AGENDA
REGULAR MEETING OF THE BOARD OF DIRECTORS

District Board Room, 2890 Mosquito Road, Placerville, California
Tuesday, October 10, 2023 — 9:00 A.M.

Board of Directors

Brian K. Veerkamp—Division 3
President

Alan Day—Division 5
Vice President

George Osborne—Division 1
Director

Pat Dwyer—Division 2
Director

Lori Anzini—Division 4
Director

Executive Staff

Jim Abercrombie
General Manager

Brian D. Poulsen
General Counsel

Jennifer Sullivan
Clerk to the Board

Jesse Saich
Communications

Brian Mueller
Engineering

Jamie Bandy
Finance

Jose Perez
Human Resources

Aaron Kennedy
Information Technology

Dan Corcoran
Operations

PUBLIC COMMENT: Anyone wishing to comment about items not on the Agenda may do so during the public comment period. Those wishing to comment about items on the Agenda may do so when that item is heard and when the Board calls for public comment. Public comments are limited to five minutes per person.

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AMERICANS WITH DISABILITIES ACT: In accordance with the Americans with Disabilities Act (ADA) and California law, it is the policy of El Dorado Irrigation District to offer its public programs, services, and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format, or if you require any other accommodation for this meeting, please contact the EID ADA coordinator at 530-642-4045 or email at adacoordinator@eid.org at least 72 hours prior to the meeting. Advance notification within this guideline will enable the District to make reasonable accommodations to ensure accessibility.

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PUBLIC PARTICIPATION INSTRUCTIONS

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CALL TO ORDER

Roll Call
Pledge of Allegiance
Moment of Silence

ADOPT AGENDA

COMMUNICATIONS

General Manager's Employee Recognition

PUBLIC COMMENT

COMMUNICATIONS

General Manager

Brief reports on District activities or items of interest to the public, including activities or developments that occur after the agenda is posted.

Clerk to the Board

Board of Directors

Brief reports on community activities, meetings, conferences and seminars attended by the Directors of interest to the District and the public.

APPROVE CONSENT CALENDAR

Action on items pulled from the Consent Calendar

CONSENT CALENDAR

1. **Clerk to the Board (Sullivan)**
   Consider approving the minutes of the September 25, 2023 regular meeting of the Board of Directors.

   Option 1: Approve as submitted.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

2. Engineering (Carrington)

Consider awarding a contract to Syblon Reid Construction in the not-to-exceed amount of $215,000 for construction of the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project and authorize additional funding of $20,000 for inspection, $20,000 for capitalized labor, and $50,000 in contingencies for a total funding request of $305,000 for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project, Project No. 23032.01.

Option 1: Award a contract to Syblon Reid Construction in the not-to-exceed amount of $215,000 for construction for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project and authorize additional funding of $20,000 for inspection, $20,000 for capitalized labor, and $50,000 in contingencies for a total funding request of $305,000 for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project, Project No. 23032.01.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

3. Operations (Russell)

Consider authorizing funding in the amounts of $85,000 for capitalized labor, $40,000 for asphalt patch paving, $40,000 for materials and supplies, $20,000 for sand and gravel, and $40,000 for concrete remediation services for a total funding request of $225,000 for the Recycled Water Service Line Replacement Project, Project No. 23036.01.

Option 1: Authorize funding in the amounts of $85,000 for capitalized labor, $40,000 for asphalt patch paving, $40,000 for materials and supplies, $20,000 for sand and gravel, and $40,000 for concrete remediation services for a total funding request of $225,000 for the Recycled Water Service Line Replacement, Project No. 23036.01.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

4. Engineering (Brink)

Consider adopting a resolution approving the revised Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service to a portion of the Folsom Heights development and authorizing the Board President to sign the Agreement.

Option 1: Adopt a resolution approving the revised Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service to a portion of the Folsom Heights development and authorizing the Board President to sign the Agreement.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

END OF CONSENT CALENDAR

WORKSHOP ITEMS

5. **Engineering (Mueller)**
   2024-2028 Capital Improvement Plan Workshop.

   Recommended Action: None – Information only.

6. **Finance (Bandy)**
   Cost of Service Analysis Workshop.

   Recommended Action: None – Information only.

INFORMATION ITEMS

7. **Office of the General Manager/Office of the General Counsel (Abercrombie/Poulsen)**
   Key Performance Indicators and Goals update.

   Recommended Action: None – Information only.

ACTION ITEMS

8. **Finance (Lane)**
   Consider ratifying EID General Warrant Registers for the periods ending September 19 and September 26, 2023, and Board and Employee Expense Reimbursements for these periods.

   Option 1: Ratify the EID General Warrant Registers and Board and Employee Expense Reimbursements as submitted.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

9. **Information Technology (Kennedy)**
   Consider approving Contract Change Order Nos. 12 and 13 to Quantum Resolve in the not-to-exceed amount of $391,625.55 and $313,958.35, respectively, for software integration and implementation, Contract Change Order 2 to Raftelis, Inc. in the not-to-exceed amount of $90,000 for project management support, and authorize total additional funding of $400,000 for the Hansen Core Software Upgrade Project, Project No.18055.

   Option 1: Approve Contract Change Order Nos. 12 and 13 to Quantum Resolve in the not-to-exceed amount of $391,625.55 and $313,958.35, respectively, for software integration and implementation, Contract Change Order 2 to Raftelis, Inc. in the not-to-exceed amount of $90,000 for project management support, and authorize total additional funding of $400,000 for the Hansen Core Software Upgrade Project, Project No.18055.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   Recommended Action: Option 1.

10. Engineering (Brink)

Consider adopting a Water Supply Assessment for the proposed Town and Country Village El Dorado Project.

Option 1: Adopt a Water Supply Assessment for the proposed Town and Country Village El Dorado Project.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

CLOSED SESSION

A. Public Employee Employment/Performance Evaluation

Government Code Section 54957(b)(1)
Position Title: General Manager. Annual performance review.

B. Public Employee Employment/Performance Evaluation

Government Code Section 54957(b)(1)
Position Title: General Counsel. Annual performance review.

REVIEW OF ASSIGNMENTS

ADJOURNMENT

TENTATIVELY SCHEDULED ITEMS FOR FUTURE MEETINGS

Engineering

- 2024-2028 Capital Improvement Plan adoption, Action, October 23 (Mueller)
- Bridlewood Tank, Reservoir 7A Tank, and Reservoir 4 Recoating Project design contract, Consent, October 23 (Eden-Bishop/Delongchamp)
- Reservoir A Water Treatment Plant valve replacement, Action, October 23 (Eden-Bishop)

Finance

- Cost of Service Analysis and Proposition 218 Notice, Action, October 23 (Bandy)
- 2022 Annual Audit, Action, October 23 (Lane)
- Vehicle purchase, Action, October 23 (Royal)

Human Resources

- Employee Handbook update, Consent, October 23 (Perez)
- Association of California Water Agencies Joint Powers Insurance Authority Risk Control Grant Program, Consent, October 23 (Newsom)

Office of the General Counsel

- Annual Legislative Report, Information, October 23 (Leeper)

Office of the General Counsel/Engineering

- Permit 21112 Change in Point of Diversion project update and contract amendments for modeling and environmental services, Action, October 23 (Leeper/Deason)

Operations

- Annual concrete restoration contract, Consent, October 23 (Wilson/Russell)
- Reservoir 1 Water Treatment Plant Generator Replacement Project, Consent, October 23 (Wilson)

El Dorado Irrigation District

MINUTES
REGULAR MEETING OF THE BOARD OF DIRECTORS

District Board Room, 2890 Mosquito Road, Placerville, California
September 25, 2023 — 9:00 A.M.

Board of Directors

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President

Alan Day—Division 5
Vice President

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Director

Pat Dwyer—Division 2
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CALL TO ORDER

Vice President Day called the meeting to order at 9:01 A.M.

Roll Call
Board

Present: Directors Osborne, Dwyer, Anzini and Day
Absent: Director Veerkamp

Staff

Present: General Manager Abercrombie, General Counsel Poulsen and Board Clerk Sullivan

Pledge of Allegiance and Moment of Silence

Director Day led the Pledge of Allegiance.

ADOPT AGENDA

ACTION: Agenda was adopted.

MOTION PASSED

Ayes: Directors Anzini, Dwyer, Osborne, and Day
Absent: Director Veerkamp

COMMUNICATIONS

Awards and Recognitions

General Manager Abercrombie recognized EID staff Devyn Teurman.

PUBLIC COMMENT

None

COMMUNICATIONS

General Manager

None

Clerk to the Board

None

Board of Directors

Director Dwyer thanked our communications staff for the ongoing public outreach regarding the District's infrastructure needs.

APPROVE CONSENT CALENDAR

ACTION: Consent Calendar was approved.

MOTION PASSED

Ayes: Directors Osborne, Anzini, Dwyer and Day
Absent: Director Veerkamp

CONSENT CALENDAR

1. **Clerk to the Board (Sullivan)**
   Consider approving the minutes of the August 28, 2023 regular meeting of the Board of Directors.

