S A W P A

SANTA ANA WATERSHED PROJECT AUTHORITY
11615 Sterling Avenue, Riverside, California 92503 • (951) 354-4220

Meeting Access Via Computer (Zoom):	Meeting Access Via Telephone:
• https://sawpa.zoom.us/j/86427752552	• 1 (669) 900-6833
• Meeting ID: 864 2775 2552	• Meeting ID: 864 2775 2552

This meeting will be conducted in person at the address listed above. As a convenience to the public, members of the public may also participate virtually using one of the options set forth above. Any member of the public may listen to the meeting or make comments to the Committee using the call-in number or Zoom link above. However, in the event there is a disruption of service which prevents the Authority from broadcasting the meeting to members of the public, the meeting will not be postponed or rescheduled but will continue without remote participation. The remote participation option is provided as a convenience to the public and is not required. Members of the public are welcome to attend the meeting in-person.

AGENDA

TUESDAY, DECEMBER 5, 2023 – 10:00 A.M.

REGULAR MEETING OF THE
PROJECT AGREEMENT 24 COMMITTEE
Inland Empire Brine Line

Committee Members

Eastern Municipal Water District	Inland Empire Utilities Agency
Joe Mouawad, General Manager	Director Jasmin A. Hall
Director David J. Slawson (Alt)	Shivaji Deshmukh, General Manager (Alt)
San Bernardino Valley Municipal Water District	**Western Municipal Water District**
Director T. Milford Harrison, Chair	Director Mike Gardner, Vice Chair
Director Gil Botello (Alt)	Craig Miller, General Manager (Alt)

1. CALL TO ORDER | PLEDGE OF ALLEGIANCE (T. Milford Harrison, Chair)

2. PUBLIC COMMENTS

Members of the public may address the Committee on items within the jurisdiction of the Committee; however, no action may be taken on an item not appearing on the agenda unless the action is otherwise authorized by Government Code §54954.2(b).

Members of the public may make comments in-person or electronically for the Committee's consideration by sending them to publiccomment@sawpa.org with the subject line "Public Comment". Submit your electronic comments by 5:00 p.m. on Monday, December 4, 2023. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record. Individuals have a limit of three (3) minutes to make comments and will have the opportunity when called upon by the Committee.

3. ITEMS TO BE ADDED OR DELETED

Pursuant to Government Code §54954.2(b), items may be added on which there is a need to take immediate action and the need for action came to the attention of the Santa Ana Watershed Project Authority subsequent to the posting of the agenda.

4. CONSENT CALENDAR

All matters listed on the Consent Calendar are considered routine and non-controversial and will be acted upon by the Committee by one motion as listed below.

A. **APPROVAL OF MEETING MINUTES: SEPTEMBER 5, 2023** **5**
Recommendation: Approve as posted.

B. **INJURY AND ILLNESS PREVENTION PLAN UPDATE (PA24#2023.15)** **11**
Recommendation: That the Committee approve the addition of the Silica Exposure Control Program to SAWPA's Injury and Illness Prevention Plan (IIPP).

5. COMMITTEE DISCUSSION/ACTION ITEMS

A. **INLAND EMPIRE BRINE LINE MASTER PLAN (PA24#2023.16)** **41**
Presenter: David Ruhl
Recommendation: Receive and file.

6. INFORMATIONAL REPORTS

Recommendation: Receive for information.

A. **BRINE LINE FINANCIAL REPORT – JULY 2023** **59**
Presenter: Karen Williams

B. **BRINE LINE FINANCIAL REPORT – AUGUST 2023** **65**
Presenter: Karen Williams

C. **BRINE LINE FINANCIAL REPORT – SEPTEMBER 2023** **71**
Presenter: Karen Williams

D. **FINANCIAL REPORT FOR THE FIRST QUARTER ENDING SEPTEMBER 30, 2023** **77**
Presenter: Karen Williams

E. **GENERAL MANAGER COMMENTS**

F. **COMMITTEE MEMBERS COMMENTS**

G. **CHAIR'S COMMENTS/REPORT**

7. COMMITTEE MEMBER REQUESTS FOR FUTURE AGENDA ITEMS

8. CLOSED SESSION

A. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION – PURSUANT TO GOVERNMENT CODE SECTION 54956.9(d)(1)**
In Re Rialto Bioenergy Facility, LLC
U.S. Bankruptcy Court for the Southern District of California
Case No.: 23-01467-CL11

B. **CONFERENCE WITH LEGAL COUNSEL – EXPOSURE TO LITIGATION – PURSUANT TO GOVERNMENT CODE SECTION 54956.9(d)(4)**
Number of Potential Cases: One

9. CLOSED SESSION REPORT

10. ADJOURNMENT

PLEASE NOTE:
In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Clerk of the Board at (951) 354-4220. Notification at least 48 hours prior to the meeting will enable staff to make reasonable arrangements to ensure accessibility to this meeting.

Materials related to an item on this agenda submitted to the Committee after distribution of the agenda packet are available for public inspection during normal business hours at the SAWPA office, 11615 Sterling Avenue, Riverside, and available at www.sawpa.org, subject to staff's ability to post documents prior to the meeting.

Declaration of Posting

I, Sara Villa, Clerk of the Board of the Santa Ana Watershed Project Authority declare that on November 30, 2023, a copy of this agenda has been uploaded to the SAWPA website at www.sawpa.org and posted at SAWPA's office, 11615 Sterling Avenue, Riverside, California.

2023 Project Agreement 24 Committee Regular Meetings

Inland Empire Brine Line
First Tuesday of Every Month
(Note: All meetings begin at 10:00 a.m., or immediately following the 9:30 a.m. SAWPA Commission meeting, whichever is earlier, unless otherwise noticed, and are held at SAWPA.)

January		February	
1/3/23	~~Regular Committee Meeting~~ [cancelled]	2/7/23	Regular Committee Meeting
March		April	
3/7/23	Regular Committee Meeting	4/4/23	Regular Committee Meeting
May		June	
5/2/23	Regular Committee Meeting	6/6/23	~~Regular Committee Meeting~~ [cancelled]
		6/20/23	Special Committee Meeting
July		August	
7/4/23	~~Regular Committee Meeting~~ [cancelled]	8/1/23	Regular Committee Meeting
September		October	
9/5/23	Regular Committee Meeting	10/3/23	~~Regular Committee Meeting~~ [cancelled]
November		December	
11/7/23	~~Regular Committee Meeting~~ [cancelled]	12/5/23	Regular Committee Meeting

2024 Project Agreement 24 Committee Regular Meetings

Inland Empire Brine Line
First Tuesday of Every Month
(Note: All meetings begin at 10:00 a.m., or immediately following the 9:30 a.m. SAWPA Commission meeting,
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1/2/24	Regular Committee Meeting	2/6/24	Regular Committee Meeting
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3/5/24	Regular Committee Meeting	4/2/24	Regular Committee Meeting
May		June	
5/7/24	Regular Committee Meeting	6/4/24	Regular Committee Meeting
July		August	
7/2/24	Regular Committee Meeting	8/6/24	Regular Committee Meeting
September		October	
9/3/24	Regular Committee Meeting	10/1/24	Regular Committee Meeting
November		December	
11/5/24	Regular Committee Meeting	12/3/24	Regular Committee Meeting

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PROJECT AGREEMENT 24 COMMITTEE
Inland Empire Brine Line
REGULAR MEETING MINUTES
September 5, 2023

COMMITTEE MEMBERS PRESENT

T. Milford Harrison, Chair, San Bernardino Valley Municipal Water District Governing Board
Jasmin A. Hall, Inland Empire Utilities Agency Governing Board
David Slawson, Alternate, Eastern Municipal Water District Governing Board

COMMITTEE MEMBERS ABSENT

Mike Gardner, Vice Chair, Western Municipal Water District Governing Board
Joe Mouawad, Eastern Municipal Water District General Manager

ALTERNATE COMMITTEE MEMBERS PRESENT [Non-Voting]

Gil Botello, San Bernardino Valley Municipal Water District Governing Board
Shivaji Deshmukh, Inland Empire Utilities Agency General Manager

STAFF PRESENT

Jeff Mosher, Karen Williams, David Ruhl, Daniel Vasquez, Dean Unger, John Leete, Sara Villa, Marie Jauregui, Melissa Bustamonte

OTHERS PRESENT

Andrew D. Turner, Lagerlof, LLP; Ken Tam, Inland Empire Utilities Agency; Kelly Rowe, Orange County Water District; Lisa Haney, Orange County Water District; Mallory O'Connor, Western Municipal Water District

1. CALL TO ORDER | PLEDGE OF ALLEGIANCE

The Meeting of the PA 24 Committee was called to order at 10:20 a.m. by Chair T. Milford Harrison on behalf of the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, California.

2. PUBLIC COMMENTS

There were no public comments; there were no public comments received via email.

3. ITEMS TO BE ADDED OR DELETED

There were no added or deleted items.

4. CONSENT CALENDAR

A. APPROVAL OF MEETING MINUTES: AUGUST 1, 2023

Recommendation: Approve as posted.

MOVED, to approve the Consent Calendar as posted.

Result:	**Adopted by Roll Call Vote**
Motion/Second:	Harrison/Hall
Ayes:	Hall, Harrison, Slawson
Nays:	None
Abstentions:	None
Absent:	Gardner

5. COMMITTEE DISCUSSION/ACTION ITEMS

A. INLAND EMPIRE BRINE LINE RESERVE FUNDS REVIEW (PA24#2023.12)

Karen Williams provided a presentation titled Inland Empire Brine Line Reserve Funds Review, contained in the agenda packet on pages 25-35. The updated Inland Empire Brine Line Reserve Policy was approved by the PA 24 Committee on November 1, 2022, and the SAWPA Commission on December 20, 2022. On February 7, 2023, it was approved to eliminate three (3) reserves and transfer the balance of $5.5 million to the R-07 Pipeline Replacement and Capital Investment. As per the approved Reserve Policy, funding above the target level in the reserve will be discussed and approved by the PA 24 Committee and SAWPA Commission annually and during the biennial budget adoption process. For the reserves under the target level, staff will involve member agencies in reviewing the timing for each reserve to achieve its target. During the FYE 2024 and 2025 budget process, contributions to the two reserve accounts that are under the target levels were reviewed and contribution amounts were approved for the next two years. There are four reserves that are over the target levels set in the Reserve Policy. The following table shows each reserve level on June 30, 2023, the minimum balance, target, and the amount over or under the target.

Reserve Fund	No.	Balance @ 06/30/2023	Minimum Balance	Target	Amount Over/(Under) Target	Comments
Brine Line Operating	R-01	$2,321,017	$2,273,388	$2,273,388	$47,629	Interest through 06/30/2023
Debt Retirement	R-02	$2,899,430	$1,709,476	$1,709,476	$1,189,954	1.5x annual debt plus interest through 06/30/2023
Pipeline Capacity Management	R-04	$12,330,705	$3,894,181	$9,735,454	$2,595,251	Funds from pipeline capacity sales plus interest
OC San Future Treatment and Disposal Capacity	R-05	$1,887,871	$1,842,396	$1,842,396	$45,475	Target set at 06/30/2022 balance. Interest through 06/30/2023
OC San Pipeline Rehabilitation	R-06	$2,448,640	$2,425,147	$7,250,000	($4,801,360)	Budget contributions in FYE 2024 and 2025 ($325,309, $155,786)
Pipeline Replacement and Capital Investment	R-07	$32,448,955	$17,503,000	$42,911,000	($10,462,045)	Budget contributions in FYE 2024 and 2025 ($1.9 million each year)
Totals		**$54,336,618**	**$29,647,588**	**$65,721,714**	**($11,385,096)**	

Ms. Williams referenced each reserve fund and provided a description of the target set, interest earned, balance, and set forth the recommendation that the PA 24 Committee set a target limit for R-01 Brine Line Operating Reserves to $2,179,659 for FYE 2024 and transfer the amount over target of $141,358 to R-07 Pipeline Replacement and Capital Investment, and to keep the current balances at June 30, 2023, and continue to accrue interest for the following reserves; R-02, R-04, and R-05. Ms. Williams informed the PA 24 Committee that the member agencies' Chief Financial Officers were provided with the recommendations and there were no questions or concerns received. There was no discussion.

MOVED, that the Project Agreement 24 Committee:

1. Set target limit for R-01 Brine Line Operating Reserves to $2,179,659 for FYE 2024 and transfer the amount over target of $141,358 to R-07 Pipeline Replacement and Capital Investment, and
2. Keep the current balances at 06/30/2023 and continue to accrue interest for the following reserves:
    a. R-02 Brine Line Debt Service

b. R-04 Pipeline Capacity Management
c. R-05 OC Future Treatment & Disposal Capacity

Result:	**Adopted by Roll Call Vote (Unanimously)**
Motion/Second:	Slawson/Hall
Ayes:	Hall, Harrison, Slawson
Nays:	None
Abstentions:	None
Absent:	Gardner

B. REACH IV EASEMENT DEED ACCEPTANCE AND COUNTY RECORDING (PA24#2023.13)

Daniel Vasquez provided a presentation titled Reach IV Easement Deed Acceptance and County Recording, contained in the agenda packet on pages 57-64. In 2014, Orange County Flood Control passed an easement to Riverside County Flood Control to maintain a grade stabilizer for the Brine Line as part of a construction project. In 2015, SAWPA agreed to accept sole responsibility of ownership, operation, and maintenance of the project once completed in the Cooperation Agreement-Santa Ana Canyon-Below Prado, Inland Empire Brine Line Sheet Pile Protection Project. In 2017, the project was completed, and the operation and maintenance of the protection structure was given to SAWPA, though the easement was never recorded with the Riverside County Recorder's Office. Due to the oversight, the recommendation is to authorize the General Manager to accept the Grant of Deed from Riverside County Flood Control and Water Conservation District for maintenance of the Reach IV sheet pile protection structure and record the Grant of Deed at the Riverside County Recorder's Office. There was no discussion.

MOVED, to authorize the General Manager to accept the Grant of Deed from Riverside County Flood Control and Water Conservation District for maintenance of the Reach IV sheet pile protection structure and record the Grant of Deed at the Riverside County Recorder's Office.

Result:	**Adopted by Roll Call Vote (Unanimously)**
Motion/Second:	Hall/Slawson
Ayes:	Hall, Harrison, Slawson
Nays:	None
Abstentions:	None
Absent:	Gardner

C. INLAND EMPIRE BRINE LINE REACH IV-D REHABILITATION WORK PLAN (PA#2023.14)

David Ruhl provided a presentation titled Inland Empire Brine Line Reach IV-D Rehabilitation Work Plan, contained in the agenda packet on pages 79-87. The Brine Line Reach IV-D was constructed in the early 1990's and runs from the intersection with Reach IV-A in the City of Chino approximately 21 miles East, to the intersection with Reach IV-E in the City of Rialto. A portion of seven (7) miles of Reach IV-D consists of T-lock lined 42-inch reinforced concrete pipe (RCP). The T-lock lining is a polyvinyl chloride (PVC) lining on the interior circumference of the pipe that provides a protective corrosion barrier between the flow and concrete pipe. The T-lock lining on this portion of the Brine Line was installed on the upper 270 degrees of the pipeline leaving the invert or bottom 90 degrees of the pipe unlined. Low flows during the initial years of operation placed the flow line below the termination of the T-lock liner and exposed the concrete to corrosion and uplifting of the T-lock liner.

In 2018, Woodard & Curran prepared a Reach IV-D Rehabilitation Work Plan. The work included a pipeline condition assessment to evaluate the condition and the remaining useful life of this portion of Reach IV-D. The Work Plan includes an evaluation of potential repair methods, recommended actions to monitor the condition of the Brine Line and a schedule

and order of magnitude cost estimate for the near-term, mid-term and long-term recommendations. The condition assessment of the Reach IV-D pipeline was conducted through visual assessment (manned entry and CCTV inspection), physical tests of the unlined concrete surface and estimating the depth of concrete cover over the steel reinforcement in the concrete pipe. Based on this assessment the consultant estimated the predicted remaining useful life of 10 to 20 years. The variability of 10 years in the estimated useful life is due to the lack of historical information on the rate of deterioration of the unlined concrete.

The consultant recommended additional field investigation in five (5) years to characterize the rate of deterioration and further refine the remaining useful life of the pipe (mid-term recommendation). To obtain a complete baseline with which to compare future inspection results the consultant recommended completing two additional manned entry inspections at two key locations along with additional cleaning and CCTV (near-term recommendation). Lastly, based on the predicted remaining useful life of 10 – 20 years, the consultant recommended implementing the recommended rehabilitation method prior to the predicted remaining useful life. The predicted remaining useful life is recommended to be updated upon completion of the mid-term field investigations in five (5) years. A summary of the Work Plan recommendations is provided in the table below.

Summary of Work Plan Recommendations

Project	Anticipated Schedule (1)	Project Recommendation	Order of Magnitude Cost
Near-Term	Within One Year (Complete)	Man-entry inspections at two key locations, Clean and CCTV 1 pipe segment	$50,000
Mid-Term	5 years	Clean and CCTV entire 7 miles of pipeline. Man-entry inspection at 7 locations. Refine useful life estimate.	$500,000
Long-Term	10 – 20 years	Rehabilitate pipeline, if required within boundaries as identified with Mid-Term Inspections.	$40 Million (+/-) Subject to reevaluation.

On August 1, 2023, the PA 24 Committee approved issuance of a Request for Proposals (RFP) for Engineering Services for the Inland Empire Brine Line Reach IV-D Rehabilitation Mid-Term recommendations. The RFP was posted to PlanetBids, and 18 firms registered as prospective bidders. Two (2) firms attended the non-mandatory pre-proposal meeting on August 10, 2023, and one (1) proposal was received from Woodard & Curran on August 30, 2023. SAWPA staff reviewed the proposal to ensure that it meets the criteria outlined in the RFP, Woodard & Curran is qualified and has the experience to perform the work since Woodard & Curran prepared the IV-D Work Plan in 2018 and the update to the Work Plan in 2019. SAWPA was pleased with the work performed by Woodard & Curran and would recommend working with Woodard & Curran on the Mid-term Recommendations.

The cost proposal was reviewed by SAWPA staff to ensure the level of effort was consistent with the project objectives. A conference call was conducted with Woodard & Curran to discuss the scope of work, schedule, allocation of billing hours and assumptions made in the proposal. Based on the discussions it was determined to include penetrating radar testing as part of the condition assessment. The fee estimate was revised to $247,174 (an increase of $578) to include the cost to rent the equipment to perform the test. There was no discussion.

MOVED, to authorize the General Manager to execute Task Order No. W&C327-03 with Woodard & Curran for Engineering Services for the Inland Empire Brine Line Reach IV-D Rehabilitation Work Plan Mid-Term Recommendations, for an amount not to exceed $247,174.

Result:	**Adopted by Roll Call Vote (Unanimously)**
Motion/Second:	Hall/Slawson
Ayes:	Hall, Harrison, Slawson
Nays:	None
Abstentions:	None
Absent:	Gardner

6. INFORMATIONAL REPORTS

Recommendation: Receive and file the following oral/written reports/updates.

A. BRINE LINE FINANCIAL REPORT – JUNE 2023

Karen Williams referenced page 111, slide 18 of the agenda packet and noted that it was requested in a previous meeting to see the difference between the revenue billed vs. OC San charges for the Flow, BOD, and TSS over the last five (5) years. Overall, SAWPA is over budget on revenue, and under budget with expenditures.

B. FINANCIAL REPORT FOR THE FOURTH QUARTER ENDING JUNE 30, 2023

C. GENERAL MANAGER COMMENTS

Jeff Mosher noted that the Master Plan is ongoing, and an update will be presented to the Committee as an informational item soon. The SAWPA/OC San Joint Policy Committee meeting is scheduled for October 12, 2023, and it includes a Tour of Plant No. 2.

