, pressure, and tank level are monitored.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.5 Barton Well 5

Figure A-5: Barton Well 5

Table A-5: Existing Barton Well 5 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-31dB

SCADA Evaluation

SF-1 controls are used to pump well water into the EDR treatment plant. The well pump turns on and off according to the treatment plant tank level. Flow, pressure, and tank level are monitored.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.6 Haynes Well 2

Figure A-6: Haynes Well 2 (RTU located at Haynes Booster Station)

Table A-6: Existing Haynes Well 2 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	Mitsubishi FR-F840	MDS 9710	-18dB

SCADA Evaluation

Haynes Well 2 pumps ground water to the EDR plant. The Swamp Fox SF-3 RTU is located 100 yd east of Haynes 2 in the abandoned Haynes Booster Station building inside the control panel. Haynes Well 2, is called to pump when the EDR plant tank levels are low.

SCADA Upgrade Recommendations

There are two options:

1. Install a new control panel inside Haynes Well 2 well house with Allend Bradley PLC, cell modem, and antenna (recommended).
2. Replace SF-3 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna in the existing control panel at the Haynes Booster Station.

A.7 Haynes Well 4

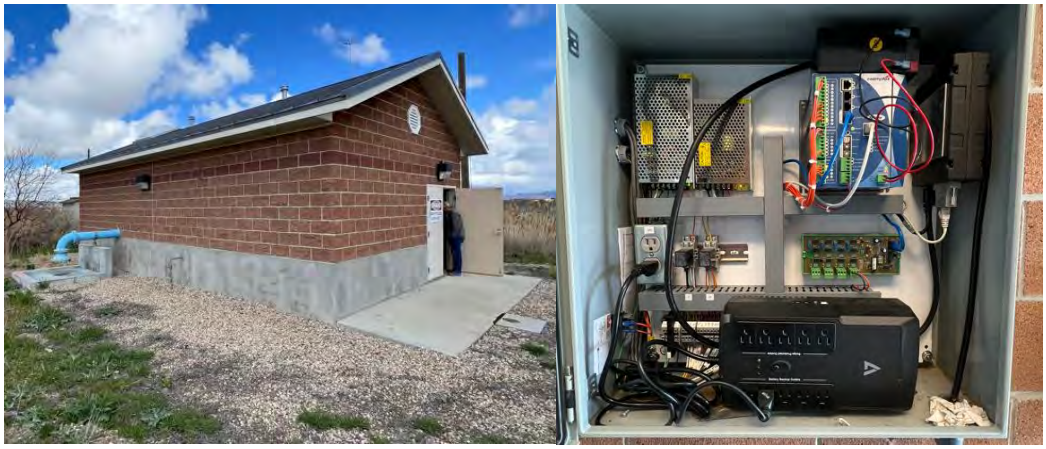

Figure A-7: Haynes Well 4

Table A-7: Existing Haynes Well 4 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-11dB

SCADA Evaluation

Haynes 4 pumps well water to the EDR plant when the tank levels demand it. There is a valve sequence when called to flush to drain for 15 minutes before sending water to the EDR plant.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.8 Haynes Well 7