   ACTION: Option 1: Approved as submitted.

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

2. **Human Resources (Calvert)**
   Consider adopting revised pay schedules for the Association of El Dorado Irrigation District Employees and El Dorado Irrigation District Managers and Supervisors Employee Association.

   ACTION: Option 1: Adopted revised pay schedules for the Association of El Dorado Irrigation District Employees and El Dorado Irrigation District Managers and Supervisors Employee Association.

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

3. **Engineering (Money/Eden-Bishop)**
   Consider authorizing additional funding of $60,000 for capitalized labor for the Reservoir A Water Treatment Plant Programmable Logic Controller Replacement Project, Project No. 19033.01; and $15,342 for engineering services during construction and $60,000 for construction for a total funding request of $75,342 for the El Dorado Hills Wastewater Treatment Plant Secondary Effluent Pump Station Modifications, Project No. 21077.01.

   ACTION: Option 1: Authorized additional funding of $60,000 for capitalized labor for the Reservoir A Water Treatment Plant Programmable Logic Controller Replacement Project, Project No. 19033.01; and $15,342 for engineering services during construction and $60,000 for construction for a total funding request of $75,342 for the El Dorado Hills Wastewater Treatment Plant Secondary Effluent Pump Station Modifications, Project No. 21077.01.

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

END OF CONSENT CALENDAR

INFORMATION ITEMS

4. **Office of the General Counsel/Engineering (Leeper/Mueller)**
   Update regarding recovery efforts related to the Caldor Fire.

   ACTION: None – Information only.

5. **Finance/Communications (Downey/Saich)**
   Feasibility and costs of restructuring the District's utility billing and meter reading schedules.

   ACTION: None – Information only.

ACTION ITEMS

6. **Finance (Lane)**
   Consider ratifying EID General Warrant Registers for the periods ending August 22, August 29, September 5, and September 12, 2023, and Employee Expense Reimbursements for these periods.

   ACTION: Option 1: Ratified the EID General Warrant Register and Employee Expense Reimbursements as submitted.

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

7. **Finance (Royal)**
   Consider awarding contracts to Downtown Ford in the not-to-exceed amount of $802,000, Watsonville Fleet Group in the not-to-exceed amount of $189,398, and Winner Chevrolet in the not-to-exceed amount of $1,360,000 for the purchase of 21 replacement trucks, and authorize the General Manager to approve contracts for the purchase of four additional replacement vehicles in the not-to-exceed amount of $170,000 for a total funding request of $2,521,398 for the 2024 Vehicle Replacement Program, Project No. 24003.

   ACTION: Option 1: Awarded contracts to Downtown Ford in the not-to-exceed amount of $802,000, Watsonville Fleet Group in the not-to-exceed amount of $189,398, and Winner Chevrolet in the not-to-exceed amount of $1,360,000 for the purchase of 21 replacement trucks, and authorized the General Manager to approve contracts for the purchase of four additional replacement vehicles in the not-to-exceed amount of $170,000 for a total funding request of $2,521,398 for the 2024 Vehicle Replacement Program, Project No. 24003.

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

8. **Operations (Crane)**
   Consider ratifying the General Manager's construction contract award to Doug Veerkamp General Engineering, Inc. in the not-to-exceed amount of $135,000 for emergency repair of the Marina Village #1 Force Main (T2023.22).

   ACTION: Option 1: Ratified the General Manager's award of a construction contract to Doug Veerkamp General Engineering, Inc. in the not-to-exceed amount of $135,000 for emergency repair of the Marina Village #1 Force Main (T2023.22).

   MOTION PASSED
   Ayes: Directors Osborne, Anzini, Dwyer and Day
   Absent: Director Veerkamp

REVIEW OF ASSIGNMENTS

Director Day requested that staff provide a draft Proposition 218 Notice for the Board's review.

ADJOURNMENT

Vice President Day adjourned the meeting at 9:57 A.M.

Brian K. Veerkamp
Board President
EL DORADO IRRIGATION DISTRICT

ATTEST

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

Approved: _____

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider awarding a contract to Syblon Reid Construction in the not-to-exceed amount of $215,000 for construction of the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project and authorize additional funding of $20,000 for inspection, $20,000 for capitalized labor, and $50,000 in contingencies for a total funding request of $305,000 for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project, Project No. 23032.01.

PREVIOUS BOARD ACTION
None

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY
BP 0010 District Mission Statement
BP 6010 Wastewater System Management

SUMMARY OF ISSUE
The Marina Village No. 1 sewer lift station (MV1LS) is located approximately 1,000 feet from Folsom Lake. A 15-inch gravity sewer pipe and 12-inch force main are located within the MV1LS access road and cross over a 48-inch corrugated metal culvert, which conveys a seasonal tributary to Folsom Lake. Last winter's extreme precipitation damaged and eroded the culvert, which, in turn, threatened the integrity of the two sewer pipelines. Therefore, the culvert must be replaced, and the banks must be stabilized to ensure the continued, safe operation of the MV1LS and associated piping.

BACKGROUND/DISCUSSION
The 2022/2023 storm events inundated the District's service area and caused numerous impacts to District facilities and local drainage systems. Excessive and intense rainfall created significant erosion to a 48-inch corrugated metal culvert that conveys local drainage east of the MV1LS access road to the west side of the access road and into Folsom Lake. The culvert, located on District property and owned by the District, was presumably constructed when the lift station and access road were built. An incoming gravity pipe and force main were constructed and remain in operation within the road embankment immediately above the culvert.

During one of the recent MV1LS force main breaks, significant erosion was observed around the circumference of the culvert, extending approximately four feet into the twelve-foot-wide access road. Therefore, an emergency culvert replacement project is needed to properly support the incoming gravity sewer pipe and the force main to prevent the sewer pipelines from rupturing, resulting in sanitary sewer overflows.

Scope of Work
The project scope is a full replacement of the 48-inch culvert and support of the sewer infrastructure. The scope of work generally consists of:

- Removal of 45 feet of 48-inch corrugated metal pipe,
- Installation of two 36-inch reinforced concrete pipes, approximately 45 feet in length each,
- Installation of concrete slurry pipe bedding and pipe zone,

- Installation of filter fabric and rip-rap in and around pipe inlet and pipe outlet for energy dissipation and
- Repave impacted portions of Marina Village No.1 access road.

Construction Bidding
Due to the recent discovery of the issue, the short timeframe to complete the work, and potential seasonal impacts, staff condensed the bidding procedures and solicited the project to three contractors with a proven track record of expeditious mobilization of ample construction resources; Teichert Construction, Syblon Reid Construction, and Doug Veerkamp General Engineering via email correspondence. Staff held a preconstruction meeting at the project site on August 31, 2023, and received two bids on September 26, 2023.

Contractor	Bid
Syblon Reid Construction	$215,000
Teichert Construction	$929,969

The bid from Syblon Reid Construction is the lowest responsible and responsive bid. Therefore, staff recommends the award of the project to Syblon Reid Construction for $215,000.

Project Schedule
The work will be completed immediately this fall prior to the 2023/2024 rainy season, to maintain the safe/reliable operation and access of MV1LS.

Environmental Review
Public Resources Code section 21080(b)(2) exempts from the California Environmental Quality Act (CEQA) emergency repairs to public service facilities necessary to maintain services. Additionally, CEQA Guidelines section 15269(a) exempt from CEQA "Projects to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to the California Emergency Services Act, commencing with Section 8550 of the Government Code." On March 8, 2023, the Governor issued a Proclamation of State of Emergency that added El Dorado County to the list of counties affected by storm events in 2023. The MV1LS Emergency Culvert Replacement Project will replace a culvert that was damaged as a result of these storm events and properly support the incoming gravity sewer pipe and the force main to prevent the risk of sewer pipe break and sanitary sewer overflow. If the Board approves the proposed project, staff will file a Notice of Exemption (NOE) with the El Dorado County Clerk-Recorder's office and post the NOE on the District's website.

Staff is also coordinating with resource agencies regarding any applicable permits and authorizations necessary to effectuate this emergency project.

FUNDING
The 2023-2027 CIP did not include this project as this is an emergency replacement project. A new project has been created, and Board authorization of funding is needed. The funding source is 100% wastewater rates.

Syblon Reid Construction – Construction services	$215,000
Inspection	$20,000
Capitalized labor	$20,000
Project contingency (20%)	$50,000
Total funding	**$305,000**

Staff included a 20% project contingency due to the expedited investigation, design timeframe, and unknown subsurface conditions. The location of the project has a higher probability of unsuitable soils and may require remedial efforts to create a stable foundation for the new culvert pipes.

BOARD OPTIONS

Option 1: Award a contract to Syblon Reid Construction in the not-to-exceed amount of $215,000 for construction for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project and authorize additional funding of $20,000 for inspection, $20,000 for capitalized labor, and $50,000 in contingencies for a total funding request of $305,000 for the Marina Village No. 1 Lift Station Emergency Culvert Replacement Project, Project No. 23032.01.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Construction Bid Summary

Liz Carrington
Senior Civil Engineer

Brian Deason
Environmental Resources Supervisor

Jon Money
Engineering Manager

Brian Mueller
Engineering Director

Tracy Crane
Wastewater and Recycled Water Operations Manager

Dan Corcoran
Operations Director

Jamie Bandy
Finance Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Attachment A

EL DORADO IRRIGATION DISTRICT

Marina Village No. 1 Lift Station Emergency Culvert Replacement

PROJECT NO. 23032.01

Bid Opening: September 26, 2023, 3:01 p.m.