D. COMMITTEE MEMBERS COMMENTS

There were no Committee Member comments.

E. CHAIR'S COMMENTS/REPORT

There were no Chair comments.

7. COMMITTEE MEMBER REQUESTS FOR FUTURE AGENDA ITEMS

There were no requests for future Agenda items.

8. ADJOURNMENT

There being no further business for review, Committee Chair T. Milford Harrison adjourned the Regular meeting at 10:55 a.m.

Approved at a Regular Meeting of the Project Agreement 24 Committee on December 5, 2023.

_____
T. Milford Harrison, Chair

Attest:

_____
Sara Villa, Clerk of the Board

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PA 24 COMMITTEE MEMORANDUM NO. 2023.15

DATE: December 5, 2023

TO: PA 24 Committee

SUBJECT: Injury and Illness Prevention Plan Update

PREPARED BY: Daniel Vasquez, Manager of Operations

RECOMMENDATION
That the PA 24 Committee approve the addition of the Silica Exposure Control Program to SAWPA's Injury and Illness Prevention Plan (IIPP).

DISCUSSION
On October 15, 2013, the SAWPA Commission adopted Resolution 2013-10 which established an IIPP.

The IIPP contains 25 safety related programs as noted below. These programs are audited and updated according to State and Federal requirements particular to each program (Ranging from annually to every three (3) years) and the entire program is reviewed annually for additional state requirements to IIPP's. A brief list of these programs can be found in the table below.

1	Accident Reporting
2	Bloodborne Pathogens
3	Air Compressor and Compressed Air Safety
4	Confined Space Entry
5	Driver Safety
6	Ergonomics
7	Fall Protection
8	Hand and Portable Powered Tools
9	Hazard Communication
10	Hazardous Material Storage and Use
11	HAZWOPER
12	Hearing Conservation
13	Heat Stress
14	Hot Work
15	Ladder Safety
16	Line Location
17	Lock-out Tag-out
18	Machine Guarding
19	Outside Regulatory Agency Inspection
20	PPE
21	Respiratory Protection
22	Safety Orientation
23	Traffic Control and Flagger Safety
24	Trenching and Excavation Safety
25	Silica Exposure Control Program

During this year's review, SAWPA's Safety Manager has created the Silica Exposure Control Program required by Title 8 of the California Code of Regulations (T8CCR), section 5204 ("Occupational Exposures to Respirable Crystalline Silica"). This program ensures that Brine Line Operational Staff safely implement the engineering controls necessary to prevent hazardous exposure to silica.

RESOURCE IMPACTS
Funds to cover staff time to perform IIPP review and audits are included in the Fiscal Year 2024 Budget, Fund 240.

Attachments:
1. Silica Exposure Control Plan
2. PowerPoint Presentation

Introduction

This program establishes the Santa Ana Watershed Authority's Silica Exposure Control procedures and sets forth SAWPA's policy, requirements, and responsibilities relating to employee protection while working in any capacity in which an employee may potentially be exposed to airborne concentrations of silica at or above regulatory and industry action levels and exposure limits.

Respirable Crystalline Silica are small, respirable factions of silica dust that enter a worker's lungs. Respirable factions are 1/100th of a typical grain of sand. Silica-related diseases include silicosis, lung cancer, Chronic Obstructive Pulmonary Disease (COPD), kidney disease, and other cardio-vascular health problems (including heart attack). In general, activities involving construction will cause the highest levels of exposure to workers. The purpose of this SAWPA safety practice is to prevent or minimize employee occupational exposure to work activities or materials involving silica and to comply with Cal OSHA requirements.

Scope

It is the policy of the Santa Ana Watershed Project Authority to ensure that all employees are informed of hazards that may exist in the workplace and provided with the equipment and procedures and training to perform these activities safely.

This program applies to all employees, and their supervisors, whose duties involve potential exposure to the hazards of silica encountered during such activities as jackhammering, grinding, mixing of dry concrete with water, cutting asphalt and similar activities.

Regulation

This program is designed to comply with the regulatory requirements of Cal OSHA Title 8 CCR, Sections 1523.3, 1530.1, 5155, and 5204 for Crystalline Silica Health Hazard, as well as the Code of Federal Regulations 29 CFR 1926.1153 for respirable crystalline silica. A copy of the safety orders and of this program statement will be provided at the time of training. In addition, copies of the safety orders may be printed from the CAL-OSHA web site at www.dir.ca.gov or may be requested from the Safety Manager, or designee.

Definitions

- **Action Level** - a concentration of airborne respirable crystalline silica of 25 $\mu g/m^3$, calculated as an 8-hour total weight average (TWA).

- **Competent Person** - an individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.

- **Employee Exposure** - the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

- **High-efficiency Particulate Air (HEPA) Filter** - a filter that is at least 99.97 percent efficient in removing mono-dispersed particles of 0.3 micrometers in diameter.

- **Objective Data** - information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

- **Respirable Crystalline Silica** - quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle-size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality -Particle Size Fraction Definitions for Health-Related Sampling.

Program Requirements

Training

SAWPA Employees who anticipate working on projects where they could be exposed to airborne silica will be provided training in silica hazards in accordance with SAWPA's Silica ECP which was established to comply with the Hazard Communication Standard (29 CFR 1910.1200). Each SAWPA Employee will have access to labels on containers of products containing crystalline silica, and safety data sheets and will also be provided information on the health hazards of silica including cancer, lung effects, immune system effects, and kidney effects.

In addition, SAWPA Employees will be provided training and information regarding specific activities identified in this Plan that could result in airborne silica exposure, and the specific engineering controls, work practices and respiratory protection requirements to mitigate the potential airborne silica exposures. This training will provide a discussion of silica hazards, initial exposure determination either by complying with 29 CFR 1926.1153 Table 1 requirements or air monitoring, specific engineering and work practice control measures, PPE, and medical surveillance requirements. The training will also identify the Competent Person for silica exposure identification and determination of control requirements.

Competent Person Requirements

SAWPA shall identify a Competent Person to inspect and oversee all activities with potential airborne silica exposure. SAWPA Contractors shall identify a Competent Person to inspect and oversee all activities with potential airborne silica exposure. Subcontractors working on projects within the scope of this ECP shall appoint a Competent Person capable of executing the duties described herein. The Competent Person must have training

in the inspection of work areas and equipment and in the determination of safe working conditions. This person shall have a working knowledge of the 1926.1153 standards, shall be capable of identifying airborne silica hazards, shall determine the need for initial and additional exposure monitoring, shall recommend and implement engineering and work practice controls, shall establish levels of PPE, and shall have the authority to take action to eliminate hazards and correct incidences of noncompliance.

The Competent Person will help determine the Regulated Areas, or locations where airborne silica is being emitted. A regulated area shall be established and demarcated whenever disturbing materials that can cause airborne respirable crystalline silica. Area shall be demarcated from the rest of the work area to minimize the number of employees that can be exposed to airborne respirable crystalline silica within the regulated area and labeled with OSHA approved signage.

Exposure Limits

The purpose of this SAWPA safety practice is to prevent or minimize SAWPA Employee and SAWPA Contractor Employee occupational exposure to work activities or materials involving silica and to comply with Cal OSHA requirements. The Cal OSHA exposure limits are as follows:

Action Level = 25 micrograms per cubic meter of air (25 µg/m3) as an 8-hour time-weighted average (TWA)
Permissible Exposure Limit (PEL) = 50 µg/m3 as an 8-hour TWA

RESPIRATOR	MAX	ASSIGNED PROTECTION FACTOR
APR Half Masks – includes disposables APR Full Face if	<10 X PEL	10
APR Full Face if quantitatively fit tested	<50 X PEL	**50**
PAPR or SAR Half Mask	<50 X PEL	50
PAPR or SAR Full Face	<1,000 X PEL	1,000
PAPR or SAR Loose Fitting Facepiece	<25 X PEL	25
PAPR or SAR Helmet / Hood	< 50 PEL <1,000 x PEL	50 or; 1,000 if Manufacturer can provide data.
SAR Half Mask PD-SAR w/out escape	<50 X PEL	50
SAR Full Facepiece PD-SAR w/out	<1,000 x PEL	1,000
PD-SAR with escape	<1,000 X PEL	PD-SAR w/Escape – 1,000 (OSHA Approved for IDLH Escape)
Self-Contained Breathing Apparatus	<10,000 X PEL	10,000 & IDLH Atmospheres

See Attachment A and Attachment B for respiratory protection guidance and work practice guidelines for exposure.

Engineering and Work Controls

Engineering and work practice controls, including administrative controls, shall be implemented to reduce and maintain employee exposure to silica at or below the PEL, to the extent that such controls are feasible. Where all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to or below the PEL, such controls shall be used, nonetheless, to reduce employee exposure to the lowest feasible level (and in conjunction with respiratory protection). Attachment B should be utilized for determining control methods.

Respiratory protection shall be selected based on guidance in 1926.1153 Table 1 or based on a Certified Industrial Hygienist's or Competent Person's assessment of the potential airborne exposure that may be created by the means and methods of work (high energy operations with high airborne dust generation or low energy operations with low dust generation).

When using mechanical ventilation to control exposure, the system's ability to effectively control exposure will be regularly evaluated. If administrative controls are used to limit exposure, a job rotation schedule may be implemented that includes employee identification as well as the duration and exposure levels at each job or workstation where each affected employee is located.

All surfaces are to be maintained as free as possible from accumulations of silica. Methods for cleaning surfaces and floors that minimize the likelihood of silica becoming airborne will be utilized (such as using a HEPA vacuum). Dry sweeping, brushing, and use of compressed air with ventilation system to clean clothing or surfaces are all prohibited practices (compressed air may be used if it is used in conjunction with a ventilation system designed to capture the airborne dust created while using the compressed air). If vacuuming is the method selected, specialized vacuums with HEPA filtration are required. Methods to use and empty vacuums in a manner that minimizes the reentry of silica into the workplace shall be described and used. Use of household vacuums with HEPA filters are not allowed at any time for the collection of dust or debris that contains silica.

Employees shall not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in any areas where exposure to silica is above the PEL. Employees should wash their hands and face at the end of the work shift and prior to eating or entering eating facilities, drinking, smoking, or applying cosmetics.

Recordkeeping

Hazard Assessments that are performed in conjunction with determining the potential for silica exposure will be kept on file with the Operations Superintendent for no less than 2 years.

Responsibilities

Employees are responsible to fully comply with all aspects of this program. There shall be no tolerance for risk taking or working unsafely for any reason.

Employees shall:

1. Familiarize themselves with the requirements of this program.

2. Follow safe work practices and requirements contained within this program.

3. Never expose themselves to airborne silica without properly assessing the necessary PPE and engineering controls required by this program.

4. Report accidental exposure to airborne silica to supervisor and Safety Manager immediately.

Managers and Supervisors shall:

1. Identify operations that present potential exposure to silica.

2. Fully support and take an active role in the elements of this program and the efforts of the safety program administrator.

3. Provide and support training opportunities for designated Competent Persons and general PPE and exposure control practices.

4. Perform Hazard Analysis and implement necessary work controls for all potential silica exposure events.

Safety Manager shall:

1. Coordinate all aspects of the implementation of this program to include providing opportunities for training in the areas of Competent Person and general training.

2. Annually review work practices and engineering controls implemented to protect employees.

Periodic Review

This policy shall be reviewed or modified at an interval of annually.

Approved By:

_____ _____

Daniel Vasquez, Manager of Operations / Safety Manager Date

Attachments:
Appendix A – Guide to Respiratory Protection From Silica
Appendix B – 1926.1153 Respirable crystalline silica – Specified Exposure Control Methods

Revision History

Revision	Date	Description of Changes	Requested By
0	8/29/2023	Program created	Daniel Vasquez

ATTACHMENT A - GUIDE TO RESPIRATORY PROTECTION FROM SILICA

		RESPIRATOR		
<25 µg/m^3 (0.025 mg/m^3)	Below Action Level	No respiratory protection is required		
<50 µg/m^3 (0.05 mg/m^3)	Below Action Level	No respiratory protection is required		
<500 µg/m^3 (0.5 mg/m^3)	10 X PEL	N95 Filtering Facepieces		
		Style	No Valve	With Valve
		Limited Use Air-Purifying Half Mask		
			Half Mask with N95 Filter	
		7190N99	Welding Half Mask with N99 Filter	
		Reusable Air-Purifying Half Mask		
		Half Mask	Filter	Adapter
				N/A
		Air-Purifying Full Facepiece		
		Facepiece	Filter	Adapter
	10 X PEL If Qualitative Fit Tested*			
				N/A
<1,250 µg/m^3 (1.25 mg/m^3)	25 X PEL	Powered Air-Purifying Respirator (PAPR)		
		Loose Fitting	PAPR Assembly	HEPA Filter
<2,500 µg/m^3 (2.5 mg/m^3)	50 X PEL If Quantitative Fit Tested	Air-Purifying Full Facepiece		
		Facepiece	Filter	Adapter
			7580P100	N/A
			75FFP100	

** Air-Purifying Facepieces must be Quantitatively Fit Tested to achieve a Fit Factor of 50*

<table>
<tr><th colspan="2">WORKSITE</th><th colspan="3">RESPIRATOR</th></tr>
<tr><td rowspan="15"><50,000 µg/m^3 (50 mg/m^3)</td><td rowspan="15">1,000 X PEL</td><td colspan="3">Powered Air-Purifying Respirator (PAPR)</td></tr>
<tr><td>Facepiece</td><td>PAPR Assy</td><td>HEPA Filter</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Hood</td><td>PAPR Assy</td><td>HEPA Filter</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">Continuous Flow Supplied Air Respirator</td></tr>
<tr><td>Facepiece</td><td>Breathing Tube Assembly</td><td>Hoses & Couplers</td></tr>
<tr><td></td><td></td><td rowspan="3"></td></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td></td></tr>
<tr><td colspan="3">Abrasive Blasting Continuous Flow Respirator</td></tr>
<tr><td>Assembly</td><td colspan="2">Hoses & Couplers</td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td rowspan="6"></td><td rowspan="6">10,000 X PEL</td><td colspan="3">Pressure Demand Supplied Air Respirator</td></tr>
<tr><td>Assembly</td><td colspan="2">Hoses & Couplers</td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td colspan="3">Self-Contained Breathing Apparatus</td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td></td><td colspan="2"></td></tr>
</table>

WORKSITE		RESPIRATOR		
<25 µg/m^3 (0.025 mg/m^3)	Below Action Level	No respiratory protection is required		
<50 µg/m^3 (0.05 mg/m^3)	Below Action Level	No respiratory protection is required		
<500 µg/m^3 (0.5mg/ m^3)	10 X PEL			
		Style	No Valve	With Valve
		Limited Use Air-Purifying Half Mask		
		Reusable Air-Purifying Half Mask		
		Half Mask	Filter	Adapter
		Air-Purifying Full Facepiece		
		Facepiece	Filter	Adapter
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<1,250 µg/m^3 (1.25 mg/m^3)	25 X PEL	Powered Air-Purifying Respirator (PAPR)		
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		Facepiece	Filter	Adapter
**Air-Purifying Facepieces must be Quantitatively Fit Tested to achieve a Fit Factor of 50*				

WORKSITE		RESPIRATOR		
<50,000 µg/m3 (50 mg/m3)	1,000 X PEL	**Powered Air-Purifying Respirator (PAPR)**		
		Facepiece	**PAPR Assy**	**HEPA Filter**
		Hood	**PAPR Assy**	**HEPA Filter**
		Continuous Flow Supplied Air Respirator		
		Facepiece	**Breathing Tube**	**Hoses & Couplers**
		Abrasive Blasting Continuous Flow Respirator		
		Assembly	**Hoses & Couplers**	
<500,000 µg/m3 (500 mg/m3)	10,000 X PEL	**Pressure Demand Supplied Air Respirator**		
		Assembly	**Hoses & Couplers**	
		Self-Contained Breathing Apparatus		
**NIOSH approval pending*				

ATTACHMENT B

§1926.1153 Respirable crystalline silica.

(c) Specified exposure control methods. (1) For each employee engaged in a task identified on Table 1, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with paragraph (d) of this section.

Table 1: Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. – When used outdoors. – When used indoors or in an enclosed area.	None APF 10	APF 10 APF 10

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.	None	None
(iv) Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. – When used outdoors. – When used indoors or in an enclosed area.	None APF 10	None APF 10
(v) Drivable saws	For tasks performed outdoors only: Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(vi) Rig-mounted core saws or drills	Use tool equipped with integrated water delivery system that supplies water to cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)	Use drill equipped with commercially available shroud or cowling with dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	None	None
(viii) Dowel drilling rigs for concrete	For tasks performed outdoors only: Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	APF 10	APF 10
(ix) Vehicle-mounted drilling rigs for rock and concrete	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. OR Operate from within an enclosed cab and use water for dust suppression on drill bit.	None None	None None

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(x) Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.		
	– When used outdoors.	None	APF 10
	– When used indoors or in an enclosed area.	APF 10	APF 10
	OR		
	Use tool equipped with commercially available shroud and dust collection system.		
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.		
	– When used outdoors.	None	APF 10
	– When used indoors or in an enclosed area.	APF 10	APF 10
(xi) Handheld grinders for mortar removal (i.e., tuckpointing)	Use grinder equipped with commercially available shroud and dust collection system.	APF 10	APF 25
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.		

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(xii) Handheld grinders for uses other than mortar removal	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	None	None
	– When used outdoors.	None	None
	– When used indoors or in an enclosed area.	None	APF 10

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(xiii) Walk-behind milling machines and floor grinders	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use machine equipped with dust collection system recommended by the manufacturer. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None None	None None
(xiv) Small drivable milling machines (less than half-lane)	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(xv) Large drivable milling machines (half-lane and larger)	For cuts of any depth on asphalt only: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. For cuts of four inches in depth or less on any substrate: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. OR Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None None None	None None None
(xvi) Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.	None	None

Equipment / Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		≤ 4 hours /shift	> 4 hours /shift
(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	Operate equipment from within an enclosed cab. When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None None	None None
(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica- containing materials	Apply water and/or dust suppressants as necessary to minimize dust emissions. OR When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None None	None None

(2) When implementing the control measures specified in Table 1, each employer shall:

(i) For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;

(ii) For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;

(iii) For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:

(A) Is maintained as free as practicable from settled dust;

(B) Has door seals and closing mechanisms that work properly;

(C) Has gaskets and seals that are in good condition and working properly;

(D) Is under positive pressure maintained through continuous delivery of fresh air;

(E) Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 μm range (e.g., MERV-16 or better); and

(F) Has heating and cooling capabilities.

(3) Where an employee performs more than one task on Table 1 during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

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SANTA ANA WATERSHED PROJECT AUTHORITY

Injury and Illness Prevention Plan Update

PA 24 Committee
No. 4.B
Daniel Vasquez
Manager of Operations
December 5, 2023

Recommendation

That the PA 24 Committee approve the addition of the Silica Exposure Control Program to SAWPA's Injury and Illness Prevention Plan (IIPP).

Injury and Illness Prevention Plan

- On October 15, 2013, the SAWPA Commission adopted Resolution 2013-10 which established an Injury and Illness Prevention Plan.

IIPP Programs

Programs in **Teal are Brine Line Employee specific.**

Programs in **Black are SAWPA wide.**

1	ACCIDENT REPORTING
2	Bloodborne Pathogens
3	Air Compressor and Compressed Air Safety
4	Confined Space Entry
5	Driver Safety
6	Ergonomics
7	Fall Protection
8	Hand and Portable Powered Tools
9	Hazard Communication
10	Hazardous Material Storage and Use
11	HAZWOPER
12	Hearing Conservation
13	Heat Stress
14	Hot Work
15	Ladder Safety
16	Line Location
17	Lock-out Tag-out
18	Machine Guarding
19	Outside Regulatory Agency Inspection
20	PPE
21	Respiratory Protection
22	Safety Orientation
23	Traffic Control and Flagger Safety
24	Trenching and Excavation Safety
25	Silica Exposure Control Program

IIPP Updates

- **IIPP is reviewed annually for new requirements.**
- **Program audits range from annually to every three (3) years depending on the program.**

Silica Exposure Control Program

Title 8 of the California Code of Regulations (T8CCR), section 5204 (Occupational Exposures to Respirable Crystalline Silica) requires a program that ensures that employees:

- Demonstrate knowledge concerning the health hazards of respirable crystalline silica.
- Understand the specific engineering controls, work practices, and respirators to be used in such cases where appropriate.