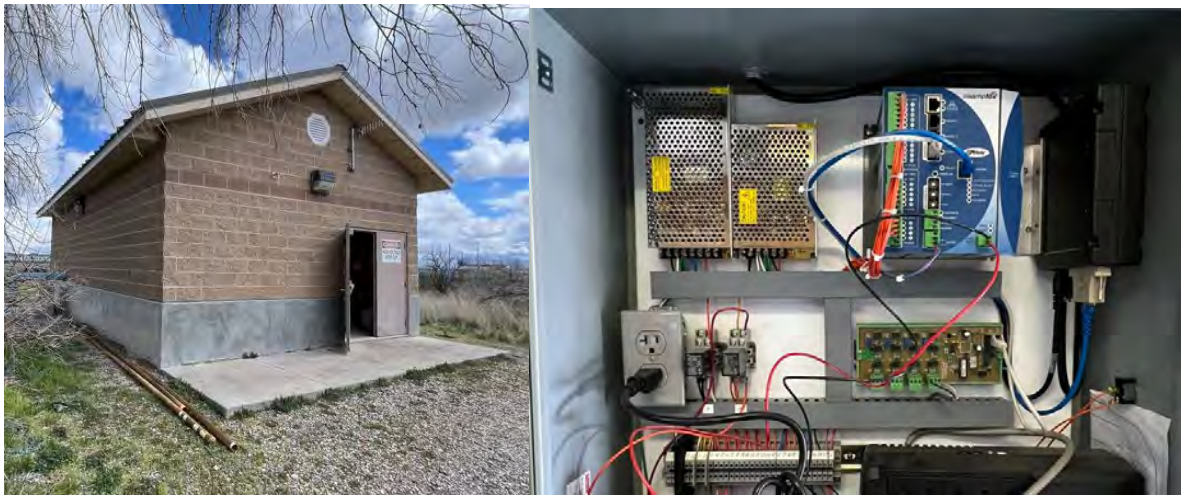

Figure A-8: Haynes Well 7

Table A-8: Existing Haynes Well 7 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	Mitsubishi FR-F840	MDS 9710	-14dB

SCADA Evaluation

Haynes well 7 has the Swamp Fox SF-1 RTU, called to pump when the EDR plant levels are low. Currently the District is doing preventative maintenance on the well pump motor.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.9 Haynes Wells 8

Figure A-9: Haynes Well 8 (RTU located at Haynes Booster Station)

Table A-9: Existing Haynes Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	Mitsubishi FR-F840	MDS 9710	-14dB

SCADA Evaluation

The Haynes Booster station has been decommissioned and abandoned. The control panel inside of the booster station controls wells 2, 8, & 9. The District is currently in the process of building a new well house for well 8, the design and controls will mirror Haynes Well 4.

SCADA Upgrade Recommendations

There are two options:

1. Install a new control panel inside Haynes Well 8 well house with Allend Bradley PLC, cell modem, and antenna (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna in the existing control panel at the Haynes Booster Station.

A.10 Haynes Well 9

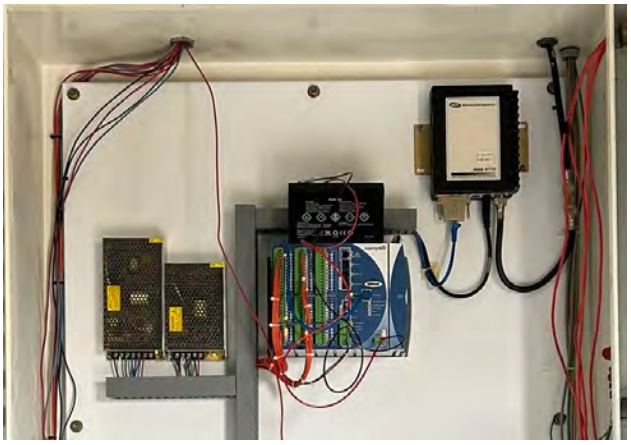

Figure A-10: Haynes Well 9 (RTU located at Haynes Booster Station)

Table A-10: Existing Haynes Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	Mitsubishi FR-F840	MDS 9710	-14dB

SCADA Evaluation

The Haynes Booster station has been decommissioned and abandoned. The control panel inside of the booster station controls wells 2, 8, & 9. The District is currently in the process of building a new well house for well 9, the design and controls will mirror Haynes Well 4.

SCADA Upgrade Recommendations

There are two options:

1. Install a new control panel inside Haynes Well 9 well house with Allend Bradley PLC, cell modem, and antenna (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna in the existing control panel at the Haynes Booster Station.

A.11 Lower Irrigation Well 1

Figure A-11: Lower Irrigation 1

Table A-11: Existing Lower Irrigation 1 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	GE FUJI AF-300	MDS 9710	-12dB

SCADA Evaluation

The lower irrigation well 1 pumps ground water to the irrigation pond zone 1 when the level is low. A Swamp Fox SF-1 run command pressure and flow.