SUMMARY OF BIDS RECEIVED

ITEM NO.	WORK OR MATERIAL	QUANTITY	UNIT	Teichert Construction Roseville, CA Bid received via email at 1:51 p.m. 09/26/2023 UNIT PRICE (FIGURES)	Teichert Construction AMOUNT (FIGURES)	Syblon Reid Construction Folsom, CA Bid received via email at 10:18a.m. 09/26/2023 *"Footnote A"* UNIT PRICE (FIGURES)	Syblon Reid Construction AMOUNT (FIGURES)
1	Culvert Replacement	1	LS	929,969.00	$ 929,969.00	215,000.00	$ 215,000.00
	GRAND TOTAL BID PRICE:				$ 929,969.00		$ 215,000.00 ***A***

Footnotes:

A The apparent low bidder is determined by the total sum of bid item

THIS TABULATION REPRESENTS A TRUE AND COMPLETE SUMMARY OF BIDS RECEIVED BY EL DORADO IRRIGATION DISTRICT

PROJECT NO. 23032.01

PREPARED BY: Liz Carrington, P.E.

SUBMITTED BY:

Liz Carrington, P.E., Senior Civil Engineer

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider authorizing funding in the amounts of $85,000 for capitalized labor, $40,000 for asphalt patch paving, $40,000 for materials and supplies, $20,000 for sand and gravel, and $40,000 for concrete remediation services for a total funding request of $225,000 for the Recycled Water Service Line Replacement Project, Project No. 23036.01.

PREVIOUS BOARD ACTION

February 12, 2022 – Board approved a contract to Joe Vicini, Inc. in the not-to-exceed amount of $1,386,750 for asphalt patch paving and associated pavement restoration work for a one-year period and authorize the General Manager to extend the contract for two additional, single-year periods if in the District's best interests, and authorize additional funding of $970,725 for asphalt patch paving, $320,000 for concrete remediation, $60,000 for backfill compaction testing, $983,744 for materials and supplies, and $2,411,077 for capitalized labor for a total funding request of $4,745,546 for the Water Service Line Replacement, Project No. 22002.

November 14, 2022 – Board adopted the 2023–2027 Capital Improvement Plan (CIP), subject to available funding.

February 13, 2023 – Board authorized funding in the amounts of $2,109,000 for capitalized labor, $869,358 for asphalt patch paving, $537,346 for materials and supplies, $343,672 for sand and gravel, $104,038 for compaction testing and El Dorado County inspections and $286,586 for concrete remediation services for a total funding request of $4,250,000 for the Service Line Replacement, Project No. 23002.01.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 0010 District Mission Statement
BP 3060 Contracts and Procurement
AR 3061.04 Procurement and Contract Authority
BP 5010 Water Supply Management

SUMMARY OF ISSUE

As part of the District's service line replacement program, staff is mobilizing to replace both water and recycled water service lines within the Serrano Village E. This next target location for Service Line Replacements (SLRs) will help mitigate utility conflicts due to inadequate separation and replace aging service lines for both water and recycled water that are experiencing an accelerated rate of failure. Prior to initiating work, staff is requesting additional capital funding for the replacement of the recycled water services, given that no prior funding has been requested for this utility.

BACKGROUND/DISCUSSION

The Board continues to include a sustained investment in SLRs within the Capital Improvement Plan (CIP), including the previously approved funding for $4,250,000 in February of this year. Staff is nearly finished with service line replacement in Stonegate in El Dorado Hills. Staff has identified Serrano Village E as the next high-priority area due to a high number of utility

conflicts, adding undue stress to the polyethylene service lines. To maximize efficiency and cost-effectiveness, staff proposes replacing water and recycled water service lines simultaneously due to multiple utility conflicts existing between District infrastructure and other utilities. To accomplish this work, staff requests only CIP funding for the recycled water service line replacements. Sufficient funding remains for water SLRs through the remainder of 2023.

During the first seven months of 2023, staff completed 415 SLRs, including 335 completed in response to leaks and failures and 80 completed as proactive replacements. After significant staffing challenges during 2022, the work unit has regrouped and is getting back on pace with a target of at least 625 planned SLRs this year. Staff remains committed to meeting the Board's direction of achieving two-thirds of planned SLRs and one-third of unplanned SLRs associated with leak response.

FUNDING

A total funding of $200,000 is requested for Recycled Water Service Line Replacement, Project No. 23036.01. The project will be completed under the Recycled Water Asset Program CIP, which anticipated $275,000 in expenditures over the 2023-2024.

On February 12, 2022, the Board approved a contract with Joe Vicini Inc. for asphalt patch paving and authorized the General Manager to extend the contract for two additional, single-year periods. The General Manager has approved a contract extension for Joe Vicini Inc. as they have continued to be responsive to the District's patch paving needs. The Board approved a concrete remediation contract with B&M Builders on October 13, 2020. That contract also included authorization for the General Manager to extend the contractor for two additional single-year periods, and the General Manager has exercised that authority both years after confirming satisfactory contractual performance. The Board also approved a bid from Hastie's Capitol Sand and Gravel on January 10, 2022, to provide necessary sand and gravel for the District construction projects. Similar to the contracts listed above, with Board direction, the General Manager extended the contract for one additional year. Portions of each of these extended contracts will be allocated to the service line replacement project through dedicated work orders. Therefore, no additional contract approvals are requested at this time, and only capitalized funding for these associated costs, along with capitalized labor and parts, is requested as outlined below. The proposed funding source is 100% recycled water rates.

Project No.	23036.01	Board Date	10/10/23
Project Name	Recycled Water Service Line Replacement Project		
Project Manager	Noel Russell		

Funding Request Breakdown	$
Capitalized labor	$85,000
Asphalt patch paving	$40,000
Materials and supplies (piping, fittings)	$40,000
Sand and gravel	$20,000
Concrete remediation services	$40,000
Total	**$225,000**

Funding Source
100% Recycled Water Rates

Description
This program consists of targeted replacement of leaking water and recycled water service lines throughout the District. Replacing leaking and substandard service lines will increase reliability, reduce maintenance expenditures, and decrease losses. Service line projects are prioritized by operations and engineering staff based on the frequency of leaks and the costs of repairs. District crews are performing the replacement work. This request will provide funding for capitalized labor, materials, supplies, patch paving, and concrete remediation services for recycled water service line replacement.

BOARD OPTIONS

Option 1: Authorize funding in the amounts of $85,000 for capitalized labor, $40,000 for asphalt patch paving, $40,000 for materials and supplies, $20,000 for sand and gravel, and $40,000 for concrete remediation services for a total funding request of $225,000 for the Recycled Water Service Line Replacement, Project No. 23036.01.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

RECOMMENDATION
Option 1

ATTACHMENTS
None

Noel Russell
Water Construction Supervisor

Patrick Wilson
Drinking Water Operations Manager

Tracy Crane
Wastewater and Recycled Water Manager

Jamie Bandy
Finance Director

Dan Corcoran
Operations Director

Jim Abercrombie
General Manager

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider adopting a resolution approving the revised Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service to a portion of the Folsom Heights development and authorizing the Board President to sign the Agreement.

PREVIOUS BOARD ACTION

December 19, 1978 – Board adopted Resolution No. 78-108, approving the annexation of the Folsom Heights parcels into the District's service area.

December 10, 2018 – Board adopted Resolution No. 2018-023, authorizing the General Manager to execute the Joint Community Facilities Financing Agreement with the City of Folsom for its Community Facilities District 22 (Folsom Heights).

September 26, 2022 – Board received an update on the Folsom Heights Project.

March 27, 2023 – Board adopted resolution 2023-010, approving the Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service to a portion of the Folsom Heights development and authorizing the Board President to sign the Agreement.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 9020 Establishing New Service
AR 9021 Eligibility for New Service
AR 9022 Payment of Service Connection Charges
AR 9028 Extension or Improvement of Facilities

SUMMARY OF ISSUE

The City of Folsom (City) and the El Dorado Irrigation District (District) are each authorized to provide water and sewer services to the Folsom Heights development located within the City. The City and District previously reached agreement on the areas to be served by each agency. On March 27, 2023, the Board approved an Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service (Agreement) for Folsom Heights. A revised Agreement is now necessary to clarify that City-required wet-barrel fire hydrants shall be used within Folsom Heights instead of District-standard dry-barrel hydrants. Board approval of a resolution is required authorizing the Board President to sign the revised Agreement.