Recommendation

That the SAWPA Commission approve the addition of the Silica Exposure Control Program to SAWPA's Injury and Illness Prevention Plan (IIPP).

Questions?

Daniel Vasquez
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@sawpatube

PA 24 COMMITTEE MEMORANDUM NO. 2023.16

DATE: December 5, 2023

TO: Project Agreement 24 Committee
(Inland Empire Brine Line)

SUBJECT: Inland Empire Brine Line Master Plan

PREPARED BY: David Ruhl, Executive Manager of Engineering and Operations

RECOMMENDATION
Receive and file.

DISCUSSION
A Master Plan is a long-term planning document that addresses facility needs over a defined planning period. The purpose of the Brine Line Master Plan is to determine how best to manage and implement the growth and expansion of the Brine Line to best serve the watershed and our Member Agencies.

In November 2022, the PA 24 Committee approved a contract with Dudek to prepare the Brine Line Master Plan. The description of the work and a summary of the work progress is described below.

Brine Line System Analysis. Review, update and calibrate the existing Brine Line hydraulic model to fully represent the existing Brine Line system.

The hydraulic model was updated to include the following system improvements and laterals:

- Reach V Rehabilitation Project
- Nichols Road (City of Lake Elsinore) Relocation Project
- Brine Disposal Pipeline Project Reach 1 and 2 (Beaumont Lateral)
- Agua Mansa Lateral (City of Colton)

As part of the calibration process, flow monitoring was performed throughout the Brine Line system over a two-week period. Flow meters were installed at six strategic locations. Flow meter data was collected in 5-minute intervals throughout the monitoring period. Concurrent flow data was collected for each Brine Line discharger. Each discharger's flow was incorporated into the model at their specific discharge location, including the flows from the six flow monitoring locations. Extended period simulations were executed over a 7-day modeling analysis period to calibrate the model. The hydraulic model is deemed to be calibrated when both average and peak model predictions reflect field measurements within 10% or less. Table 1 summarizes the results of the calibration process for each Reach of the Brine Line.

Table 1: Model Calibration Results

Flow Meter	Average Flows			Peak Flows		
	Measured (MGD)	Modeled (MGD)	% Diff	Measured (MGD)	Modeled (MGD)	% Diff
OC San Meter	13.34	13.53	1.4	14.02	14.99	6.9
Reach IV-A (FM 1)	0.31	0.30	3.9	0.53	0.56	6.8
Reach IV-B (FM 2)	8.53	6.77	20.6	9.17	7.35	19.9
Reach IV-D (FM 3)	6.87	6.48	5.8	7.74	7.54	2.5
Reach IV-D (FM 4)	3.98	3.71	6.9	4.76	4.54	4.6
Reach IV-D (FM 5)	2.13	1.75	17.5	2.41	2.08	13.4
Reach IV-E (FM 6)	1.40	1.46	3.9	1.60	1.70	6.5

Data from FM 2 and FM 5 did not calibrate within the desired 10% accuracy and were not used in calibration of the hydraulic model. Data from the other five (5) locations tracked well with the average flow (1.4% - 6.9%) and the peak flow (2.5% - 6.9%) indicating an accurate analysis of the hydraulic capabilities of the Brine Line System. A Technical Memorandum was prepared documenting the calibration of the model.

Market Analysis, Member Agency Coordination, and Future Growth Projections. Identify new customers and their associated capacity needs.

Member Agency and Stakeholder meetings were conducted over a six-month period from February through August 2023. Information was obtained on the Brine Management needs of each agency including groundwater desalination, wastewater (recycled water) desalination and industries that use large volumes of water and have a high salinity discharge. Table 2 lists the nineteen (19) Member Agency and Stakeholder meetings.

Table 2: Member Agency and Stakeholder meetings

Date	Agency
February 23, 2023	**San Bernardino Valley Municipal Water District**
February 23, 2023	San Bernardino Municipal Water Department
February 23, 2023	City of Redlands
February 23, 2023	East Valley Water District
March 8, 2023	**Eastern Municipal Water District**
March 16, 2023	**Western Municipal Water District**
March 30, 2023	**Inland Empire Utilities Agency**
March 19, 2023	Chino Basin Desalter Authority
May 4, 2023	City of Corona
June 12, 2023	Elsinore Valley Municipal Water District
June 15, 2023	Jurupa Community Services District
June 15, 2023	Yucaipa Valley Water District
June 21, 2023	City of Colton
June 22, 2023	Riverside County Flood Control District
July 13, 2023	City of Beaumont

August 16, 2023	City of Chino
August 17, 2023	Temescal Valley Water District
August 17, 2023	City of Riverside
August 24, 2023	Rubidoux Community Services District

Information obtained from the stakeholder meetings were used to quantify the discharge projections over a defined period of time. Discharge projections were broken down into the Near – Term (1 – 10 years), Long – Term (11 – 35 years) and Build – Out (greater than 35 years). Table 3 shows the discharger projections by flow type and planning period.

Table 3: Discharge Projections by Flow Type and Planning Period

Flow Type	Current June 2023		Near – Term 2023 - 33		Long – Term 2033 - 58		Build – Out 2058	
Potable Water Production	10.1	74%	11.6	62%	16.9	63%	18.3	60%
Wastewater Desalination	1.0	7%	4.5	24%	5.9	22%	6.3	21%
Industrial	1.7	12%	1.9	10%	2.3	9%	2.9	9%
Power Generation	0.5	4%	0.6	3%	0.6	2%	0.7	2%
Dry Weather Flow Diversions	0.0	0%	0.0	0%	1.0	4%	2.0	7%
Domestic	0.3	2%	0.3	2%	0.3	1%	0.4	1%
Total	**13.5 MGD**		**18.8 MGD**		**27.0 MGD**		**30.5 MGD**	

Potable water production from groundwater RO desalters and ion exchange desalters maintain the largest discharge to the Brine Line by volume for all planning periods. Wastewater desalination, which includes RO treatment of recycled water for discharge or indirect potable recharge increases by 500% over the planning period. Dry weather flow diversions that have a high salinity is a potential discharge to the Brine Line in the long term. Industrial discharges have a moderate increase while power generation and domestic flows remain about the same throughout the planning period.

Existing and Future Brine Line System Evaluation. Use the calibrated hydraulic model to evaluate existing and future system conditions to identify potential hydraulic issues, determine critical infrastructure and necessary improvements. Conduct a reliability and redundancy analysis to investigate and identify the potential for system enhancements that will prevent or minimize customer outages.

Future system conditions were modeled using the growth projections and planning periods. Although critical infrastructure was identified on Reach IV and Reach IV-A lower, the Brine Line system has the capacity for the projected flow conditions. Work is continuing on the reliability and redundancy analysis and will be presented in a Technical Memorandum with the system evaluation.

Capacity Management (30 MGD System), and Long-Term Planning Efforts. Investigate and identify the potential for system enhancements that will provide SAWPA with the ability to manage the capacity in the Brine Line to 30 MGD, including brine storage, flow reduction/brine concentration, additional treatment opportunities including BOD/TSS and PFAS, mainline flow recorders and SCADA. Work on this task will commence upon completion of the existing and future system evaluation.

Multi-Use Benefits for the Future. Identify and evaluate the potential for multi-use benefits for the Brine Line system. Work on multi-use benefits is continuing and will be presented in a Technical Memorandum.

Policy Considerations. Address questions that may necessitate the need to update or initiate new policy considerations such as lateral ownership, capacity buy-back program and how to pay for laterals, projects, and system expansion. Policy considerations will be developed by staff and the General Managers and presented to PA 24 for consideration and review.

Next Steps and Schedule
The next steps and schedule for completion of the Master Plan is as follows:

- Master Plan Update to PA – 24 December 5, 2023
- Policy Considerations review with GMs January 2024
- Draft Report February 2024
- Review with Member Agencies and Stakeholders February 2024
- PA – 24 Workshop March 5, 2024
- Incorporate Comments March 2024
- Final Report to PA – 24 April 2, 2024

RESOURCE IMPACTS
Sufficient funds for consultant services are included in the Fiscal Year 24 Budget Fund 240 (Brine Line Enterprise).

Attachments:
1. PowerPoint Presentation

SANTA ANA WATERSHED PROJECT AUTHORITY

INLAND EMPIRE BRINE LINE MASTER PLAN

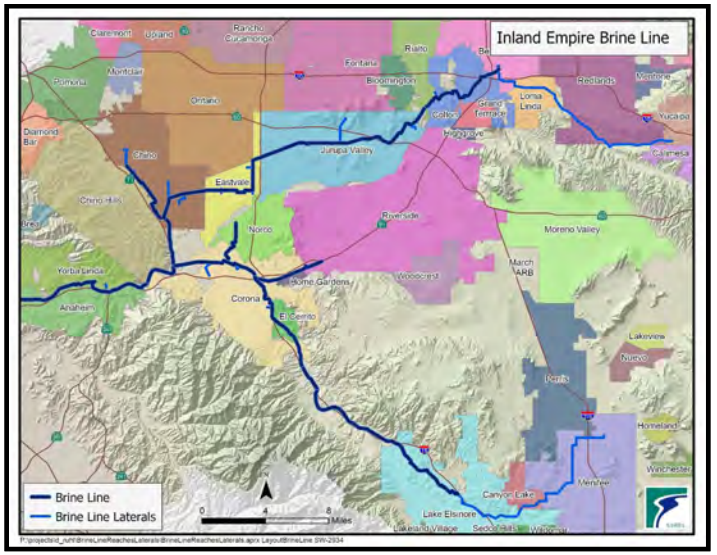
PA 24 Committee Meeting
Item No. 5.A
David Ruhl
Executive Manager of Engineering and Operations
December 5, 2023

Recommendation

- Receive and file a status report on the Inland Empire Brine Line Master Plan

Brine Line Master Plan

- Long-term planning document that addresses facility needs
- Manage and implement the growth and expansion of the Brine Line to best serve the watershed, our Member Agencies and current and future dischargers
- Benefits
  - Ability to make informed decisions
  - Focus resources and prioritize projects
  - Promote economic development
  - Maintain system reliability
  - Accommodate future growth
  - Meet future regulatory requirements



Brine Line Master Plan - Scope of Work

Update and calibrate the existing hydraulic Model

Market analysis, Member Agency and Stakeholder coordination, and future growth projections

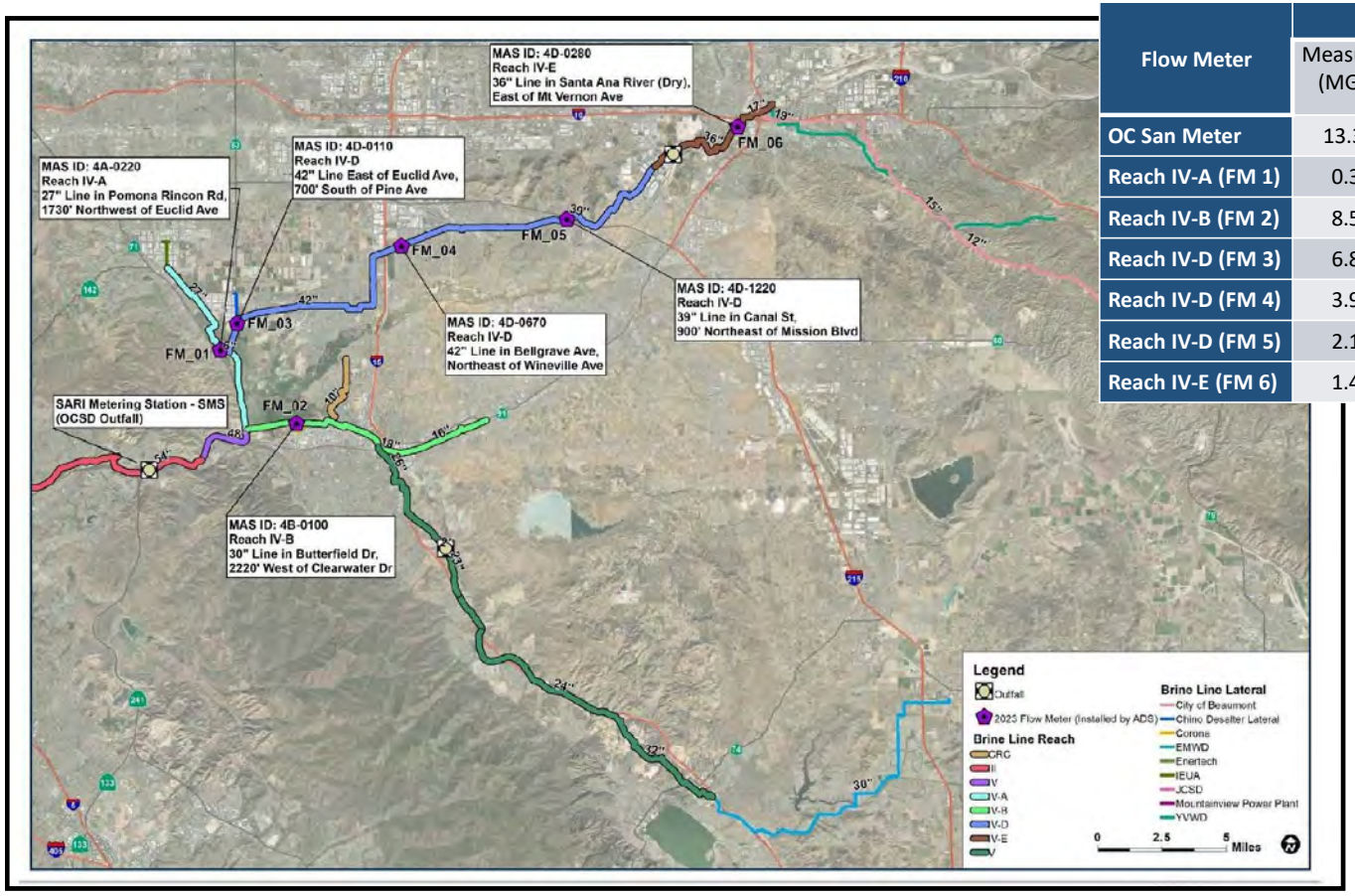
Existing and Future Brine Line System Evaluation

Capacity management and long-term planning efforts

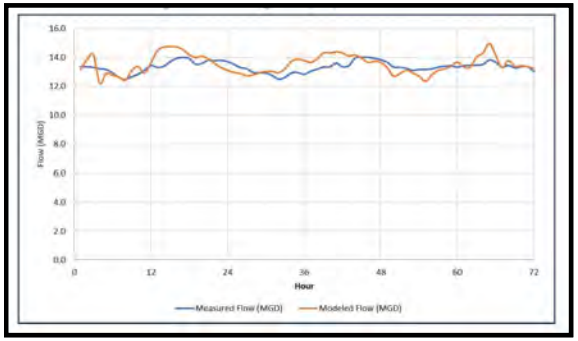
Multi-use benefits for the future

Policy considerations

Update and Calibrate the Existing Hydraulic Model



Flow Meter	Average Flows			Peak Flows		
	Measured (MGD)	Modeled (MGD)	% Diff	Measured (MGD)	Modeled (MGD)	% Diff
OC San Meter	13.34	13.53	1.4	14.02	14.99	6.9
Reach IV-A (FM 1)	0.31	0.30	3.9	0.53	0.56	6.8
Reach IV-B (FM 2)	8.53	6.77	20.6	9.17	7.35	19.9
Reach IV-D (FM 3)	6.87	6.48	5.8	7.74	7.54	2.5
Reach IV-D (FM 4)	3.98	3.71	6.9	4.76	4.54	4.6
Reach IV-D (FM 5)	2.13	1.75	17.5	2.41	2.08	13.4
Reach IV-E (FM 6)	1.40	1.46	3.9	1.60	1.70	6.5



Member Agency / Stakeholder Meetings

Date	Agency
February 23, 2023	**San Bernardino Valley Municipal Water District**
February 23, 2023	San Bernardino Municipal Water Department
February 23, 2023	City of Redlands
February 23, 2023	East Valley Water District
March 8, 2023	**Eastern Municipal Water District**
March 16, 2023	**Western Municipal Water District**
March 30, 2023	**Inland Empire Utilities Agency**
March 19, 2023	Chino Basin Desalter Authority
May 4, 2023	City of Corona
June 12, 2023	Elsinore Valley Municipal Water District
June 15, 2023	Jurupa Community Services District
June 15, 2023	Yucaipa Valley Water District
June 21, 2023	City of Colton
June 22, 2023	Riverside County Flood Control District
July 13, 2023	City of Beaumont
August 16, 2023	City of Chino
August 17, 2023	Temescal Valley Water District
August 17, 2023	City of Riverside
August 24, 2023	Rubidoux Community Services District

Industries that disposal of salty wastewater:

- Biotech Manufacturing
- Electronic Parts Manufacturers
- Medical Supply Manufacturing
- Computer Chip Manufacturers
- Commercial Laundries
- Food and Beverage Processing
- Groundwater desalters
- Ion Exchange Plants
- Power Plants
- Water Reclamation Facilities

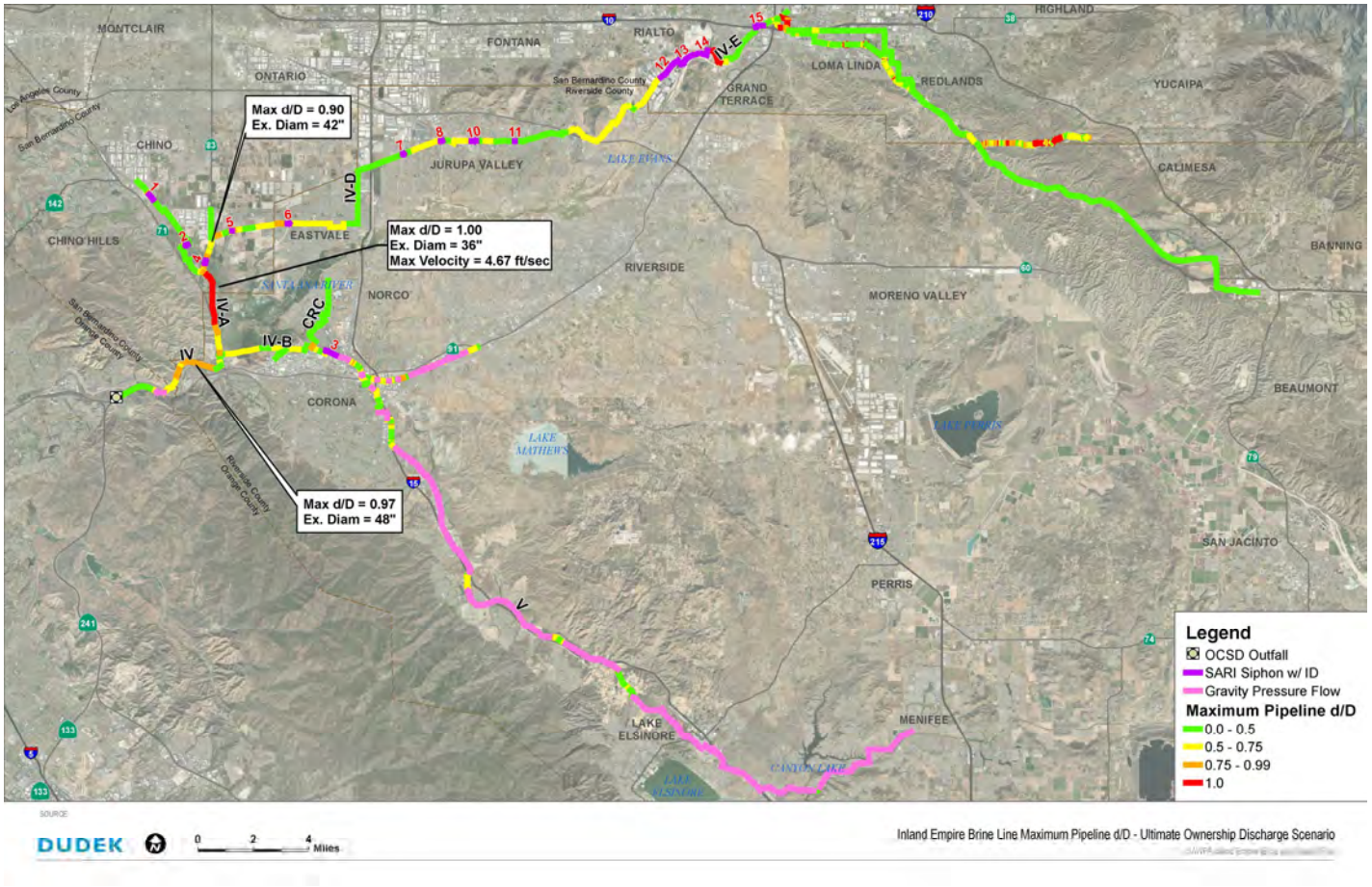
Market Analysis - Key information / concerns

- Near term Treatment and Disposal Capacity needs
  - YVWD 0.5 MGD
  - EVMWD 0.8 MGD
- Current projects and studies – Brine Line disposal needs not defined
  - Regional Recycled Water Facilities Plan - Valley District, East Valley, City of San Bernardino and City of Redlands - Feasibility study late 2024
  - Chino Basin Program
  - Southern Riverside County Regional Brine Line
- Factors influencing Agency Brine Disposal Needs
  - Recycled Water / Ground Water Recharge Projects
  - Potential PFAS regulations
  - Brine Line Capacity
- DWF diversions to the Brine Line
- Is an intertie with IEUA's north system a feasible option for greater reliability and redundancy?