SCADA Upgrade Recommendations

There are two options:

1. Replace control panel enclosure, and components with new control panel enclosure, VFD, PLC and other components (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna (keep existing control panel enclosure, VFD, and other components).

A.12 Lower Irrigation Well 2


Figure A-12: Lower Irrigation 2

Table A-12: Existing Lower Irrigation 2 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	EQ7-2100-C	MDS 9710	-11dB

SCADA Evaluation

Lower Irrigation 2 pumps ground water to the Irrigation Zone 1 pond when the level is low. The Swamp Fox SF-1 through SCADA turns the pump on and off, measuring pressure and flow.

SCADA Upgrade Recommendations

There are two options:

1. Replace control panel enclosure, and components with new control panel enclosure, VFD, PLC and other components (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna (keep existing control panel enclosure, VFD, and other components).

A.13 Lower Irrigation Well 3

Figure A-13: Lower Irrigation 3

Table A-13: Existing Lower Irrigation 3 Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength (outside)
N/A	Galt 200V	N/A	-11dB

SCADA Evaluation

Lower Irrigation 3 pumps ground water to Irrigation Zone 1 pond. Currently a District worker must manually turn the pump on and off as needed.

SCADA Upgrade Recommendations

There are two options:

1. Replace control panel enclosure, and components with new control panel enclosure, VFD, PLC and other components (recommended).
2. Install new Allen Bradley PLC, cell modem, and antenna in existing control panel.

A.14 3500 South Tanks

Figure A-14: 3500 South Tanks

Table A-14: Existing 3500 South Tank Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS 9710	-12dB

SCADA Evaluation

The tanks at 3500 South hold culinary water produced from the EDR plant. It then gravity feeds the distribution for Zone 1. One digital input measures the level for both tanks, maintaining the level through SCADA.

SCADA Upgrade Recommendations

There are two options:

1. Replace control panel enclosure with new Allen Bradley PLC, cell modem, and antenna (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna in the existing control panel.

A.15 4100 South Tanks


Figure A-15: 4100 South Tanks

Table A-15: Existing 4100 South Tank Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS 9710	-12dB

SCADA Evaluation

4100 South Tanks 1 and 2 hold culinary water from the EDR plant distributing water to Zone 2. The SF-1 RTU monitors level for tank 1 and tank 2, has flood alarm and entry switch.

SCADA Upgrade Recommendations

There are two options:

1. Replace control panel enclosure with new Allen Bradley PLC, cell modem, and antenna (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna in the existing control panle.

A.16 Zone 3 Tank

Figure A-16: Zone 3 Tank

Table A-16: Existing Zone 3 Tank Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS SD9	-31dB

SCADA Evaluation

Zone 3 0.5MG tank is the highest in elevation in the distribution system. Zone 3 booster station pumps water filling the tank. The 24vdc solar powered Swamp Fox SF-1 controls valves, level and flow to gravity feed the system.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.17 Irrigation Zone 1 Pond

Figure A-17: Irrigation Zone 1 Pond

Table A-17: Existing Irrigation Zone 1 Pond Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS 9710	-21dB

SCADA Evaluation

The lower irrigation pond is a reservoir filled by the irrigation pump station low zone as well as the lower irrigation 1, 2, and 3. A 24 VDC solar powered Swamp Fox SF-1 measures and communicates the level of the reservoir to SCADA calling pumps on and off.

SCADA Upgrade Recommendations

There are two options:

1. Replace SF-1 RTU, MDS 9710 radio and antenna with Signal Fire Ranger (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna

A.18 7600 West Booster Station

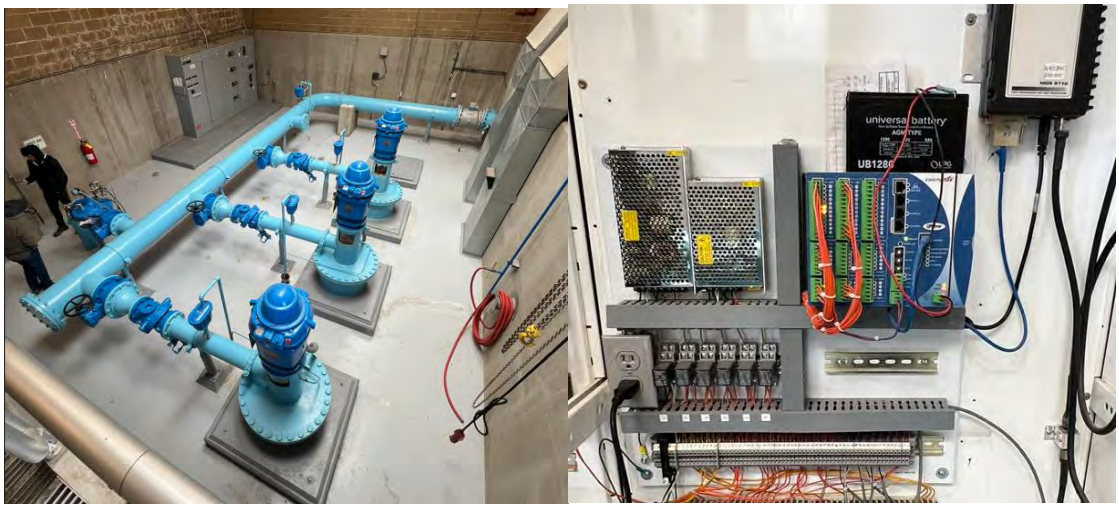

Figure A-18: 7600 West Booster Station

Table A-18: Existing 7600 West Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	3-Soft Starts	MDS 9710	-11dB

SCADA Evaluation

7600 West Booster Station pumps culinary water from an underground 5MG tank to tanks 4100 South and Zone 3 Tank. The SF-3 controls three pumps, line pressure, tank level, valve position, flood alarm, and flow through SCADA.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.19 8000 West Booster Station

Figure A-19: 8000 West Booster Station

Table A-19: Existing 8000 West Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	2 Soft Starts	MDS SD-9	-12dB*

SCADA Evaluation

The 8000 West Booster Station was built in 2018. It pumps pressurized culinary water from EDR treatment plant to Zone 2 as well as 3500 South tanks. The SF-3 controls two pumps, inlet and outlet pressure, and flow.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.20 Zone 3 Booster Station

Figure A-20: Zone 3 0.5 MG Tank

Table A-20: Existing Zone 3 0.5 MG Tank Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	2- Eaton	MDS SD9	-21dB

SCADA Evaluation

Zone 3 Booster Station and 8MG Bachus Tank hold culinary water pumped from the 7600 West W booster station. From there the booster station pumps to Zone 3 0.5MG Tank. The Swamp Fox SF-3 controls two pumps, level, pressure, and flow. As well as 4 analog outputs 4100 South Tank meter Zone 3 Tank Meter VFD 1 control and VFD 2 control.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.21 Irrigation Booster Station

Figure A-21: Irrigation Booster Station

Table A-21: Existing Irrigation Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	Yaskawa F7 WEG CFW-11 WEG-CFW700 Yaskawa F7 WEG-CF700 WEG-CF700	MDS 9710	-10dB

SCADA Evaluation

The irrigation booster station pumps water from the canal next to the station. There are six pumps total. Three pump to the high zone 4100 South irrigation pond, and the other three pump to the low zone, lower irrigation pond. The Swamp Fox SF-3 controls run commands pressure flow and valve position.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.22 Zone 3 Secondary Booster Station

Figure A-22: Zone 3 Secondary Booster Station

Table 4-22: Existing Zone 3 Secondary Booster Station Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-3	3-Toshiba VF-AS3	MDS SD9	-23dB

SCADA Evaluation

Zone 3 Secondary Booster Station pumps non-potable water from 4100 South Irrigation Pond pressurizing the system. The Swamp Fox-SF-3 controls 3 pumps, inlet and discharge pressure, level, and security alarms.