BACKGROUND/DISCUSSION

Folsom Heights Project Status

The City approved the "*Folsom Plan Area Specific Plan*" in 2011. The plan includes construction of approximately 11,461 homes, of which Folsom Heights is a small portion within the District's service area. Folsom Heights will include approximately 530 single-family homes and some commercial development (Attachment A). Elliott Homes, Inc. purchased the Folsom Heights property in 2019. The District issued an updated Facility Improvement Letter in November 2021 and approved an updated Facility Plan Report (FPR) in June 2022. The District provided comments on the Phase 1 Improvement Plans in January 2023. Approval of the Phase 1 Improvement Plans is expected next year, followed by installation of water and sewer utilities and eventually the construction of homes and commercial development.

The original concept between the two agencies envisioned that the District would provide water and sewer service to all parcels in Folsom Heights. However, based on the analysis presented in the FPR and discussions with the City, both agencies agreed to have the City provide water and sewer services to select areas of Folsom Heights where connection to District infrastructure would result in either increased operations and maintenance efforts and/or increased capital costs.

Water and Sewer Service

The future extension of Empire Ranch Road will traverse through the western portion of Folsom Heights and extend beyond Folsom Heights to the south. The City will have water transmission mains within Empire Ranch Road. As planned, all District waterlines will stop short of Empire Ranch Road, providing a clear transition point between the City and District service areas. Both agencies agreed that the City will serve the common area irrigation within Empire Ranch Road. The District will serve all residential, commercial, and common areas east of Empire Ranch Road.

Due to the area's topography, two new District sewer lift stations would have been required to provide wastewater service to approximately 130 parcels within Folsom Heights that could otherwise flow west via gravity to the City's existing sewer collection system. The remaining parcel's wastewater can flow via gravity east to the District's existing collection system in El Dorado County. To avoid the cost of constructing and maintaining lift stations, the City and District have agreed that those 130 parcels shall be City sewer customers while remaining District water customers.

Fire hydrant design

Last summer, the City raised concern that their fire department typically operates a hydrant design (wet-barrel) within its service area that is different than the District's design (dry-barrel). Wet-barrel hydrants have individual valves on each of the three hydrant connections and are constantly pressurized with water within the hydrant assembly itself. By comparison, dry-barrel hydrants are not constantly pressurized with water and instead have a single valve that is opened to allow water from the main to charge the hydrant when needed. The District standardized on dry-barrel design due to the potential for freeze damage in higher elevations of the District's service area and to maintain consistent infrastructure throughout its service area for maintenance efficiency.

In March 2023, the Folsom Fire Department sent the District a letter stating that they did not support the installation of dry-barrel hydrants and would not approve any fire-related permits for the Folsom Heights development. During the same timeframe, the City and District concurred and finalized the prior Agreement for water and wastewater service, which specified, among other items, that "All EID water and wastewater infrastructure to be designed and installed per EID standards and specifications." However, it wasn't until after Board approval that the City changed direction and notified the District in May 2023 that they would not sign the Agreement until it received a resolution regarding the design of fire hydrants.

The General Manager and staff subsequently met with the Folsom City Manager, Fire Chief, and staff in August 2023. Given the concerns expressed by the City's Fire Chief, staff ultimately agreed that District fire hydrants within Folsom Heights will be wet-barrel design instead of our standard dry-barrel design located elsewhere throughout the District's service area.

Revised Agreement and Resolution

The revised Agreement (Attachment B) is materially identical to the prior Agreement with the exception of the District hydrant design as outlined above. The revised Agreement includes an exhibit that shows the approximate water and sewer areas to be served by the City, the requirement for wet-barrel fire hydrants on District infrastructure, and also spells out the

responsibilities of each agency. District staff have developed the proposed resolution authorizing approval of the revised Agreement (Attachment C). Staff anticipates the City will seek similar approval of the revised Agreement from the Folsom City Council in the near future.

FUNDING

No funding is requested as part of this agenda item. However, as a practical matter, the revised Agreement will require the District to bear the costs to maintain an additional inventory of non-standard parts to maintain these approximately 80 new wet-barrel hydrants and train staff in the maintenance of this design of infrastructure. Staff estimates the costs at less than $50,000 for initial parts acquisition and nominal training efforts.

BOARD OPTIONS

Option 1: Adopt a resolution approving the revised Agreement between El Dorado Irrigation District and the City of Folsom concerning Wastewater and Water Service to a portion of the Folsom Heights development and authorizing the Board President to sign the Agreement.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Folsom Heights Phasing Plan
Attachment B: Revised Agreement between the District and City for Folsom Heights
Attachment C: Proposed resolution

Mike Brink
Supervising Civil Engineer

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

Brian Poulsen
General Counsel

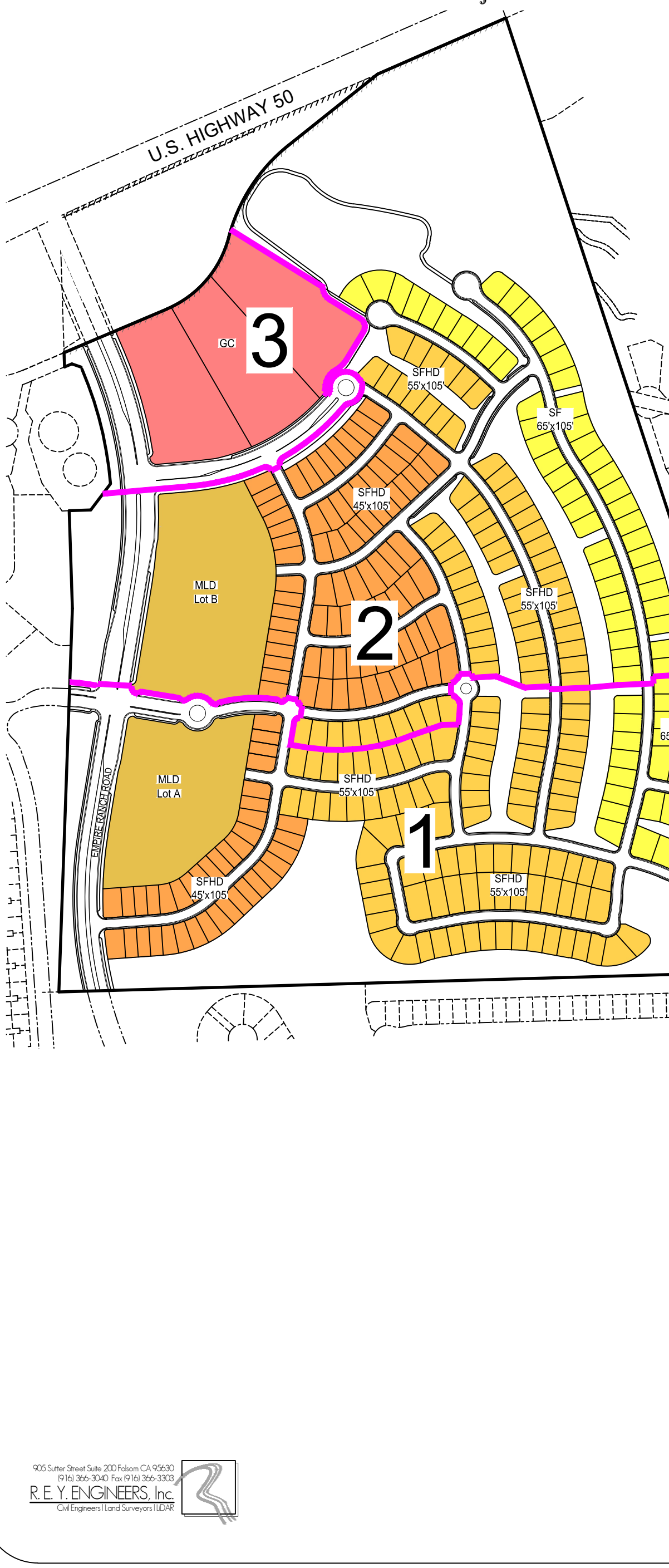
Jim Abercrombie
General Manager

FOLSOM HEIGHTS

PHASING AND LAND USE

FOLSOM, CALIFORNIA

JUNE 2022



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SCALE IN FEET

PHASE 1
- SFHD (45'X105') = 38 Lots
- SFHD (55'x105') = 94 Lots
- SF (65'x105') = 79 Lot
- MLD = 54 Lots (estimated)

Total Phase 1 = 265 Lots

PHASE 2
- SFHD (45'x105') = 84 Lots
- SFHD (55'x105') = 63 Lots
- SF = 49 Lots
- MLD = 69 Lots (estimated)

Total Phase 2 = 265 Lots

PHASE 3
- General Commercial

Total Estimated Residential Lots = 530

905 Sutter Street Suite 200 Folsom CA 95630
(916) 366-3040 Fax (916) 366-3303
R. E. Y. ENGINEERS, Inc.
Civil Engineers | Land Surveyors | LIDAR

N:\2681 - Elliott Homes\081 - Folsom Heights\10 - CAD Drawings\Exhibits\Phasing Exhibit 06-07-2022.dwg Jun 07, 2022 - 10:33pm, DSagon

AGREEMENT BETWEEN EL DORADO IRRIGATION DISTRICT AND THE CITY OF FOLSOM CONCERNING WASTEWATER AND WATER SERVICE TO A PORTION OF THE FOLSOM HEIGHTS DEVELOPMENT

This agreement (hereinafter "Agreement") is entered into on _____, by and between the City of Folsom, a charter city (hereinafter "Folsom"), and the El Dorado Irrigation District, a public agency formed under the Irrigation District Law (hereinafter "EID"). Folsom and EID are individually referred to herein as a Party and collectively as the Parties.