Future Growth Projections

Flow Type	Current June 2023		Near – Term 2023 - 33		Long – Term 2033 - 58		Build – Out ➢ 2058	
Potable Water Production	10.1	74%	11.6	62%	16.9	63%	18.3	60%
Wastewater Desalination	1.0	7%	4.5	24%	5.9	22%	6.3	21%
Industrial	1.7	12%	1.9	10%	2.3	9%	2.9	9%
Power Generation	0.5	4%	0.6	3%	.6	2%	0.7	2%
Stormwater	0.0	0%	0.0	0%	1.0	4%	2.0	7%
Domestic	0.3	2%	0.3	2%	0.3	1%	0.4	1%
Total	**13.5 MGD**		**18.8 MGD**		**27.0 MGD**		**30.5 MGD**	

Existing and Future System Evaluation

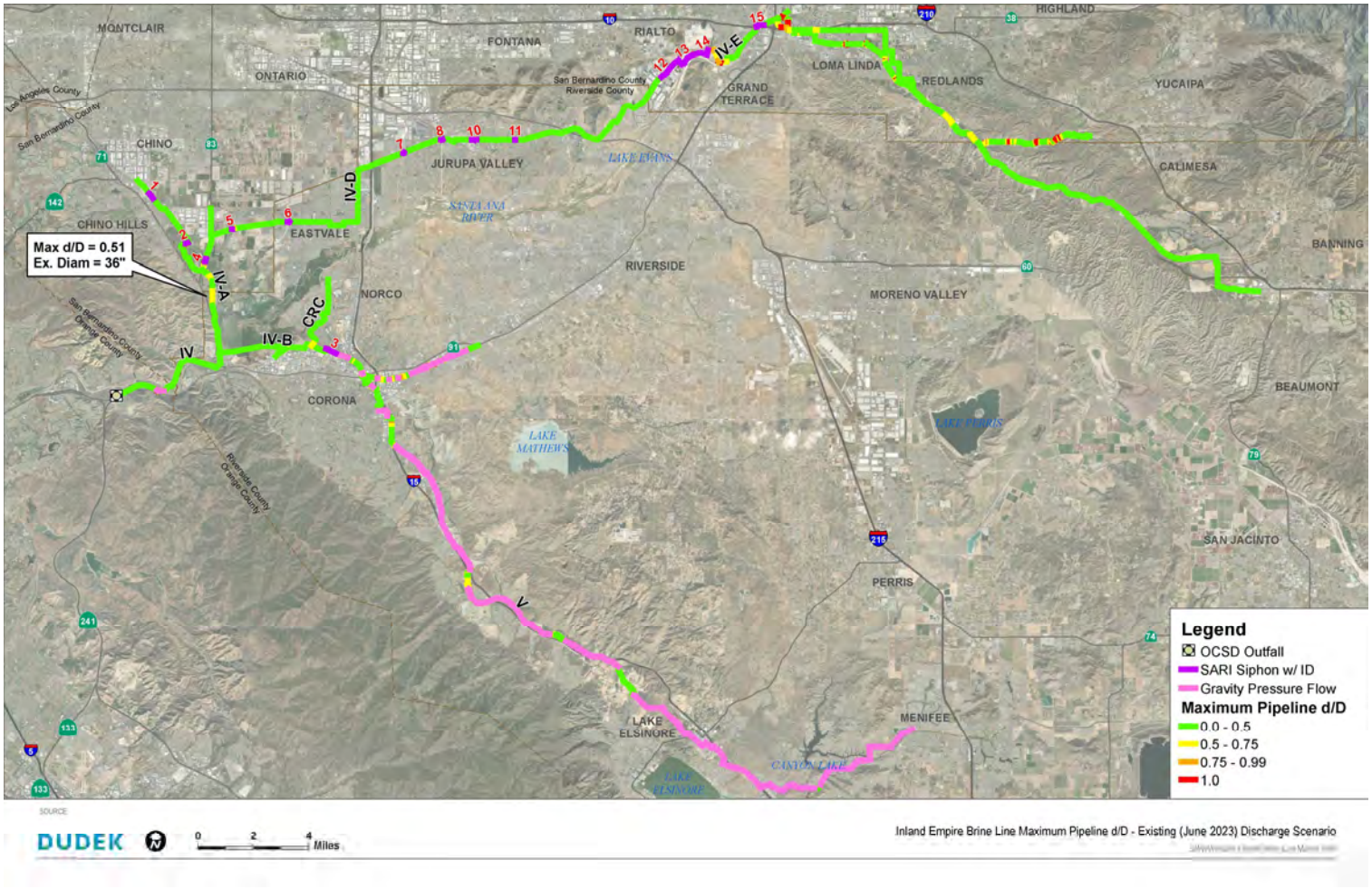


- Hydraulic Model
  - Current
  - Near – Term
  - Long – Term
  - Build – Out
  - Ownership

Agency	Pipeline Capacity (MGD)
SAWPA	0
CDA	3.670
EMWD	5.946
IEUA	4.130
VALLEY	7.738
Western	11.084
Total	32.568

- System Evaluation
  - Critical Infrastructure
  - System enhancements

Existing and Future System Evaluation – June 2023



Brine Line Master Plan

- Manage capacity (30 MGD System)
  - Storage
  - Brine concentration facilities
  - Other treatment opportunities
    - BOD/TSS
    - PFAS
- Multi – use benefits
  - In-line hydroelectric system as source of renewable energy
- Policy considerations
  - Lateral ownership
  - Capacity buy-back
  - How to pay for laterals, projects and system expansion

Next Steps and Schedule

• Master Plan update to PA – 24	December 5, 2023
• Policy Considerations (review with GMs)	January 2024
• Draft Report	February 2024
• Review with Member Agencies and Stakeholders	February 2024
• PA - 24 Workshop	March 5, 2024
• Incorporate comments	March 2024
• Final Report PA – 24	April 2, 2024

Questions?

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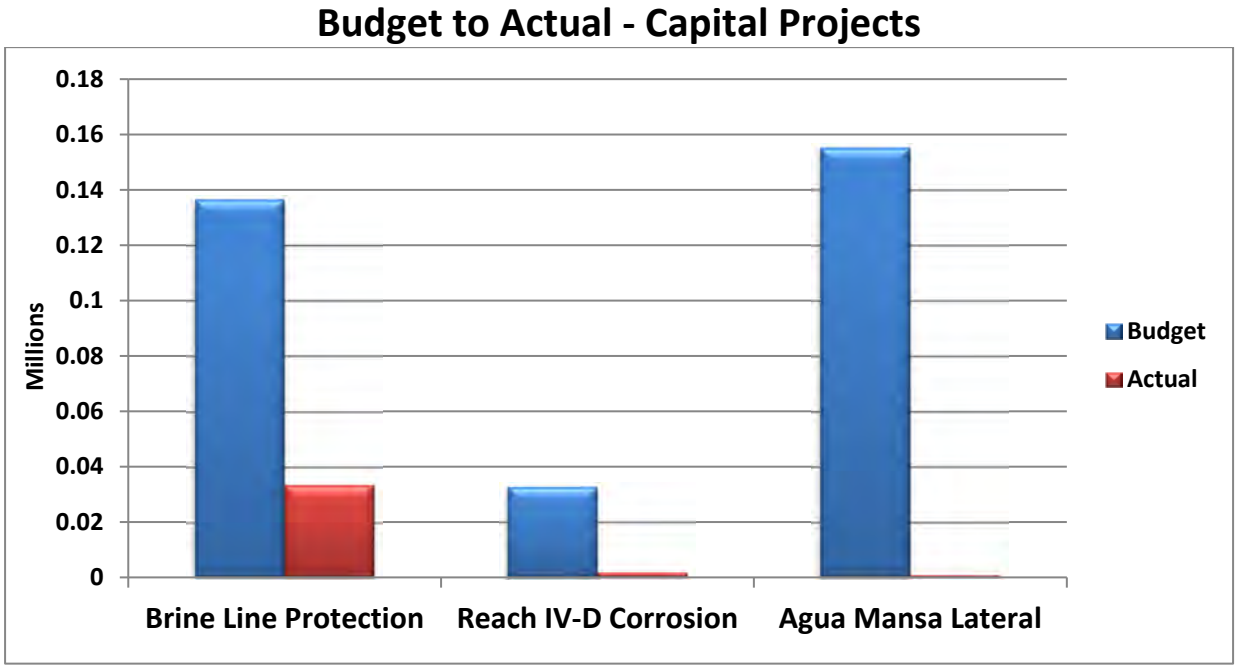
Santa Ana Watershed Project Authority
PA24 - Brine Line - Financial Report
July 2023

Staff comments provided on the last page are an integral part of this report.

Overview	This report highlights the Brine Line's key financial indicators for the Fiscal Year-to-Date (FYTD) through July 2023 unless otherwise noted.

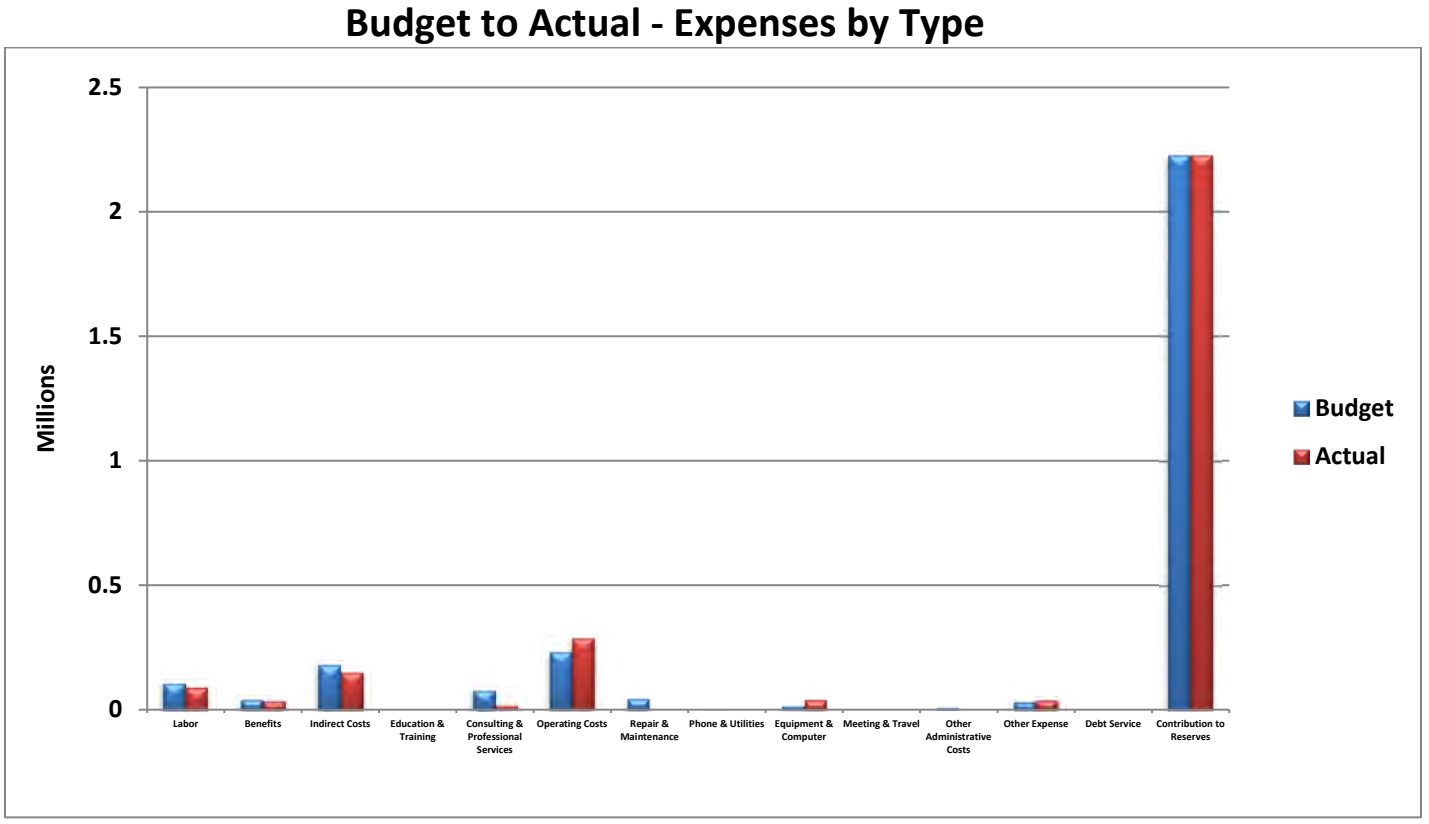
Brine Line - Capital Projects

Budget to Actual – Capital Projects				Concern
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Brine Line Protection	$ 1,639,115	$136,593	$33,543	$103,050
Reach IV-D Corrosion	391,577	32,631	1,853	30,778
Agua Mansa Lateral	1,862,445	155,204	886	154,318
Total Capital Costs	**$3,893,137**	**$324,428**	**$36,282**	**$288,146**

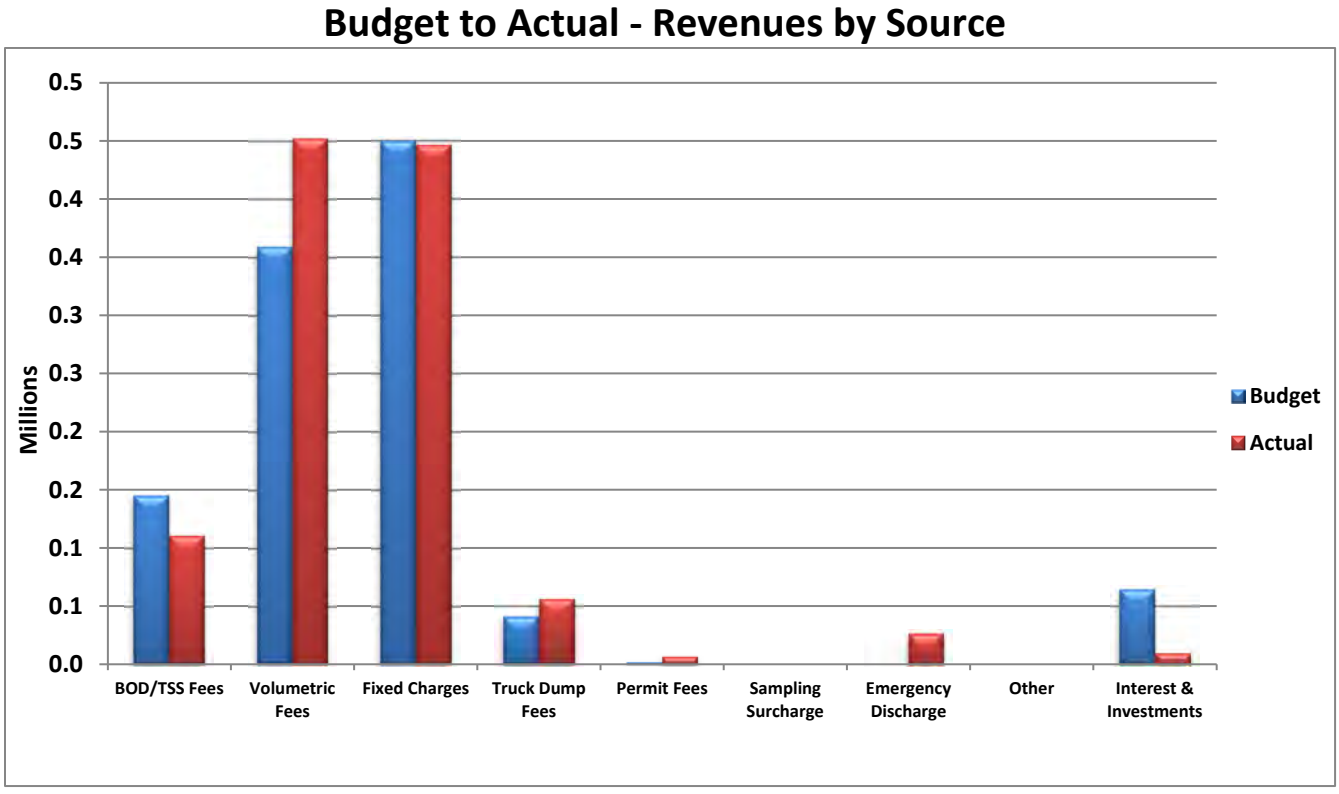


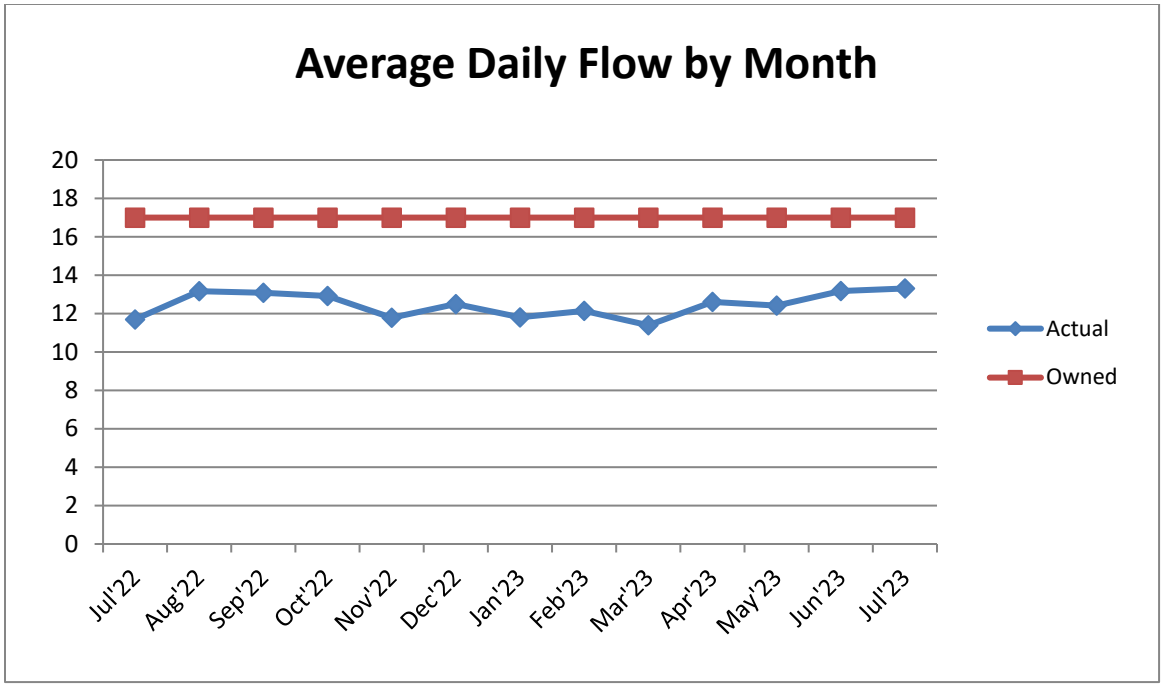
Brine Line – Operating

Budget to Actual - Expenses by Type				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Labor	$1,274,437	$106,203	$88,273	$17,930
Benefits	467,548	38,962	32,396	6,566
Indirect Costs	2,155,749	179,651	149,358	30,293
Education & Training	14,500	1,208	-	1,208
Consulting & Prof Svcs	930,000	77,500	18,165	59,335
Operating Costs	2,776,349	231,362	286,407	(55,045)
Repair & Maintenance	525,080	43,757	557	43,200
Phone & Utilities	12,000	1,000	765	235
Equip & Computers	188,706	15,726	37,341	(21,615)
Meeting & Travel	7,000	583	-	583
Other Admin Costs	89,915	7,493	538	6,955
Other Expense	355,551	29,629	37,167	(7,538)
Debt Service	1,709,476	-	-	-
Contribution to Reserves	2,225,309	2,225,309	2,225,309	-
Total	**$12,731,620**	**$2,958,383**	**$2,876,276**	**$82,107**