SCADA Upgrade Recommendations

Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.23 Alliant Tech East

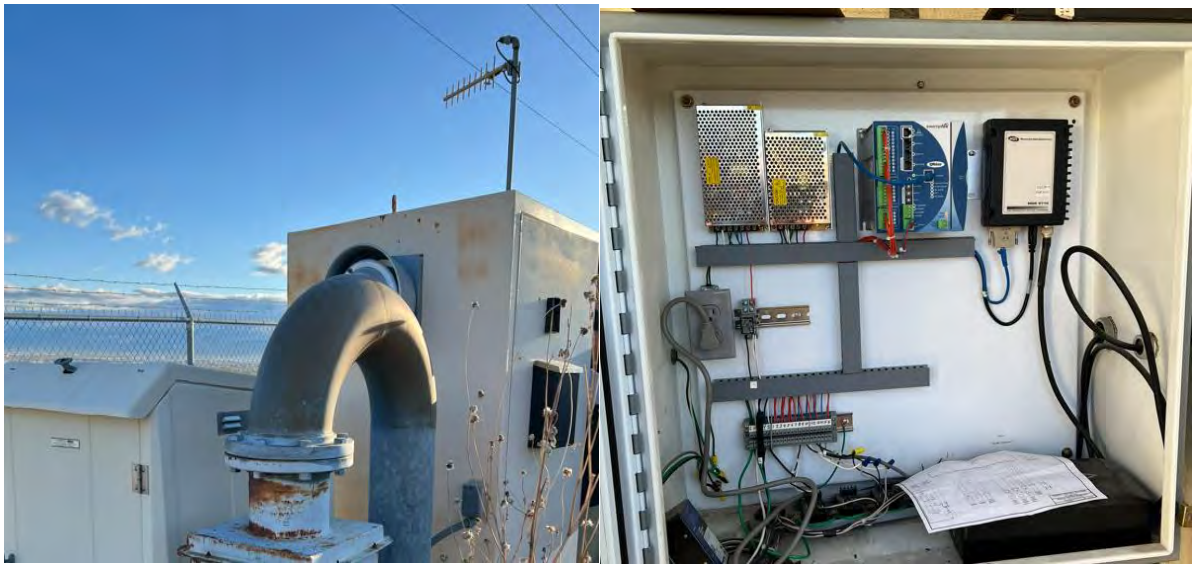

Figure A-23: Alliant Tech East

Table 4-23: Existing Alliant Tech East Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS 9710	-15dB

SCADA Evaluation

Alliant Tech East uses a SF-1 that monitors the Jordan Valley intake as well as wastewater flow.

SCADA Upgrade Recommendations

There are three options:

1. Replace control panel enclosure with new Signal Fire Ranger (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Signal Fire Ranger in existing control panel.
3. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.24 Alliant Tech West

Figure A-24: Alliant Tech West

Table A-24: Existing Alliant Tech West Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SF-1	N/A	MDS 9710	-14dB

SCADA Evaluation

Alliant Tech West uses an SF-1 that monitors wastewater flow.

SCADA Upgrade Recommendations

There are three options:

1. Replace control panel enclosure with new Signal Fire Ranger (recommended).
2. Replace SF-1 RTU, MDS 9710 radio and antenna with Signal Fire Ranger in existing control panel.
3. Replace SF-1 RTU, MDS 9710 radio and antenna with Allen Bradley PLC, cell modem, and antenna.

A.25 EDR Water Treatment Plant

Figure A-25: EDR Water Treatment Plant

Table A-25: Existing EDR Water Treatment Plant Specs

RTU	VFDs/Soft Starters	Radio	Cellular Strength
Swamp Fox SCADA Gateway	N/A	MDS 9710	-12dB

SCADA Evaluation

The SCADA Gateway is located at the EDR plant communicating to the distribution network. The SCADA Gateway communicates with remote sites to the workstation at the EDR plant. Operators have access to the workstation using LogMeIn from a mobile device or laptop.

SCADA Upgrade Recommendations

Replace SF-SCADA Gateway with an Allen Bradley CompactLogix PLC, cell modem and antenna. Replacing the old SCADA Workstation with new Windows 11 PLC with new cybersecurity measures for remote access is also recommended.