Recitals

A. The geographic area located south of Highway 50 along the eastern boundary of Sacramento County is under active development.
B. Approximately 186 acres of this geographic area (hereinafter referred to as "Folsom Heights") is within EID's service area, having been annexed by EID in 1978.
C. In 2000, Sacramento County Local Agency Formation Commission approved the annexation of Folsom Heights into Folsom's sphere of influence and later approved the annexation of the area into Folsom.
D. Both EID and Folsom are authorized to provide water and wastewater services to Folsom Heights.
E. On January 25, 2010, Folsom and EID entered a memorandum of understanding concerning the evaluation of projects of mutual interest.
F. Both EID and Folsom desire to cooperate in providing water and wastewater service to Folsom Heights.
G. Folsom's Fire Department will provide emergency services to Folsom Heights and has requested that EID install fire hydrants that conform to Folsom's standards and specifications.

Terms of Agreement

1. **Incorporation of recitals:** The foregoing recitals are hereby incorporated by reference.

2. **Water and Wastewater Service to Folsom Heights:**
    a. Except as set forth herein in paragraph 2.b below, EID will provide water service to all customers located within Folsom Heights.
    b. Within the boundaries of Folsom Heights, Folsom will provide common area landscape irrigation water service within the right-of-way Limits of Empire Ranch Road and to the adjoining landscape corridors on the eastern and western sides of Empire Ranch Road as identified in the map attached hereto as Exhibit A and incorporated herein by reference.
    c. Folsom will be responsible for the operation, maintenance, and capital replacement of the water infrastructure required to serve the areas identified in paragraph 2.b.
    d. Folsom will provide wastewater service to approximately 130 residential lots within the Folsom Heights subdivision, as identified in the map attached hereto as Exhibit A and incorporated herein by reference, that can be connected to Folsom's gravity sewer collection system. Due to topography, these lots would otherwise need lift stations to receive wastewater service from EID. Notwithstanding any provision to the contrary,

Folsom is not obligated to provide wastewater service to Folsom Heights unless connected to Folsom's gravity sewer collection system.

e. For services provided under paragraph 2.d above, Folsom will be responsible for the operation, maintenance, and capital replacement of the wastewater infrastructure from the individual cleanouts to the Folsom gravity sewer main in the street, and from the main to the regional Folsom pump station for each of the approximately 130 lots served by Folsom.
f. All water infrastructure under 2.b and all wastewater infrastructure under 2.d shall be designed and installed per City of Folsom standards and specifications. All EID water and wastewater infrastructure within Folsom Heights shall be designed and installed per EID standards and specifications, with the exception of the fire hydrants, which shall conform to Folsom's wet-barrel standard.
g. EID will provide water and wastewater service for the remaining lots and common areas within the Folsom Heights subdivision not served by Folsom.
h. In responding to customer wastewater related calls, Folsom will respond to the approximately 130 wastewater customers identified in subparagraph 2.d and reflected on the attached map, and EID will respond to all remaining wastewater customer addresses within Folsom Heights. Folsom and EID will cooperate and work in good faith to reimburse one another for costs associated with responding to after-hours calls at any address in Folsom Heights outside the Parties' normal jurisdiction described above.
i. EID and Folsom will each bill their respective customers for water and wastewater service.

3. Term: The term of this Agreement will commence on the date it has been executed by the Parties and will terminate only on mutual written agreement by both Parties.

4. Contacts: For administration of this Agreement, the persons designated as the primary contacts for the Parties are:

For Folsom:

Marcus Yasutake, Environmental and Water Resources Director
50 Natoma Street
Folsom, CA 05630
Telephone: (916) 461-6161
eMail: myasutake@folsom.ca.us

For EID: Brian Mueller, Engineering Director
2890 Mosquito Road
Placerville, CA 95667
Telephone: (530) 642-4029
eMail: bmueller@eid.org

Either Party may change its contact person at any time upon written notice to the other Party.

5. **Modification:** This Agreement may be amended by mutual written agreement of the Parties.

6. **Dispute Resolution:** The Parties agree to resolve all potential and actual disputes at the lowest level. If unable to informally resolve a potential or actual dispute, the Parties hereby agree to engage a third-party neutral. Each Party shall bear their own expenses, including attorney's fees to resolve disputes.

7. **No Third Party Beneficiaries:** This Agreement creates rights and obligations solely between Folsom and EID and is not intended to benefit any other party. No provision of this Agreement shall in any way inure to the benefit of any third person so as to constitute any such third person as a third-party beneficiary of this Agreement or any of its items of conditions, or otherwise give rise to any cause of action in any person not party hereto.

8. **Severability:** This Agreement is made on the understanding that each term is a necessary part of the entire Agreement. However, if any term or other part of this Agreement is held to be unlawful, invalid, or unenforceable, the Parties agree that the remainder of the Agreement will not be affected thereby. The Parties hereto shall negotiate in good faith in an attempt to agree to another provision (instead of the provision held to be unlawful, invalid, or unenforceable) that is lawful, valid, and enforceable and carries out the Parties' intention to the greatest lawful extent under this Agreement.

9. **Entire Agreement:** This Agreement contains the entire agreement of the Parties with respect to the subject matter thereof and supersedes all prior understandings and agreements, whether written or oral.

10. **Counterparts:** This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same Agreement.

The foregoing is approved by the Parties as of the effective date first written above.

CITY OF FOLSOM:

By: _____
Elaine Andersen, City Manager

By: _____
Steven Wang, City Attorney

By: _____
Christa Freemantle, City Clerk

EL DORADO IRRIGATION DISTRICT:

By: _____
Jennifer Sullivan, Clerk to the Board

By: _____
Brian K. Veerkamp, Board President

By: _____
Ken Cusano, Fire Chief

By: _____
Pam Johns, Community Development Director

By: _____
Marcus Yasutake, Environmental & Water Resources Director

Exhibit A

FOLSOM HEIGHTS

ANTICIPATED LOTS TO SEWER TO FOLSOM
AREAS TO BE SERVED BY FOLSOM WATER

OCTOBER, 2022

R. E. Y. ENGINEERS, Inc.
Civil Engineers • Land Surveyors

**RESOLUTION OF THE BOARD OF DIRECTORS OF
EL DORADO IRRIGATION DISTRICT
AUTHORIZING AN AGREEMENT WITH THE CITY OF FOLSOM
CONCERNING WATER AND WASTEWATER SERVICE TO
A PORTION OF THE FOLSOM HEIGHTS DEVELOPMENT**

WHEREAS, on December 19, 1978, the El Dorado Irrigation District ("District") Board of Directors adopted Resolution No. 78-108 approving the annexation of certain real property comprised of approximately 186 acres located south of Highway 50 in the County of Sacramento herein referred to as "Folsom Heights;" and

WHEREAS, in 2000, Sacramento County Local Agency Formation Commission approved the annexation of Folsom Heights into The City of Folsom's ("City") sphere of influence and later approved the annexation of the area into the City; and

WHEREAS, both the District and City (collectively referred to as "Agencies") are authorized to provide water and wastewater services to Folsom Heights; and

WHEREAS, on January 25, 2010, the Agencies entered a memorandum of understanding concerning the evaluation of projects of mutual interest; and

WHEREAS, in 2011 the City approved the "*Folsom Plan Area Specific Plan"* which includes the construction of approximately 530 single-family homes and some commercial development within Folsom Heights; and

WHEREAS, on December 10, 2018, the District Board of Directors adopted Resolution No. 2018-023 authorizing the General Manager to execute the Joint Community Facilities Financing Agreement with the City for its Community Facilities District 22 (Folsom Heights); and

WHEREAS, in November 2021, the District issued an updated Facility Improvement Letter and approved an updated Facility Plan Report ("FPR") in June 2022; and

WHEREAS, based on the analysis presented in the FPR the Agencies agree it is in the best interests of the Agencies to have the City provide water service and sewer service to select areas of Folsom Heights; and

WHEREAS, The City has requested that wet barrel fire hydrants be used within Folsom Heights; and

WHEREAS, the Agencies collaboratively drafted the *"Agreement Between El Dorado Irrigation District And The City of Folsom Concerning Wastewater And Water Service To A Portion of the Folsom Heights Development"* ("Agreement") attached hereto as Exhibit A; and

WHEREAS, the Agreement illustrates the approximate water and sewer areas served by the Agencies, and includes the responsibilities of each agency.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Directors of the El Dorado Irrigation District that the Agreement is acceptable to the District and the Board President is hereby authorized to execute said Agreement.