Budget to Actual - Revenues by Source				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
BOD/TSS Fees	$1,738,500	$144,875	$110,547	($34,328)
Volumetric Fees	4,308,095	359,008	452,030	93,022
Fixed Charges	5,396,025	449,669	446,292	(3,377)
Truck Dump Fees	492,400	41,033	56,058	15,025
Permit Fees	26,600	2,217	6,800	4,583
Sampling Surcharge	-	-	-	-
Lease Capacity Revenue	-	-	26,691	26,691
Emergency Discharge Fees	-	-	-	-
Use of Reserves	-	-	-	-
Other Revenue	-	-	33	33
Interest & Investments	770,000	64,167	9,934	(54,233)
Total	**$12,731,620**	**$1,060,969**	**$1,108,385**	**$47,416**

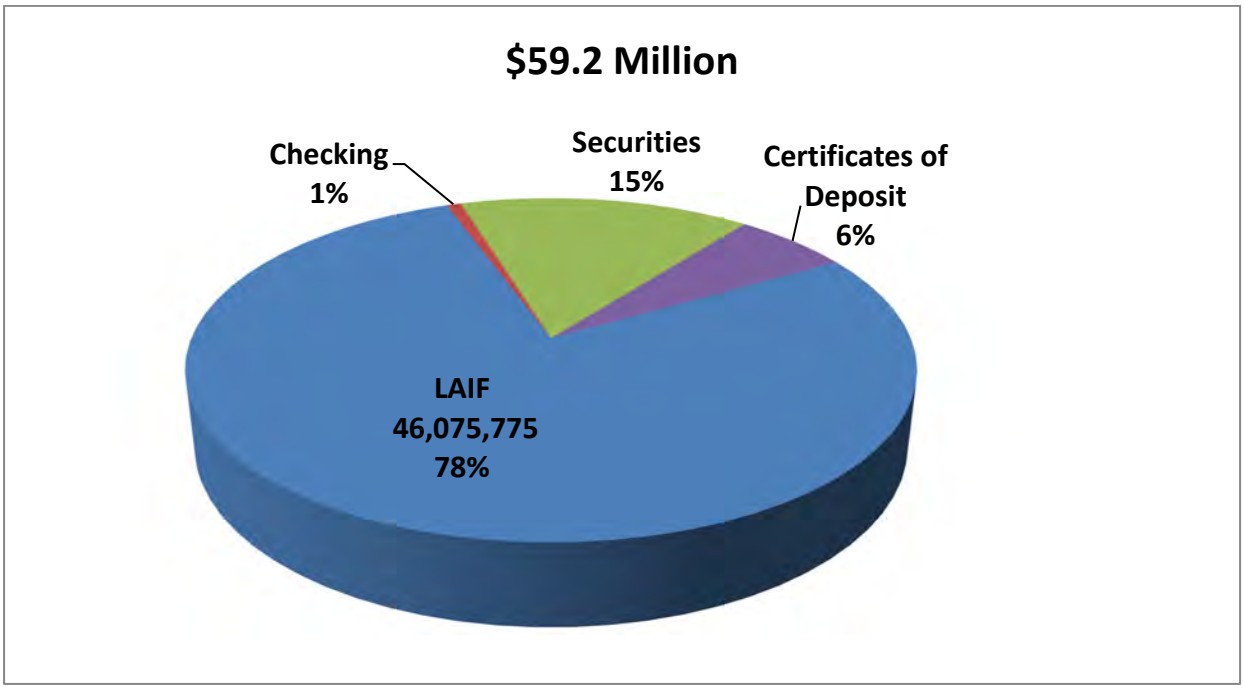




Total Discharge by Agency
(in million gallons)

Discharger	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	Total
Chino Desalter Authority	112.9255						112.9255
Eastern Municipal Water District	118.6649						118.6649
Inland Empire Utilities Agency	14.0668						14.0668
San Bernardino Valley MWD	45.5391						45.5391
Western Municipal Water District	129.1791						129.1791
SAWPA Adjustment	2.0000						2.0000
Truck Discharge	3.3964						3.3964
Total	**425.7718**						**425.7718**

Total Cash & Investments



Reserve Fund Balance

	Amount
Debt Retirement	$2,899,430
Pipeline Replacement & Capital Investment	34,509,700
OC San Pipeline Rehabilitation	2,773,949
Pipeline Capacity Management	12,330,705
OC San Future Treatment & Disposal Capacity	1,887,871
Brine Line Operating	2,321,017
Brine Line Operating Cash	2,505,100
Total Reserves	**$59,227,772**

Legend		
		Compared to Budget
	Ahead or Favorable	Above +5% Favorable Revenue or Expense Variance
	On Track	+5% to -2% Variance
	Behind	-3% to -5% Variance
	Concern	Below -5% Variance

Staff Comments

For this month's report, the item(s) explained below are either "behind", a "concern", or have changed significantly from the prior month.

Capital Projects are 88.8% below budget. It is expected that they will be on target by the end of the year.

Santa Ana Watershed Project Authority
PA24 - Brine Line - Financial Report
August 2023

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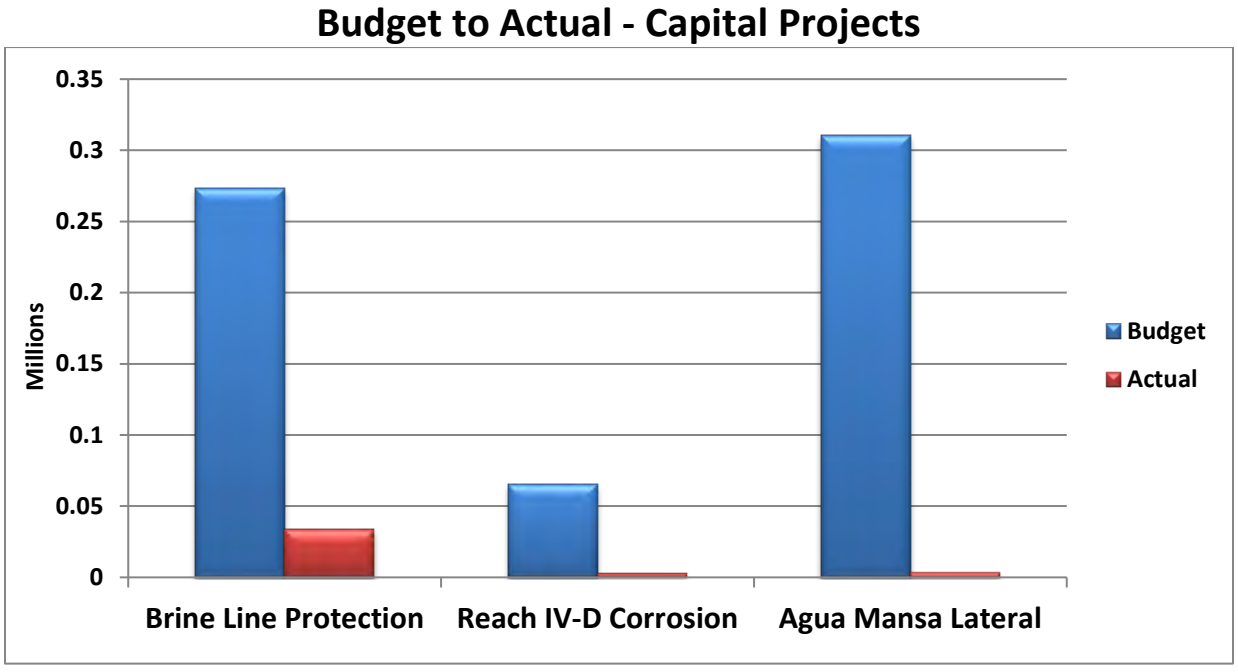
Overview	This report highlights the Brine Line's key financial indicators for the Fiscal Year-to-Date (FYTD) through August 2023 unless otherwise noted.

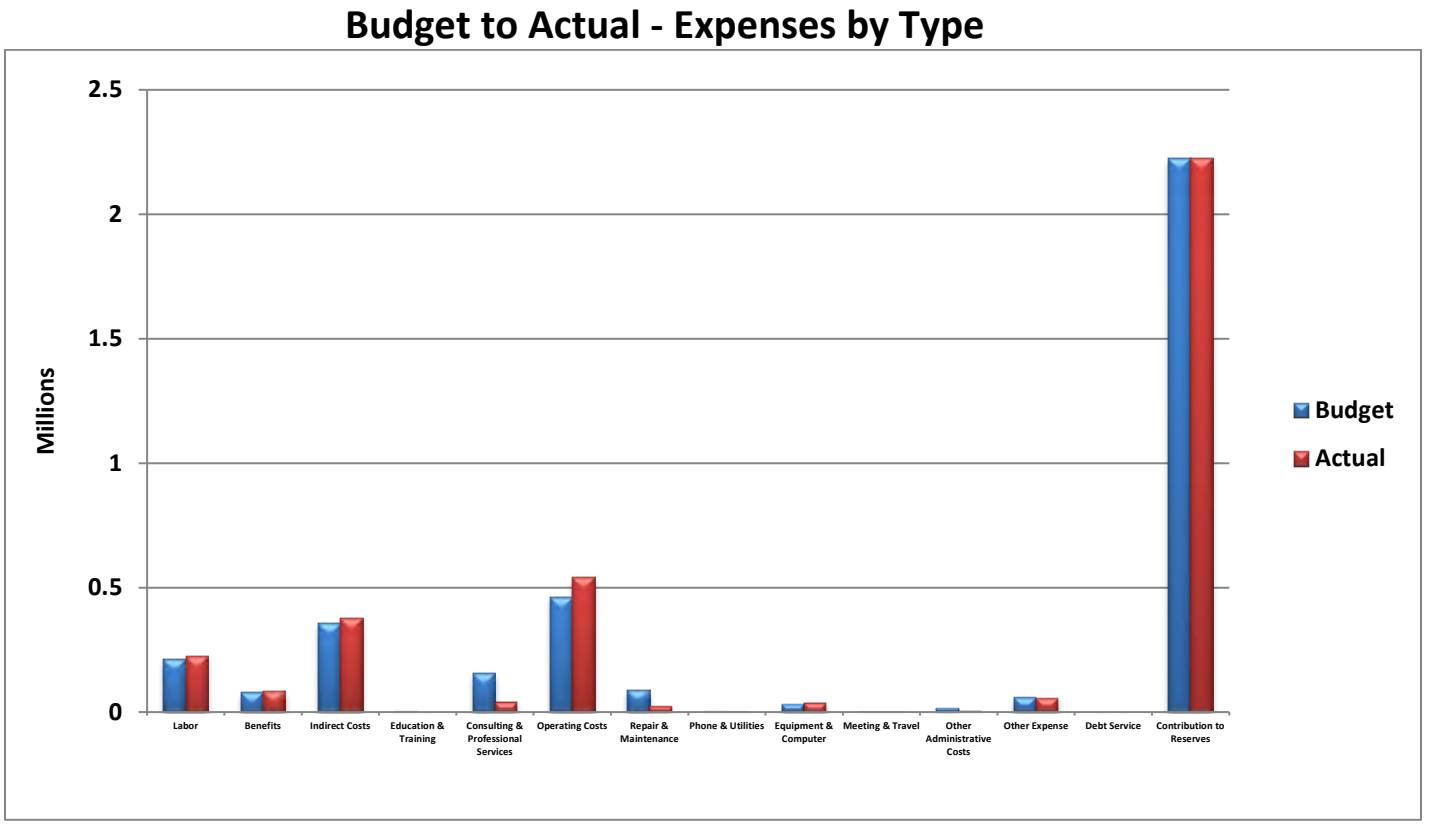
Brine Line - Capital Projects

Budget to Actual – Capital Projects				Concern
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Brine Line Protection	$ 1,639,115	$273,186	$33,717	$239,469
Reach IV-D Corrosion	391,577	65,263	2,965	62,298
Agua Mansa Lateral	1,862,445	310,408	3,707	306,701
Total Capital Costs	**$3,893,137**	**$648,857**	**$40,389**	**$608,468**

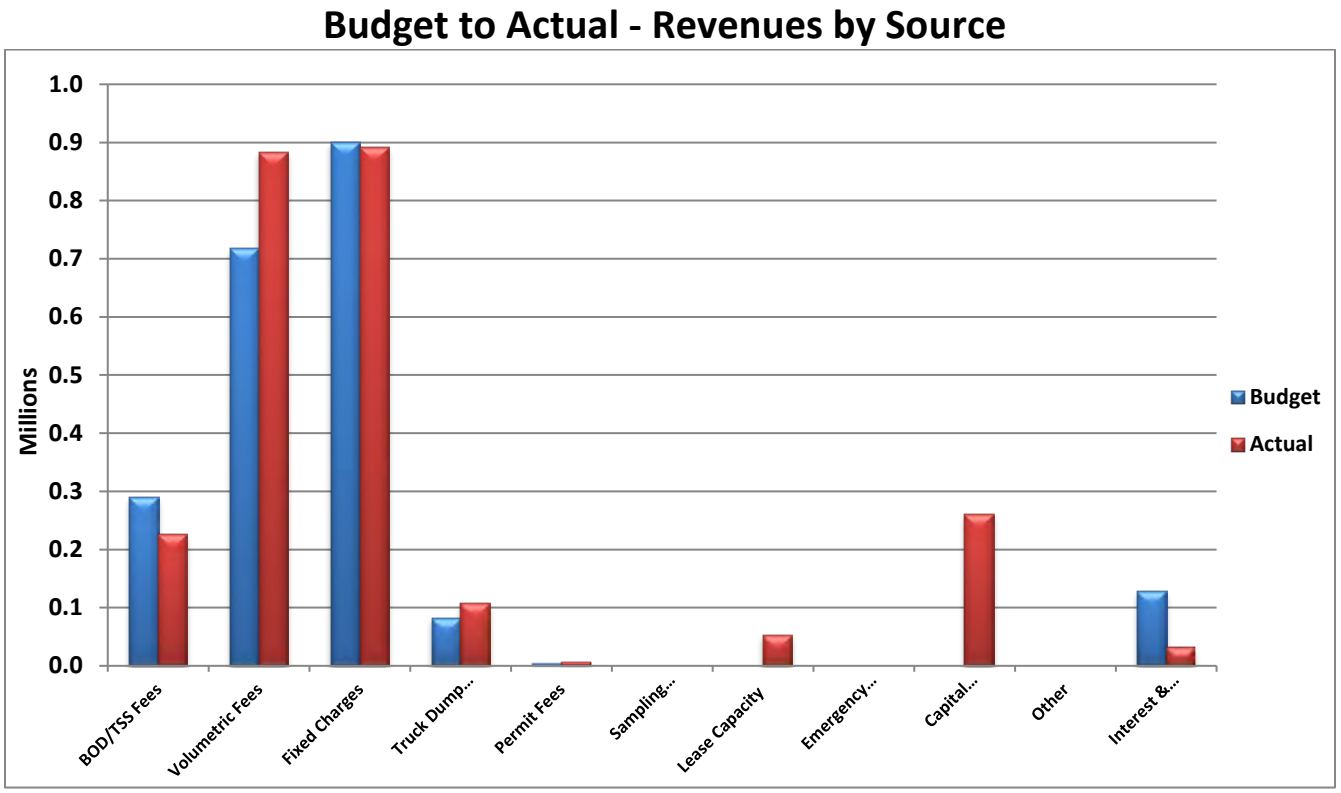


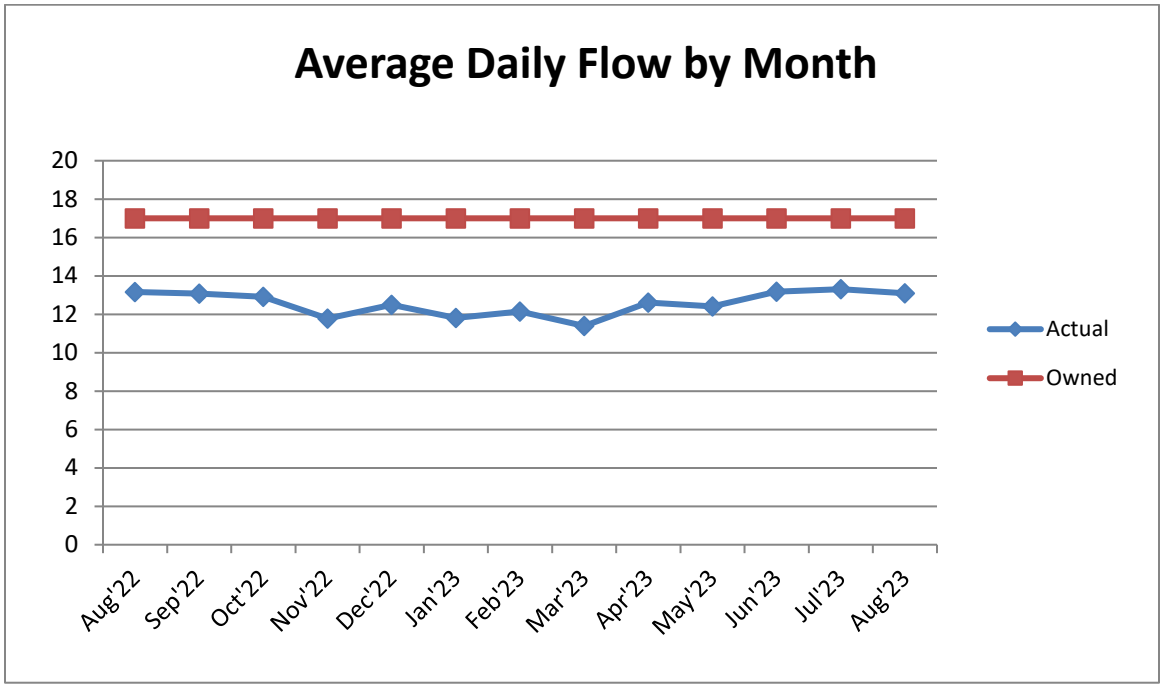
Brine Line – Operating

Budget to Actual - Expenses by Type				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Labor	$1,274,437	$212,406	$223,594	($11,188)
Benefits	467,548	77,925	82,059	(4,134)
Indirect Costs	2,155,749	359,297	378,320	(19,023)
Education & Training	14,500	2,417	-	2,417
Consulting & Prof Svcs	930,000	155,000	40,288	114,712
Operating Costs	2,776,349	462,725	541,454	(78,729)
Repair & Maintenance	525,080	87,513	22,795	64,718
Phone & Utilities	12,000	2,000	1,614	386
Equip & Computers	188,706	31,451	37,405	(5,954)
Meeting & Travel	7,000	1,167	20	1,147
Other Admin Costs	89,915	14,986	4,212	10,774
Other Expense	355,551	59,259	55,927	3,332
Debt Service	1,709,476	-	-	-
Contribution to Reserves	2,225,309	2,225,309	2,225,309	-
Total	**$12,731,620**	**$3,691,455**	**$3,612,997**	**$78,458**



Budget to Actual - Revenues by Source				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
BOD/TSS Fees	$1,738,500	$289,750	$225,611	($64,139)
Volumetric Fees	4,308,095	718,016	882,283	164,267
Fixed Charges	5,396,025	899,338	892,585	(6,753)
Truck Dump Fees	492,400	82,067	107,594	25,527
Permit Fees	26,600	4,433	6,800	2,367
Sampling Surcharge	-	-	-	-
Lease Capacity Revenue	-	-	53,381	53,381
Emergency Discharge Fees	-	-	567	567
Use of Reserves	-	-	-	-
Capital Contributions - RBF	-	-	260,432	260,432
Other Revenue	-	-	67	67
Interest & Investments	770,000	128,333	31,013	(97,320)
Total	**$12,731,620**	**$2,121,937**	**$2,460,333**	**$338,396**

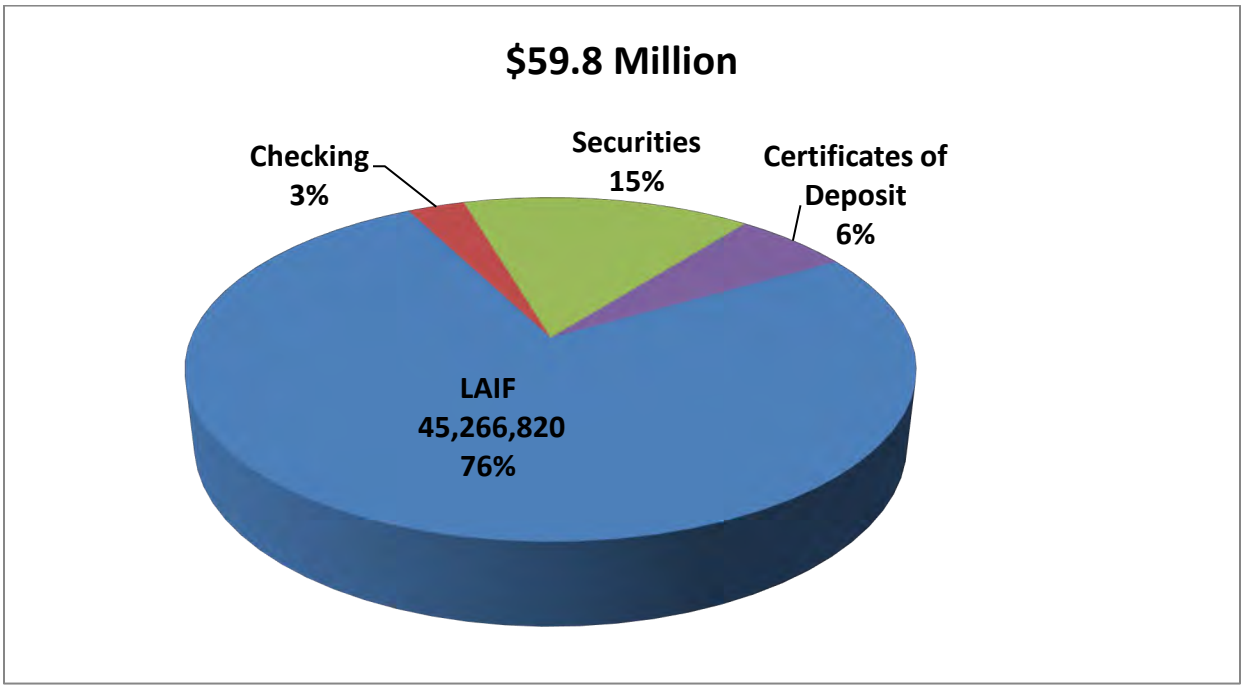




Total Discharge by Agency
(in million gallons)

Discharger	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	Total
Chino Desalter Authority	112.9255	98.9731					211.8986
Eastern Municipal Water District	118.6649	113.3889					232.0538
Inland Empire Utilities Agency	14.0668	13.8985					27.9653
San Bernardino Valley MWD	45.5391	45.0113					90.5504
Western Municipal Water District	129.1791	128.7686					257.9477
SAWPA Adjustment	2.0000	2.5000					4.5000
Truck Discharge	3.3964	3.0670					6.4634
Total	**425.7718**	**405.6074**					**831.3792**

Total Cash & Investments



Reserve Fund Balance

	Amount
Debt Retirement	$2,899,430
Pipeline Replacement & Capital Investment	34,489,861
OC San Pipeline Rehabilitation	2,773,949
Pipeline Capacity Management	12,330,705
OC San Future Treatment & Disposal Capacity	1,887,871
Brine Line Operating	2,179,659
Brine Line Operating Cash	3,213,192
Total Reserves	**$59,774,667**

Legend		
		Compared to Budget
	Ahead or Favorable	Above +5% Favorable Revenue or Expense Variance
	On Track	+5% to -2% Variance
	Behind	-3% to -5% Variance
	Concern	Below -5% Variance

Staff Comments

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Capital Projects are 93.8% below budget. It is expected that they will be on target by the end of the year.

Santa Ana Watershed Project Authority
PA24 - Brine Line - Financial Report
September2023

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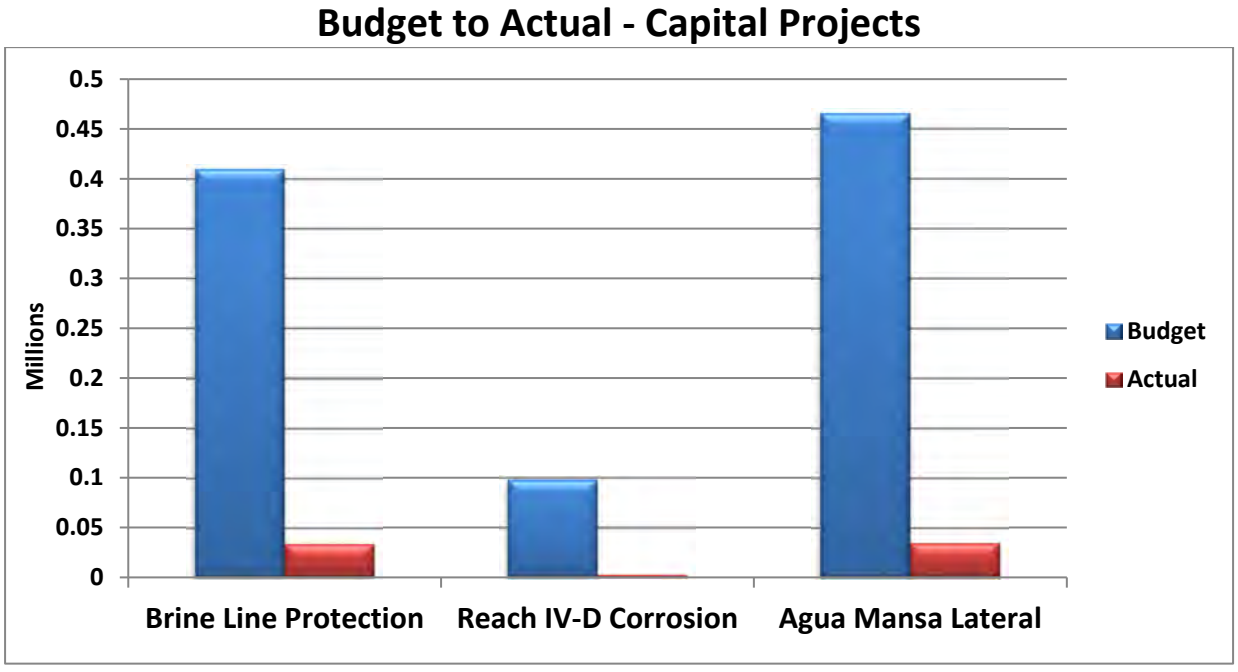
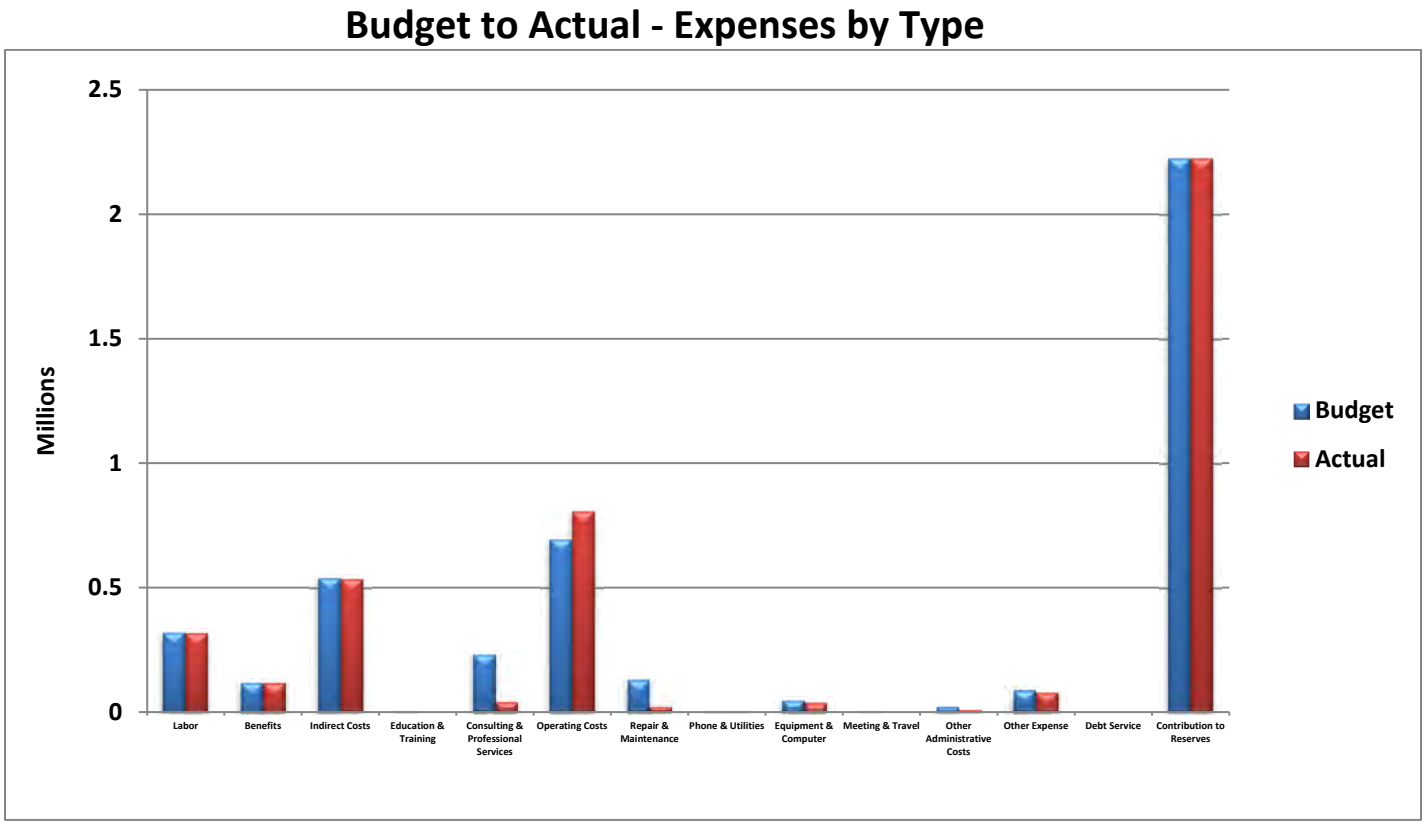
Brine Line - Capital Projects

Budget to Actual – Capital Projects				Concern
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Brine Line Protection	$ 1,639,115	$409,779	$33,891	$375,888
Reach IV-D Corrosion	391,577	97,894	2,994	94,900
Agua Mansa Lateral	1,862,445	465,611	34,743	430,868
Total Capital Costs	**$3,893,137**	**$973,284**	**$71,628**	**$901,656**

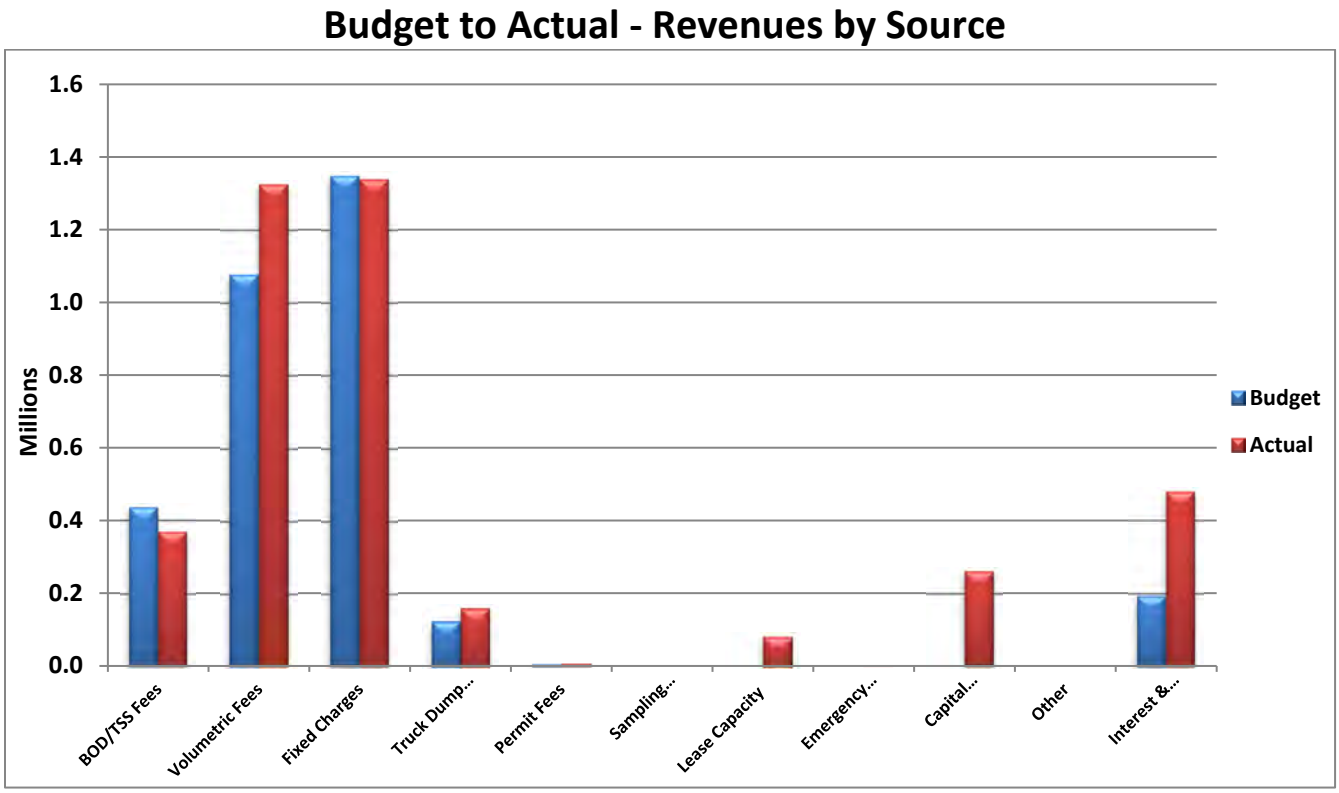


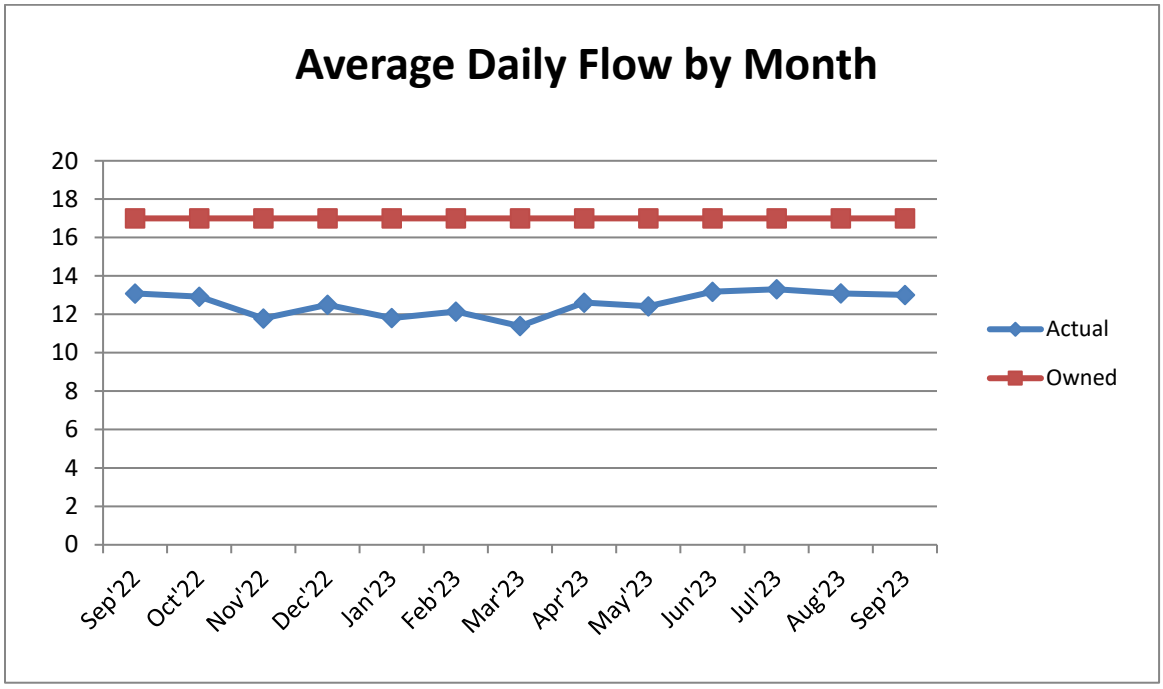
Brine Line – Operating

Budget to Actual - Expenses by Type				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
Labor	$1,274,437	$318,609	$316,805	$1,804
Benefits	467,548	116,887	116,267	620
Indirect Costs	2,155,749	538,942	536,034	2,908
Education & Training	14,500	3,625	-	3,625
Consulting & Prof Svcs	930,000	232,500	43,796	188,704
Operating Costs	2,776,349	694,087	805,711	(111,623)
Repair & Maintenance	525,080	131,270	24,049	107,221
Phone & Utilities	12,000	3,000	2,448	552
Equip & Computers	188,706	47,177	37,678	9,499
Meeting & Travel	7,000	1,750	20	1,730
Other Admin Costs	89,915	22,479	10,590	11,889
Other Expense	355,551	88,888	79,957	8,931
Debt Service	1,709,476	-	-	-
Contribution to Reserves	2,225,309	2,225,309	2,225,309	-
Total	**$12,731,620**	**$4,424,523**	**$4,198,663**	**$225,860**