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 10th day of October 2023, by Director who moved its adoption. The motion was seconded by Director and a poll vote taken which stood as follows:

AYES:

NOES:

ABSENT:

ABSTAIN:

The motion having a majority of votes "Aye", the resolution was declared to have been adopted, and it was so ordered.

_____
Brian K. Veerkamp, President
Board of Directors
EL DORADO IRRIGATION DISTRICT

ATTEST:

_____
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

(SEAL)

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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 10th day of October 2023.

_____

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

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EL DORADO IRRIGATION DISTRICT

SUBJECT: 2024-2028 Capital Improvement Plan Workshop.

PREVIOUS BOARD ACTION

November 11, 2022 – Board adopted the 2023-2027 Capital Improvement Plan, subject to available funding.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 3010 Budget Development

SUMMARY OF ISSUE

This workshop will review the draft 2024-2028 Capital Improvement Plan (CIP) for Board and public input.

BACKGROUND/DISCUSSION

On November 11, 2022, the Board adopted the 2023-2027 CIP. The five-year plan projected expenditures of $208 million, with $48 million in planned projects in 2023. The District completed or began construction on a large number of projects and continued to advance many projects included in the CIP. These projects respond to mandated regulatory requirements, maintain and improve service reliability, and/or protect public health and safety.

Completed or Substantially Complete

- Wastewater collections facility relocation
- Flume 45 abutment section replacement
- Reservoir A Water Treatment Plant (WTP) Programmable Logic Controller replacement
- El Dorado Hills (EDH) WWTP Waste Activated Sludge Dissolved Air Flotation Thickener (WAS DAFT) rehabilitation
- Deer Creek Wastewater Treatment Plant (WWTP) Blower replacement
- Wastewater collection system pipeline rehabilitation
- Battery storage at water and wastewater facilities
- Hydro crew room upgrade

Projects under construction

- Motherlode force main replacement
- Forebay Road and Drop Off Road water line replacement
- Bass Lake tanks recoating and structural rehabilitation
- Silver Lake East campground water system
- EDHWWTP Filters 5 and 6 rehabilitation
- EDHWWTP Secondary Effluent pump station modifications
- Echo Conduit emergency replacement of damaged sections
- Kyburz Diversion Dam facility upgrades
- EDHWTP Clarifier rehabilitation
- Headquarters Roof replacement
- Sly Park day use area stabilization

Ongoing projects and initiatives

- Hansen Upgrade
- Water service line replacement program
- Emergency backup generator upgrades
- EDM2 condition assessment
- Reservoir 1 and Pollock Pines reservoir replacement design
- Water Right Permit 21112 change petition
- Water Master Plan update
- Sly Park Intertie replacement design
- Crestview pump station upgrade design
- Flume 45 Section 3 replacement design
- Flume 48 replacement design
- Silver Lake Dam replacement design
- Penstock improvements design
- Vehicle replacement program

The 2024–2028 CIP development

Staff updated the descriptions, funding status, and priority of ongoing and planned projects and developed new estimates of expenditures for the five-year planning period. District staff collaborate throughout the year to identify and prioritize the replacement needs of the District's water supply, storage, conveyance systems, drinking water, wastewater treatment, collection systems, fleet, and business support systems that have reached the end of their service life. Prior to this workshop staff then identified the highest priority projects to maintain safe, reliable service for our customers and incorporate and update those projects in the proposed CIP.

There were four particular noteworthy challenges of CIP planning this year:

- The recent completion of condition assessments and master plans for our major water treatment facilities identified the need to begin investing large expenditures at El Dorado Hills Water Treatment Plant (EDHWTP) and the Reservoir 1 Water Treatment Plant in Pollock Pines to avoid service impacts to our customers. Recently, failures of EDHWTP clarifiers, clear well pumps, and Reservoir A WTP filter valves have illustrated this increasing risk that must be addressed immediately. Approximately $93 million is needed for these two projects in the next five years. Staff have phased the required rehabilitations/upgrades wherever possible to defer costs, but these are the minimum investments necessary over the five-year horizon. These costs were not included in last year's CIP because the condition assessments were still under preparation.
- The Silver Lake Dam replacement project is on schedule for construction in 2027. Staff is nearly complete with 30% design, and approximately $50 million has been budgeted for this single project. The estimated construction costs for this project were also not included in last year's CIP because the design had not sufficiently advanced to inform an accurate estimate of construction costs.
- Water storage tank recoating project costs, which previously were included as an operating expense, were moved to the CIP following recent guidance from our external auditors. This added approximately $12.5 million to the CIP for our water and recycled water storage tank programs.
- As part of the ongoing Cost of Service study, a five-year financial plan was developed to include approximately $233 million in expenditures from the water fund and $39 million in expenditures from the wastewater fund. Staff worked to fit planned CIP expenditures within the constraints of the financial plan while also including approximately $155

million of new construction needs not included in last year's CIP for the reasons identified above. To balance these two needs, staff needed to make a large number of deferrals and cuts to other projects in the CIP. Those deferrals and cuts are not without risks, which staff will share with the Board during the meeting so that the Board can make a fully informed decision on how it wishes to proceed with planned expenditures over the five-year horizon.

The draft 2024-2028 CIP estimates planned expenditures of approximately $321 million, as summarized in the table below.

El Dorado Irrigation District

2024-2028 CAPITAL IMPROVEMENT PLAN

Draft October 10, 2023

	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$2,191,195	$727,671	$999,191	$945,682	$332,292	$5,196,031
Water	$26,871,587	$27,794,723	$32,166,360	$49,361,209	$48,829,612	$185,023,491
Wastewater	$11,050,000	$7,775,000	$11,500,000	$6,525,000	$4,925,000	$41,775,000
Recycled Water	$984,084	$1,563,510	$1,714,340	$1,060,140	$325,000	$5,647,074
Hydroelectric	$7,090,000	$7,055,000	$4,715,000	$24,015,000	$25,140,000	$68,015,000
Recreation	$230,000	$245,000	$50,000	$160,000	$240,000	$925,000
General District	$7,207,401	$2,566,000	$2,092,800	$1,860,000	$1,147,000	$14,873,201
TOTAL	**$55,624,267**	**$47,726,904**	**$53,237,691**	**$83,927,031**	**$80,938,904**	**$321,454,797**

This plan represents an increase in planned expenditures from last year's plan ($208 million) attributable to the water treatment plant improvements, Silver Lake Dam replacement, and the storage tank recoating program. However, it also required reductions and risk analysis of deferrals to many other planned projects. For example, two major flume replacements (Flume 45 Section 3 and Flume 48) are proposed to be deferred so that available water funds can be spent on other projects such as service line replacement, water line replacement, and storage upgrades. With the Sly Park Intertie planned for construction in 2024/2025, this pipeline will increase reliability and operational flexibility to better withstand an unplanned canal outage. Staff intends to complete the design of these two flumes so that construction can be advanced on an emergency basis due to actual or pending failure. While this is not staff's preferred approach, it presents the best risk balancing with planned available funds.

FUNDING

Recent financial planning identified two bond issuances in 2024 and 2027 to fund some of the large projects. As discussed in past presentations, these large projects include the Sly Park Intertie, Silver Lake Dam, water treatment plant improvements, and storage tanks. The other sources used to fund the CIP include rate revenue (new requirements included in the Cost of Service) and Facility Capacity Charges collected from new development hookups.

With $321 million of planned expenditures, given past performance and anticipated staffing resources, actual expenditures would be approximately $275 million. This level of capital expenditures matches the financial plan recently developed with the Cost of Service Analysis.

BOARD OPTIONS
None – Information only.

RECOMMENDATION
None – Information only.

ATTACHMENTS
Attachment A: Draft 2024–2028 CIP Summary
Attachment B: Project summaries

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

Aaron Kennedy
Information Technology Director

Jamie Bandy
Finance Director

Jose Perez
Human Resources Director

Jesse Saich
Communications and Media Relations Manager

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

El Dorado Irrigation District

2024-2028 CAPITAL IMPROVEMENT PLAN

Draft October 10, 2023

	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$2,191,195	$727,671	$999,191	$945,682	$332,292	$5,196,031
Water	$26,871,587	$27,794,723	$32,166,360	$49,361,209	$48,829,612	$185,023,491
Wastewater	$11,050,000	$7,775,000	$11,500,000	$6,525,000	$4,925,000	$41,775,000
Recycled Water	$984,084	$1,563,510	$1,714,340	$1,060,140	$325,000	$5,647,074
Hydroelectric	$7,090,000	$7,055,000	$4,715,000	$24,015,000	$25,140,000	$68,015,000
Recreation	$230,000	$245,000	$50,000	$160,000	$240,000	$925,000
General District	$7,207,401	$2,566,000	$2,092,800	$1,860,000	$1,147,000	$14,873,201
TOTAL	**$55,624,267**	**$47,726,904**	**$53,237,691**	**$83,927,031**	**$80,938,904**	**$321,454,797**