Budget to Actual - Revenues by Source				Favorable
	Annual Budget	FYTD Budget	FYTD Actual	Favorable (Unfavorable) Variance
BOD/TSS Fees	$1,738,500	$434,625	$367,691	($66,934)
Volumetric Fees	4,308,095	1,077,024	1,325,344	248,320
Fixed Charges	5,396,025	1,349,006	1,338,877	(10,129)
Truck Dump Fees	492,400	123,100	158,443	35,343
Permit Fees	26,600	6,650	6,800	150
Sampling Surcharge	-	-	-	-
Lease Capacity Revenue	-	-	80,072	80,072
Emergency Discharge Fees	-	-	567	567
Use of Reserves	-	-	-	-
Capital Contributions - RBF	-	-	260,432	260,432
Other Revenue	-	-	100	100
Interest & Investments	770,000	192,500	477,893	285,393
Total	**$12,731,620**	**$3,182,905**	**$4,016,219**	**$833,314**

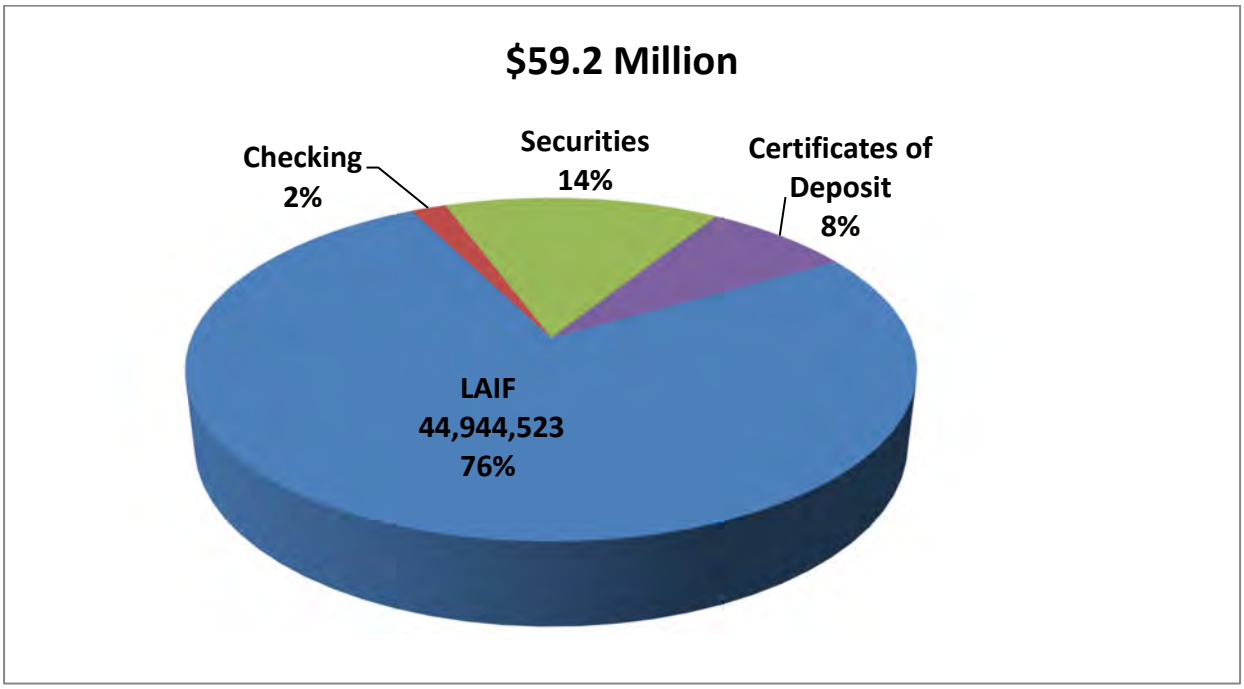




Total Discharge by Agency
(in million gallons)

Discharger	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	Total
Chino Desalter Authority	112.9255	98.9731	115.9900				327.8886
Eastern Municipal Water District	118.6649	113.3889	120.1618				352.2156
Inland Empire Utilities Agency	14.0668	13.8985	13.1309				41.0962
San Bernardino Valley MWD	45.5391	45.0113	43.0704				133.6208
Western Municipal Water District	129.1791	128.7686	119.3664				377.3141
SAWPA Adjustment	2.0000	2.5000	1.5000				6.0000
Truck Discharge	3.3964	3.0670	3.0422				9.5056
Total	**425.7718**	**405.6074**	**416.2617**				**1,247.6409**

Total Cash & Investments



Reserve Fund Balance

	Amount
Debt Retirement	$2,899,430
Pipeline Replacement & Capital Investment	34,592,116
OC San Pipeline Rehabilitation	2,773,949
Pipeline Capacity Management	12,330,705
OC San Future Treatment & Disposal Capacity	1,887,871
Brine Line Operating	2,179,659
Brine Line Operating Cash	2,581,116
Total Reserves	**$59,244,846**

Legend		
		Compared to Budget
	Ahead or Favorable	Above +5% Favorable Revenue or Expense Variance
	On Track	+5% to -2% Variance
	Behind	-3% to -5% Variance
	Concern	Below -5% Variance

Staff Comments

For this month's report, the item(s) explained below are either "behind", a "concern", or have changed significantly from the prior month.

Capital Projects are 92.6% below budget. It is expected that they will be on target by the end of the year.

SANTA ANA WATERSHED PROJECT AUTHORITY

SAWPA

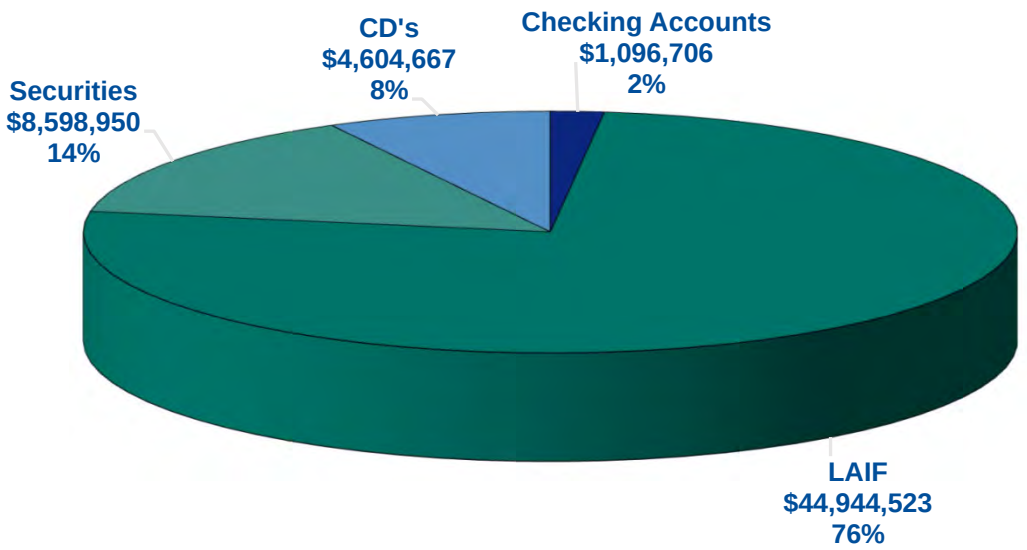
Financial Report for the Inland Empire Brine Line Enterprise/CIP for the1st Quarter Ending September 30, 2023

Agenda

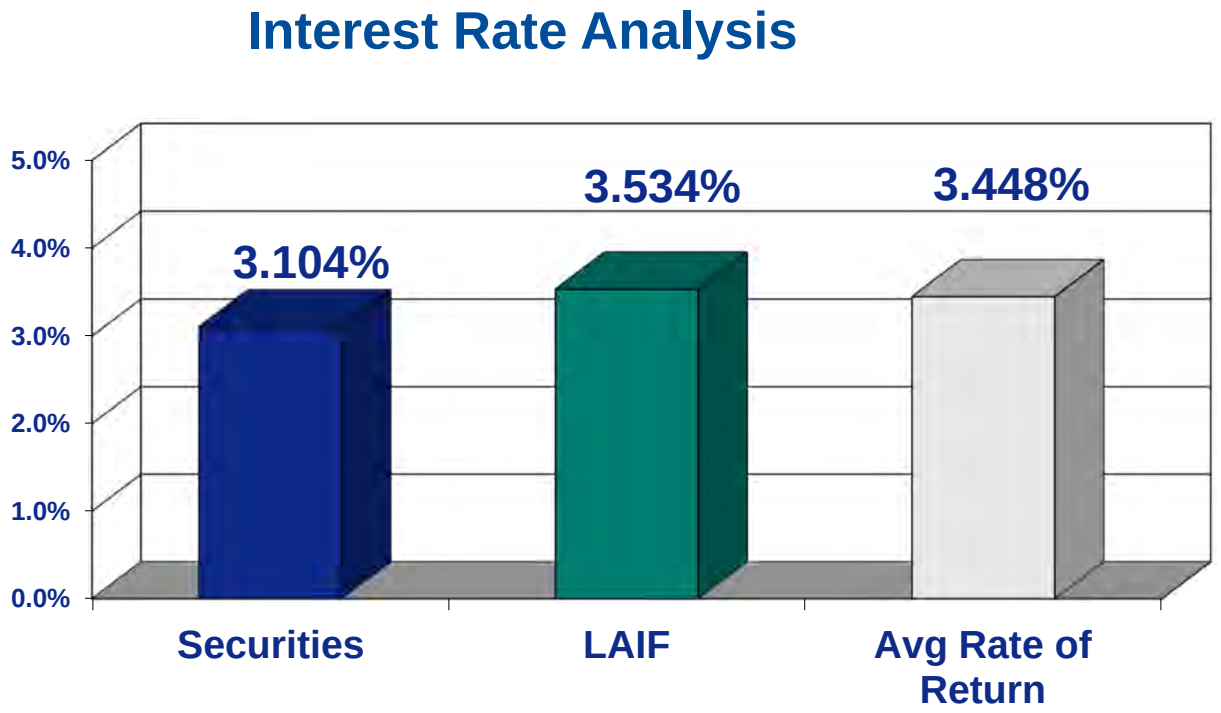
- Cash & Investments
- Reserve Account Balances
- Transfer, Uses, and Contributions from/to Reserves
- Enterprise Revenues
- Enterprise Expenses
- Enterprise Performance
- Capital Improvement Program

Cash & Investments

$59,244,846



Cash & Investments



Reserve Account Balance

Reserve Account	Balance
Debt Retirement	$2,899,430
Pipeline Replacement & Capital Investment	34,592,116
OC San Pipeline Rehabilitation	2,773,949
Pipeline Capacity Management	12,330,705
OC San Future Treatment & Disposal Capacity	1,887,871
Brine Line Operating	2,179,659
Operating Cash	2,581,116
Total Reserves	**$59,244,846**

Reserve Account Balance

Reserve	Balance @ 12/31/22	Balance @ 03/31/2023	Balance @ 06/30/2023	Balance @ 09/30/2023
Self Insurance	$4,374,998	$-	$-	$-
Debt Retirement	2,844,366	2,858,445	2,876,283	2,899,430
Pipeline Replacement & Capital Investment	25,546,733	31,457,768	32,045,367	34,592,116
OC San Pipeline Rehabilitation	2,402,137	2,414,028	2,429,092	2,773,949
Pipeline Capacity Mgmt	12,096,528	12,156,407	12,232,268	12,330,705
OC San Future Treatment & Disposal Capacity	1,852,018	1,861,185	1,872,800	1,887,871
Flow Imbalance Reserve	85,014	-	-	-
Rate Stabilization Reserve	1,037,820	-	-	-
Brine Line Operating	2,276,938	2,288,209	2,302,489	2,179,659
Operating Cash	3,072,232	3,802,229	3,451,591	2,581,116
Total	**$55,588,784**	**$56,838,271**	**$57,209,890**	**$59,244,846**

Transfers,Uses, and Contributions to/from Reserves

Pipeline Replacement & Capital Investment

- Contribution of $1,900,000
- RBF Loan Payment #2 of $291,684
- Transfer of $141,358 from excess Operating Reserve

OC San Pipeline Rehabilitation

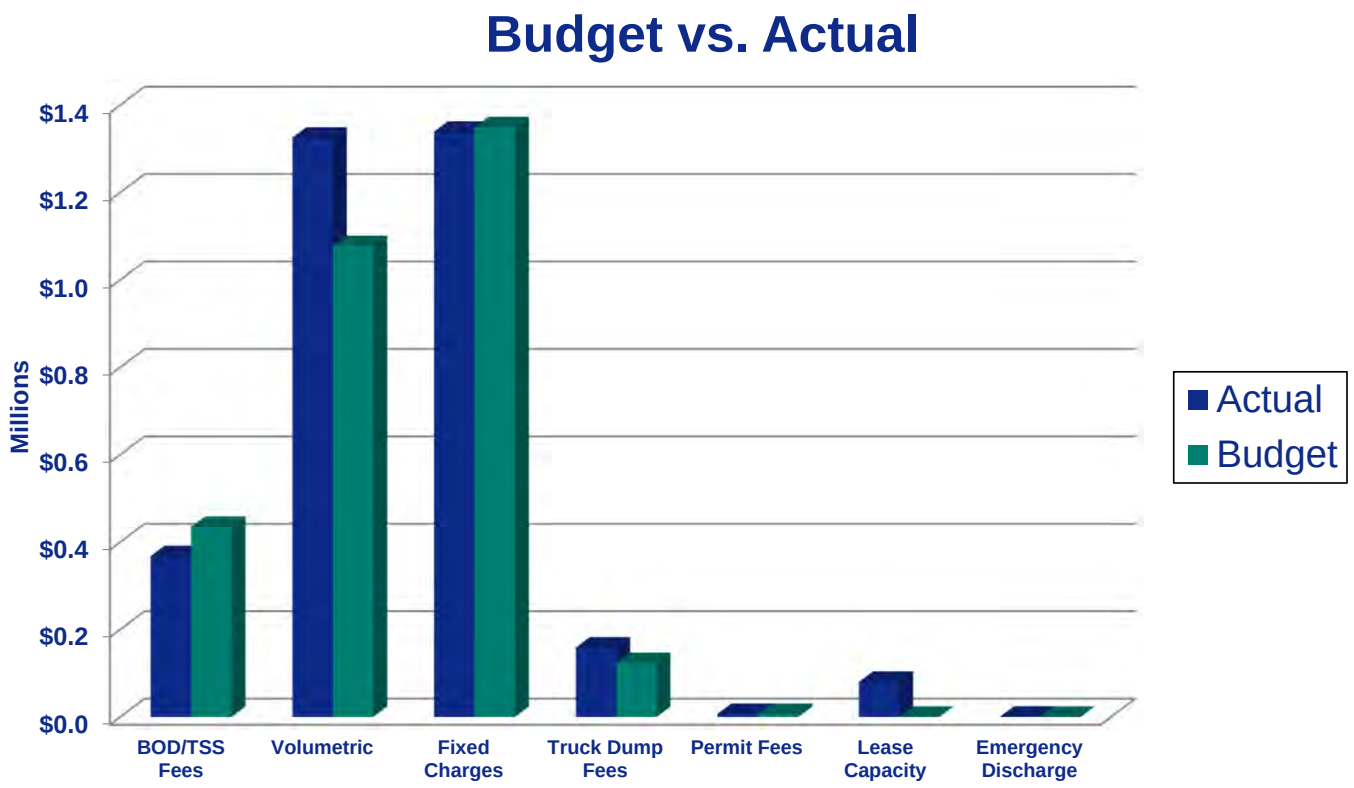
- Contribution of $325,309

Interest Earned (All Reserve Funds) - $477,893

Total Operating Revenues

Source	Actual	Budget	Variance Positive/(Negative)
BOD/TSS Fees	$367,691	$434,625	($66,934)
Volumetric Fees	1,325,344	1,077,024	248,320
Fixed Charges	1,338,877	1,349,006	(10,129)
Truck Discharge	158,443	123,100	35,343
Permit Fees	6,800	6,650	150
Lease Capacity Revenue	80,072	0	80,072
Emergency Discharge Fees	567	0	567
Total Operating Revenues	$3,277,794	$2,990,405	$287,389

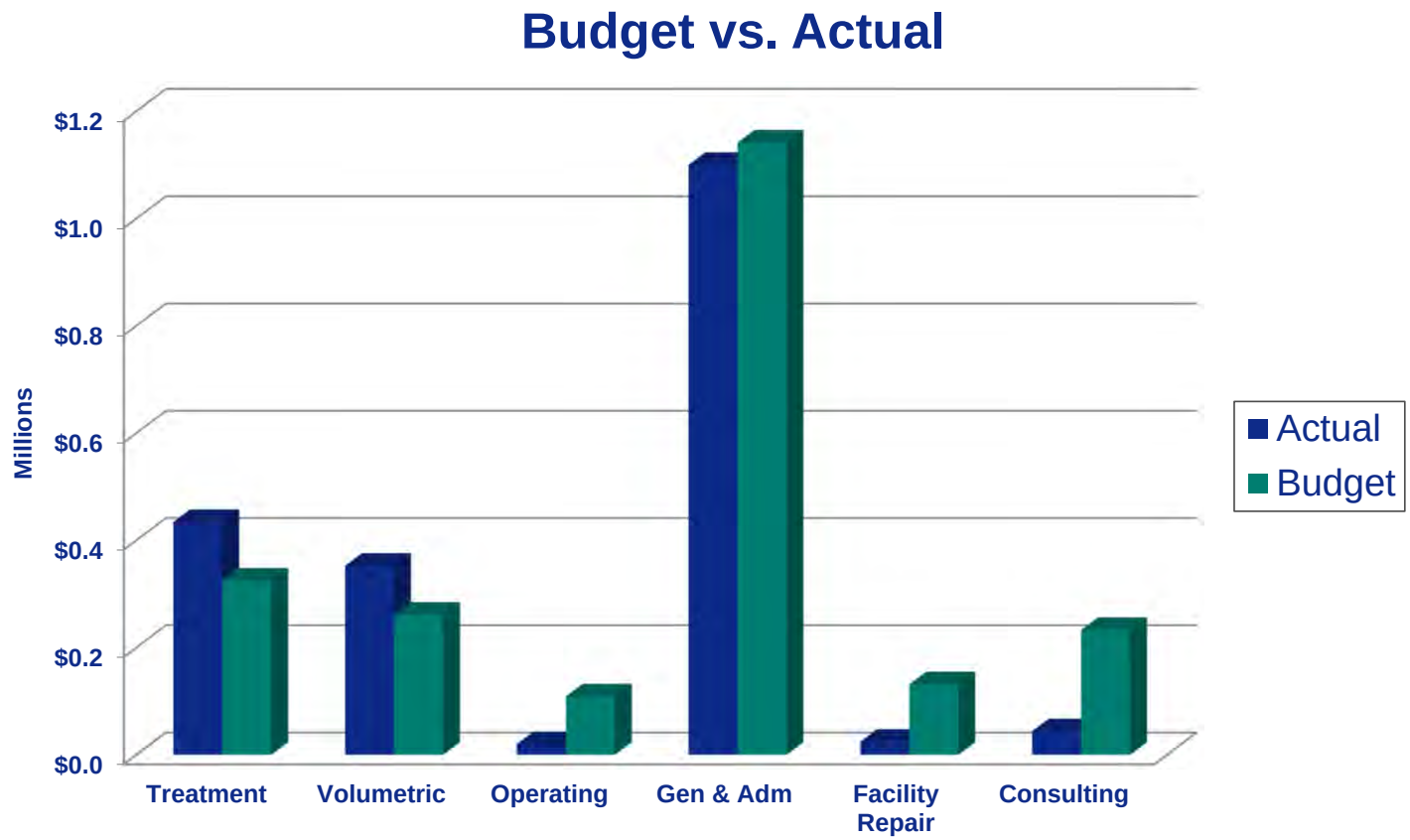
Operating Revenues vs. Budget



Total Operating Expenses

Source	Actual	Budget	Variance Positive/(Negative)
Treatment Costs	($433,857)	($324,625)	($109,232)
Volumetric Costs	(352,166)	(260,784)	(91,382)
Operating Costs	(19,688)	(108,678)	88,990
General & Administration	(1,099,799)	(1,141,357)	41,558
Facility Repair & Maintenance	(24,049)	(131,270)	107,221
Consulting & Prof. Services	(43,796)	(232,500)	188,704
Total Operating Expenses	($1,973,354)	($2,199,214)	$225,860

Operating Expenses vs. Budget



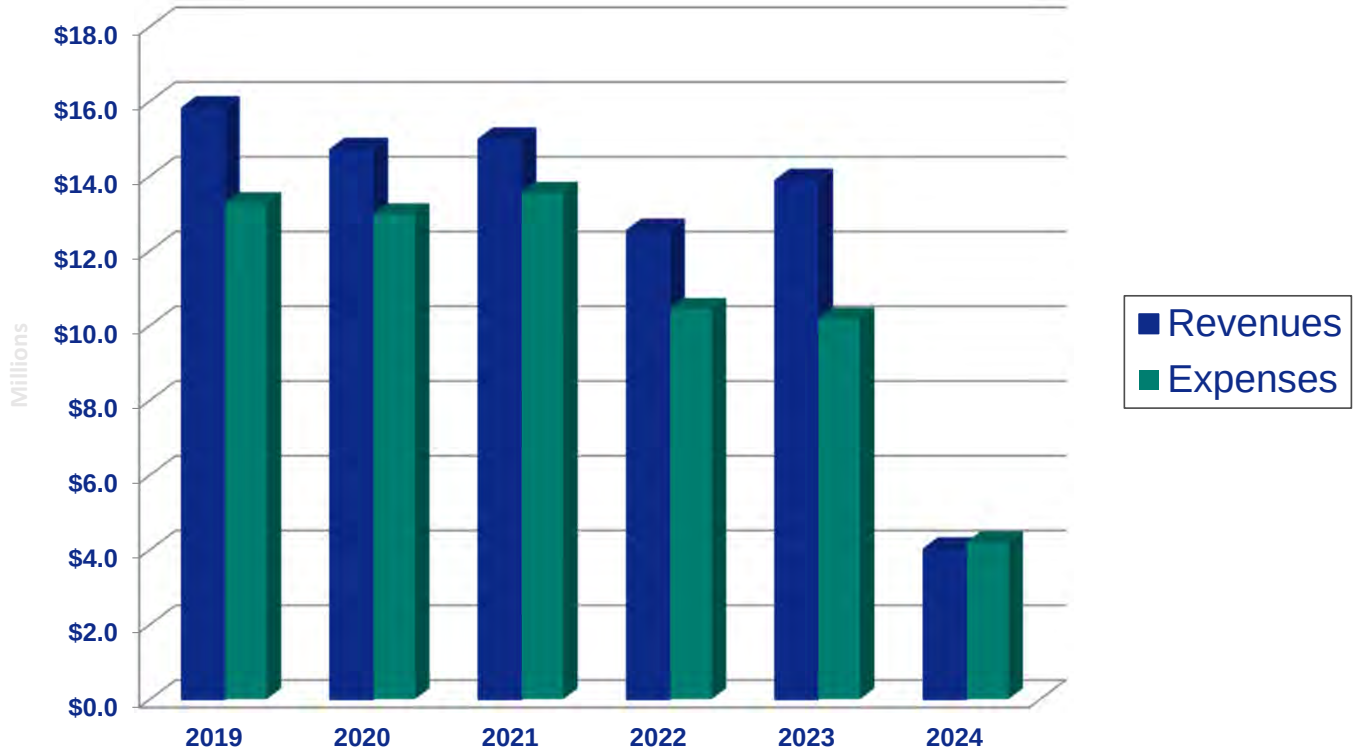
Non-Operating Revenues and Expenses

Source	Actual	Budget	Variance Positive/(Negative)
Interest & Investments	$477,893	$192,500	$285,393
Other Income	100	0	100
Capital Contribution – RBF	260,432	0	260,432
Contributions to Reserves	(2,225,309)	(2,225,309)	0
Total Non-Operating	($1,486,884)	($2,032,809)	$545,925

5 Year Enterprise Performance

FYE	Revenue	Expense	Net Gain (Loss)
2019	$15,815,809	($13,275,330)	$2,540,479
2020	14,705,314	(12,973,136)	1,732,178
2021	14,979,869	(13,547,431)	1,432,438
2022	12,540,991	(10,440,350)	2,100,641
2023	13,875,754	(10,184,463)	3,691,291
2024	4,016,219	(4,198,663)	(182,444)

5 Year Enterprise Performance



Enterprise Performance

Flow, BOD, TSS Actual vs. OC San Billing

	SAWPA Billed	OC San Billing	Difference
Total Flow (MG)	**1,247.9372**	**1,206.090**	**41.8472**
Total BOD (1,000 lbs)	**264.7600**	**231.352**	**33.408**
Total TSS (1,000 lbs)	**735.9587**	**694.057**	**41.9017**
Flow - Pass through per MG	**$292.00**	**$291.99**	**$0.01**
BOD cost per 1,000 lbs	**$394.00**	**$393.64**	**$0.36**
TSS cost per 1,000 lbs	**$494.00**	**$493.89**	**$0.11**

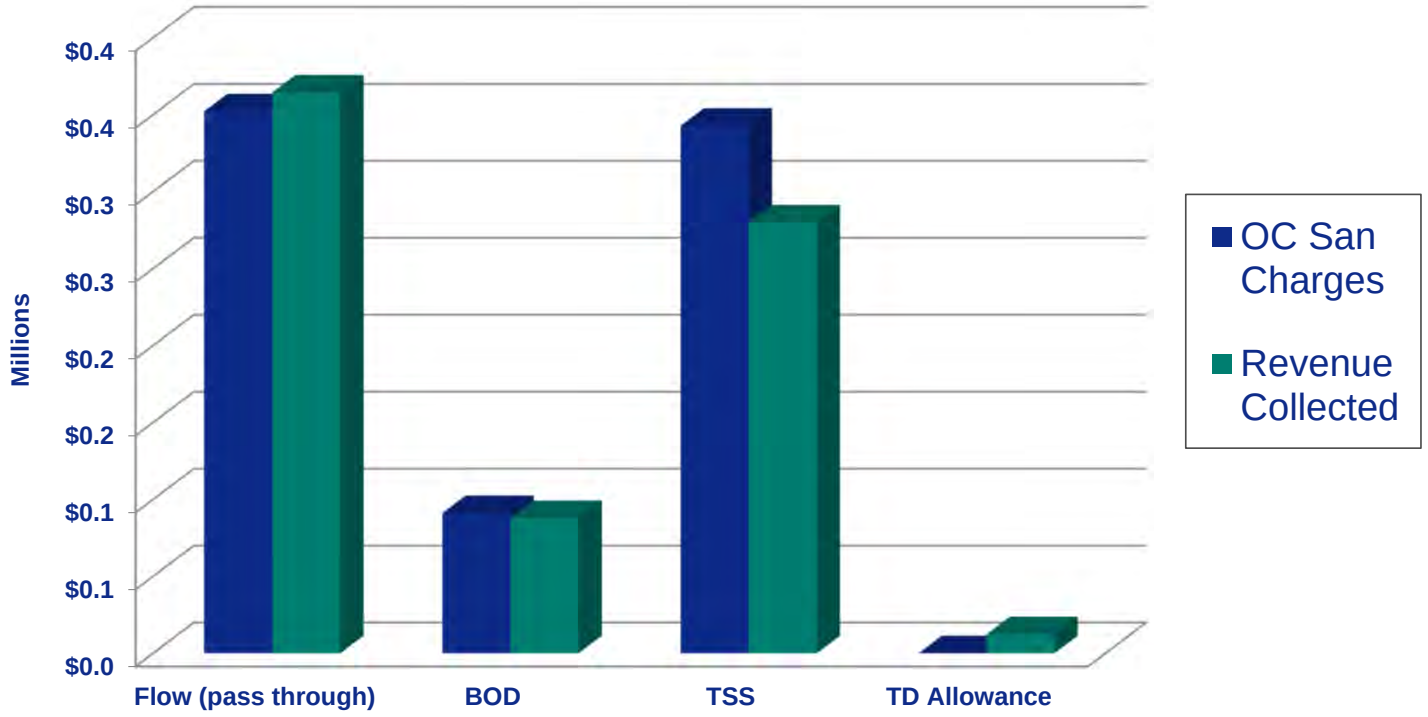
Enterprise Performance

OC San Flow, BOD & TSS Charges vs. Revenue Billed

	Revenue Billed	OC San Charges	Difference
Flow (pass through)	$364,398	$352,166	$12,232
BOD	87,792	91,069	(3,277)
TSS	279,899	342,788	(62,889)
TD Allowance	12,284	0	12,284
Total	$744,373	$786,023	($41,650)

Enterprise Performance

OC San Flow, BOD & TSS Charges vs. Revenue Billed



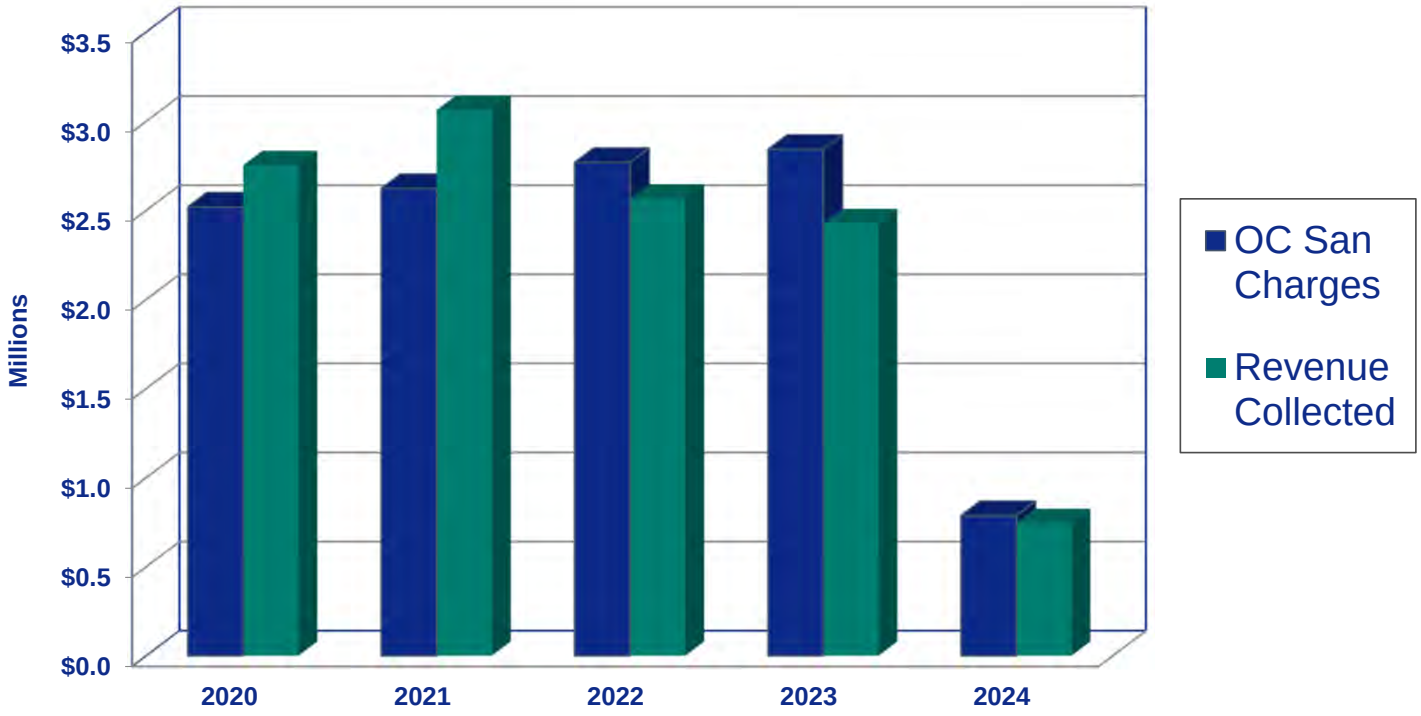
5 Year Enterprise Performance

Flow, BOD & TSS Charges vs. Revenue Billed – Last 5 Years

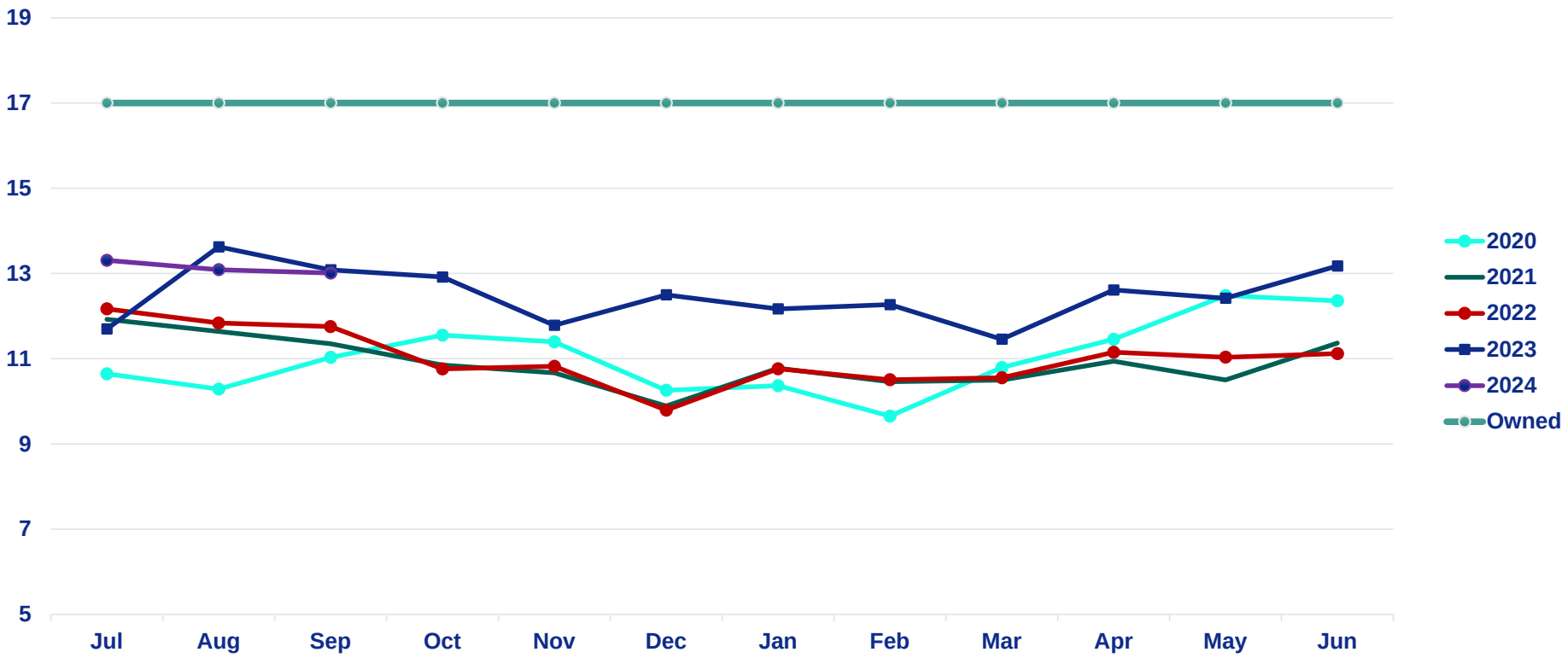
FYE	Revenue Billed	OC San Charges	Difference
2020	2,751,954	2,518,051	233,903
2021	3,061,944	2,621,142	440,802
2022	2,566,021	2,767,351	(201,330)
2023	2,427,005	2,841,389	(414,384)
2024	744,373	786,023	(41,650)
Total	$11,551,297	$11,533,956	$17,341

5 Year Enterprise Performance

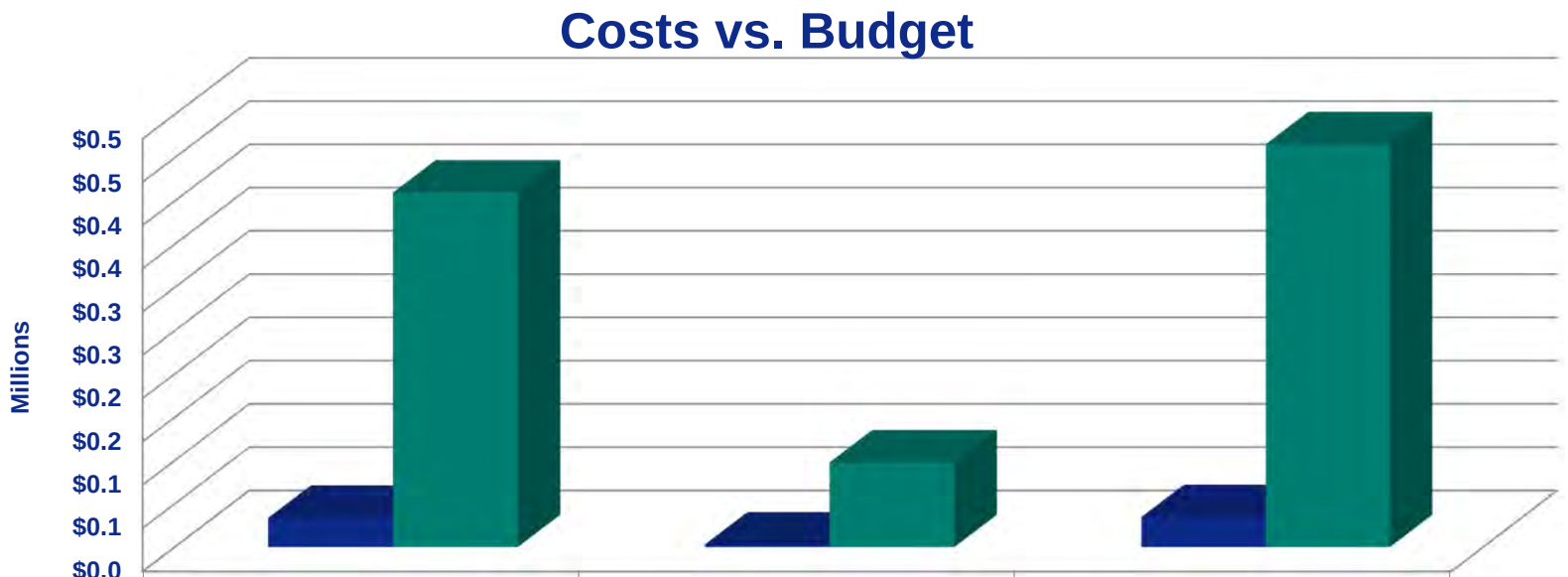
Flow, BOD & TSS Charges vs. Revenue Billed – Last 5 Years



Average Daily Flow



Capital Projects



	Above Prado	Reach IV-D Corrosion Repairs	Agua Mansa Lateral
Costs	$33,891	$2,994	$34,743
Budget	$409,779	$97,894	$465,611

Capital Project Fund (320)

Brine Line Protection / Relocation Projects

- **D/S Prado in OC – emergency protection work, pipeline relocation**
- **Above Prado - pipeline relocation and manhole lid adjustments – when required**
- **D/S Prado in Riverside County – bank armoring**

Questions

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