2023-2027 CAPITAL IMPROVEMENT PLAN

Approved November 14, 2022

	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$1,546,195	$427,671	$314,191	$715,682	$557,292	$3,561,030
Water	$16,349,843	$28,270,000	$26,070,214	$12,405,000	$15,195,000	$98,290,057
Wastewater	$16,218,067	$9,855,000	$7,315,214	$6,485,000	$6,350,000	$46,223,281
Recycled Water	$150,000	$300,000	$400,000	$325,000	$325,000	$1,500,000
Hydroelectric	$6,567,656	$9,565,000	$10,550,000	$4,070,000	$7,735,000	$38,487,656
Recreation	$450,000	$150,000	$260,000	$110,000	$275,000	$1,245,000
General District	$7,377,675	$4,714,500	$2,527,000	$2,241,000	$2,130,000	$18,990,175
TOTAL	**$48,659,436**	**$53,282,171**	**$47,436,619**	**$26,351,682**	**$32,567,292**	**$208,297,200**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan

FERC Projects

PROJECT NO.	PROJECT DESCRIPTION	Program	PROJECT Ranking Level 1	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
10007	FERC C51.1 and 51.2 RM Caples Auxiliary Dam and Boat Launch	FERC	1	40,000	40,000	40,000	40,000	40,000	200,000
06019H	FERC: C35 Oyster Creek	FERC	1	15,000	15,000	0	0	0	30,000
06021H	FERC C37.8 Water Temperature	FERC	1	30,000	35,000	35,000	30,000	35,000	165,000
06025H	FERC: C41 Canal Release Pt	FERC	1	10,000	0	0	0	0	10,000
06076H	FERC C38.4b Caples Spillway Channel Stabilization	FERC	1	15,000	15,000	15,000	0	0	45,000
06082H	FERC: C50.1 Silver Lake Campground East Re-Construction	FERC	1	1,230,000	0	0	0	0	1,230,000
06086H	FERC C33 Lake Aloha Trout Removal	FERC	1	20,000	0	0	0	0	20,000
06087H	FERC C37.1 Fish Monitoring	FERC	1	0	0	95,000	70,000	0	165,000
06088H	FERC: C37.2 Macroinvertebrate Monitoring	FERC	1	0	0	75,000	75,000	0	150,000
06089H	FERC: C37.3 Amphibian Monitoring	FERC	1	25,000	0	110,000	0	0	135,000
06090H	FERC: C37.4 Riparian Species Composition	FERC	1	0	0	30,000	0	0	30,000
06091H	FERC: C37.5 Riparian Vegetation Recruitment	FERC	1	0	0	30,000	0	0	30,000
06092H	FERC: C37.7 Geomorphology Evaluation	FERC	1	0	0	80,000	0	0	80,000
06095H	FERC: C54 Visual Resources Management Plan	FERC	1	5,000	0	0	0	0	5,000
06096H	FERC: C55 Heritage Resources	FERC	1	60,000	0	0	0	0	60,000
06097H	FERC: C59 Facility Management Plan	FERC	1	10,000	0	0	0	0	10,000
06098H	FERC: C46 thru C49 Recreation Resource Management	FERC	1	10,000	0	0	0	0	10,000
07003H	FERC: C37.9 Water Quality	FERC	1	100,000	0	0	105,000	0	205,000
07005H	FERC: C51.3 RM Echo Trailhead	FERC	1	8,000	8,000	8,000	8,000	8,000	40,000
07006H	FERC: C51.5 and C51.7 RM USFS Payments	FERC	1	53,195	54,671	56,191	57,682	59,292	281,030
07010H	FERC: C15 Pesticide Use	FERC	1	80,000	80,000	80,000	80,000	80,000	400,000
07011H	FERC: C38 Adaptive Management Program	FERC	1	50,000	50,000	50,000	50,000	50,000	250,000
07030H	FERC: C57 Transportation System Management Plan	FERC	1	400,000	400,000	250,000	400,000	30,000	1,480,000
08025H	FERC C44 Noxious Weed Monitoring	FERC	1	30,000	30,000	45,000	30,000	30,000	165,000
TOTAL				**2,191,195**	**727,671**	**999,191**	**945,682**	**332,292**	**5,196,030**

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El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
17011	Crestview Pump Station Replacement Project	WA	1	775,000	0	0	0	0	775,000
17035	Green Valley Bridge Relocation	WA	1	0	0	700,000	0	0	700,000
20030	Drop Off Road Waterline Extension	WA	1	1,100,000	0	0	0	0	1,100,000
21040	Water Facility Generators - FEMA Grant	WA	1	500,000	0	0	0	0	500,000
22038	Reservoir A Filter Valve Replacements	WA	1	1,432,917	0	0	0	0	1,432,917
23010	Res 1 Water Treatment Plant Generator Replacement	WA	1	525,000	0	0	0	0	525,000
23017	El Dorado Hills WTP Clear Well Pump Replacement	WA	1	153,000	0	0	0	0	153,000
PLANNED	Placerville Drive Hangtown Creek Bridge Replacement	WA	1	75,000	975,000	0	0	0	1,050,000
PLANNED	Pleasant Valley Road Bulk Water Station Upgrades	WA	1	0	70,000	125,000	0	0	195,000
PLANNED	Sly Park Spillway Improvements	WA	1	120,000	200,000	0	0	0	320,000
PLANNED	Water Arc Flash Risk Assessment Program	WA	1	50,000	50,000	50,000	50,000	50,000	250,000
16003	Permit 21112 Change in Point of Diversion	WA	2	275,000	200,000	100,000	0	0	575,000
21015	Swansboro Pump Station Replacement Project	WA	2	0	50,000	0	0	0	50,000
21079	Sly Park Intertie Improvements	WA	2	10,500,000	10,400,000	0	0	0	20,900,000
22019	Pleasant Oak Main Pressure Reducing Station #2 Upgrade	WA	2	175,000	250,000	0	0	0	425,000
23001	AMR and Small Meter Replacement	WA	2	360,000	360,000	400,000	400,000	425,000	1,945,000
23002	Serviceline Replacement Program	WA	2	2,750,000	2,750,000	3,000,000	3,000,000	3,450,000	14,950,000
23009	Reservoir 1 Storage Replacement	WA	2	550,000	1,000,000	7,500,000	0	0	9,050,000
23025	Valve Replacement EDM1 And EDM2	WA	2	50,000	100,000	0	0	0	150,000
PLANNED	Construction Spoils Management	WA	2	420,000	750,000	0	0	0	1,170,000
PLANNED	EDH Water Treatment Plant Phase 1-3 Improvements	WA	2	2,688,000	4,388,000	11,971,000	20,771,000	23,221,000	63,039,000
PLANNED	El Dorado Hills Raw Water Pump Station 4160 Enclosure	WA	2	150,000	0	0	0	0	150,000
PLANNED	Pressure Reducing Station Rehabilitation and Replacement Program	WA	2	50,000	200,000	750,000	350,000	900,000	2,250,000
PLANNED	Pump Station Rehabilitation and Replacement Program	WA	2	75,000	75,000	100,000	1,000,000	600,000	1,850,000
PLANNED	Res 1 Water Treatment Plant Phase 1 Improvements Program	WA	2	537,000	1,237,000	1,312,000	13,560,000	13,560,000	30,206,000
PLANNED	Reservoir A Backwash to Waste Valve Replacement	WA	2	0	195,000	1,925,000	0	0	2,120,000
PLANNED	Ridgeview Pump Station Rehabilitation	WA	2	0	100,000	0	0	0	100,000
PLANNED	SCADA Water Hardware Replacement Program	WA	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Sly Park Outlet Control Facility Improvements	WA	2	0	50,000	100,000	0	0	150,000
PLANNED	Storage Tank Replacement & Rehabilitation Program	WA	2	2,785,670	2,944,723	1,258,360	6,730,209	2,973,612	16,692,573
PLANNED	Transmission Slope Stabilization	WA	2	0	75,000	600,000	0	0	675,000
PLANNED	Valve Replacement Program	WA	2	0	100,000	125,000	125,000	150,000	500,000
PLANNED	Water Treatment Plant Asset Replacement Program	WA	2	500,000	500,000	0	0	0	1,000,000

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El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Water Projects

PLANNED	Water Treatment Plant Flow Meters Upgrade	WA	2	0	0	0	0	100,000	100,000
PLANNED	Waterline Replacement Program	WA	2	0	150,000	2,000,000	3,000,000	3,000,000	8,150,000
PLANNED	Wholesale Meter Replacement	WA	2	0	250,000	0	275,000	0	525,000
PLANNED	Large Meter Replacement	WA	2	0	0	0	0	250,000	250,000
19050	Construction Storage Facility	WA	3	75,000	225,000	0	0	0	300,000
PLANNED	Water Distribution Radio Path Program	WA	3	50,000	50,000	0	0	0	100,000
PLANNED	Water Model - Validation and Update	WA	3	50,000	0	50,000	0	50,000	150,000
TOTAL				**26,871,587**	**27,794,723**	**32,166,360**	**49,361,209**	**48,829,612**	**185,023,490**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Wastewater Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
21041	Wastewater Facility Generators - FEMA Grant	WW	1	210,000	0	0	0	0	210,000
21081	Motherlode Force Main Replacement Program	WW	1	5,000,000	0	0	0	0	5,000,000
PLANNED	Camino Heights Wastewater Treatment Plant Disposal Improvements	WW	1	0	150,000	200,000	0	0	350,000
PLANNED	Wastewater Arc Flash Risk Assessment Program	WW	1	50,000	50,000	50,000	50,000	50,000	250,000
15036	Silva Valley - El Dorado Hills Sewer Pipeline	WW	2	0	0	300,000	350,000	350,000	1,000,000
17046	Strolling Hills Pipeline Improvements	WW	2	500,000	3,000,000	3,000,000	0	0	6,500,000
18003	Indian Creek Lift Station Upgrades	WW	2	1,325,000	1,250,000	0	0	0	2,575,000
20040	Deer Park LS SCADA Hardware Replacement	WW	2	65,000	0	0	0	0	65,000
21007	Town Center Force Main Phase 4 Replacement	WW	2	0	0	0	0	100,000	100,000
21026	St. Andrews Lift Station Upgrades	WW	2	100,000	250,000	0	0	0	350,000
PLANNED	Collections Pipeline Replacement and Rehabilitation Program	WW	2	2,500,000	250,000	1,250,000	250,000	1,250,000	5,500,000
PLANNED	Collections SCADA and PLC Upgrade Program	WW	2	400,000	400,000	300,000	0	0	1,100,000
PLANNED	DCWWTP PLC Replacement Program	WW	2	0	150,000	150,000	150,000	0	450,000
PLANNED	DCWWTP Process Control Device Integration	WW	2	75,000	75,000	0	0	0	150,000
PLANNED	EDHWWTP PLC Replacement Project	WW	2	0	300,000	400,000	400,000	0	1,100,000
PLANNED	El Dorado Hills Lift Station Consolidation	WW	2	0	150,000	150,000	0	0	300,000
PLANNED	El Dorado Lift Station Site Improvements	WW	2	0	0	250,000	0	0	250,000
PLANNED	Ponderosa Heights Force Main Replacement	WW	2	0	250,000	750,000	750,000	0	1,750,000
PLANNED	Promontory Village Inflow & Infiltration Study	WW	2	0	0	0	25,000	100,000	125,000
PLANNED	SCADA Wastewater Hardware Replacement Program	WW	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Wastewater Asset Replacement Program	WW	2	500,000	500,000	500,000	500,000	500,000	2,500,000
PLANNED	Wastewater Lift Station Upgrade Program	WW	2	0	175,000	1,625,000	1,475,000	2,250,000	5,525,000
PLANNED	Wastewater Treatment Plant Assessments	WW	2	0	200,000	250,000	250,000	0	700,000
PLANNED	WWTP Solids Handling Replacement	WW	2	0	300,000	2,000,000	2,000,000	0	4,300,000
PLANNED	WWTP Process Improvement Program	WW	2	175,000	175,000	175,000	175,000	175,000	875,000
PLANNED	Wastewater Collection System Hydraulic Modeling	WW	3	50,000	50,000	50,000	50,000	50,000	250,000
TOTAL				**11,050,000**	**7,775,000**	**11,500,000**	**6,525,000**	**4,925,000**	**41,775,000**

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El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Recycled Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
PLANNED	Recycled Storage Tank Replacement & Rehabilitation Pr	RW	2	859,084	1,188,510	1,389,340	735,140	0	4,172,074
PLANNED	Recycled Water Asset Program	RW	2	75,000	175,000	75,000	75,000	75,000	475,000
PLANNED	Recycled Water Distribution Program	RW	2	50,000	125,000	250,000	250,000	250,000	925,000
PLANNED	Recycled Water Radio Path Design and Replacement	RW	2	0	75,000	0	0	0	75,000
Total			**TOTAL:**	**984,084**	**1,563,510**	**1,714,340**	**1,060,140**	**325,000**	**5,647,074**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
19031	Silver Lake Dam Replacement	HY	1	700,000	1,980,000	2,200,000	22,500,000	22,500,000	49,880,000
21008	Diversion - Facility Upgrades	HY	1	300,000	0	0	0	0	300,000
PLANNED	Hydro Arc Flash Risk Assessment Program	HY	1	50,000	65,000	50,000	0	50,000	215,000
17028	Flume 48 Replacement	HY	2	50,000	200,000	250,000	200,000	0	700,000
18010	Penstock Improvements	HY	2	200,000	200,000	185,000	80,000	80,000	745,000
19021	Canal RTU Replacement Control Sites	HY	2	150,000	325,000	325,000	325,000	0	1,125,000
19024	Echo Conduit Rehabilitation	HY	2	80,000	0	0	0	0	80,000
21004	A18 Fiber Communication Improvements	HY	2	300,000	0	0	0	0	300,000
21013	Flumes 45A, 46A, 47A, and 47B Replacement	HY	2	0	0	0	0	2,000,000	2,000,000
21016	Penstock Stabilization	HY	2	80,000	520,000	170,000	0	0	770,000
21028	Powerhouse Automation Replacement	HY	2	75,000	500,000	0	0	0	575,000
22014	Flume 45 Section 3 Replacement	HY	2	500,000	10,000	10,000	10,000	10,000	540,000
22030	Flume 47A Replacement	HY	2	3,200,000	0	0	0	0	3,200,000
23016	Camp 2 Structure	HY	2	0	0	250,000	0	0	250,000
PLANNED	14 Mile Tunnel Improvements	HY	2	200,000	2,000,000	0	0	0	2,200,000
PLANNED	Annual Canal and Flume Improvements Program	HY	2	425,000	300,000	300,000	300,000	300,000	1,625,000
PLANNED	Annual Reservoir and Dam Improvements Program	HY	2	165,000	50,000	50,000	50,000	50,000	365,000
PLANNED	Camp 5 Generator Replacement	HY	2	0	50,000	250,000	0	0	300,000
PLANNED	Ditch SCADA Hardware Replacement	HY	2	0	0	50,000	150,000	0	200,000
PLANNED	Diversion - A11 Flow Control	HY	2	80,000	0	0	0	0	80,000
PLANNED	Flume 4 Replacement	HY	2	0	250,000	250,000	0	0	500,000
PLANNED	Hydro Equipment and Facility Replacement Program	HY	2	75,000	75,000	75,000	75,000	75,000	375,000
PLANNED	Hydro Powerhouse Equipment and Facility Replacement	HY	2	75,000	75,000	75,000	75,000	75,000	375,000
PLANNED	Lakes Remote Telemetry Units Replacement	HY	2	50,000	275,000	0	0	0	325,000
PLANNED	Powerhouse Turbine Runner Upgrade	HY	2	50,000	50,000	0	0	0	100,000
PLANNED	Spill 3 Crib Wall Replacement	HY	2	0	0	125,000	200,000	0	325,000
STUDY 2023	2024 Canal Assessment	HY	2	50,000	0	0	0	0	50,000
STUDY 2024	2024 Siphon Assessment	HY	2	60,000	0	0	0	0	60,000

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2024 - 2028 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
STUDY 2025	2025 Canal Release Points Assessment	HY	2	0	80,000	0	0	0	80,000
STUDY 2026	2026 Tunnel Assessment	HY	2	0	0	50,000	0	0	50,000
STUDY 2027	2027 Flume Assessment	HY	2	0	0	0	50,000	0	50,000
21003	Diversion Repeater Site	HY	3	175,000	0	0	0	0	175,000
21009	Diversion - Fish Ladder Improvements	HY	3	0	50,000	50,000	0	0	100,000
Total				**7,090,000**	**7,055,000**	**4,715,000**	**24,015,000**	**25,140,000**	**68,015,000**

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El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Recreation Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
PLANNED	Recreation Facility Replacement Program	RE	2	175,000	100,000	25,000	100,000	100,000	500,000
18023	Acorn Day Use Area	RE	3	5,000	20,000	0	0	0	25,000
PLANNED	Boat Launching Facility Improvements	RE	3	25,000	0	0	0	0	25,000
PLANNED	Silver Lake West Campground Improvements	RE	3	0	0	0	35,000	140,000	175,000
PLANNED	Sly Park Recreation Area Facility Improvements	RE	3	25,000	125,000	25,000	25,000	0	200,000
TOTAL:				**230,000**	**245,000**	**50,000**	**160,000**	**240,000**	**925,000**

2024-2028 Capital Improvement Plan
General District

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
18044	WAN Upgrade	GD	1	15,000	0	0	0	0	15,000
18055	Hansen 7 Software Replacement	GD	1	2,374,000	0	0	0	0	2,374,000
19027	Windows Server 2016 Upgrade	GD	1	35,000	0	0	0	0	35,000
19028	Datacenter SCADA Segmentation	GD	1	33,000	0	0	0	0	33,000
PLANNED	Arc Flash Risk Assessment Program	GD	1	42,000	0	0	0	47,000	89,000
PLANNED	New Security Systems	GD	1	500,000	515,000	371,000	385,000	400,000	2,171,000
22021	Camino Heights SCADA Upgrade	GD	2	100,000	0	0	0	0	100,000
22044	Remote Site Wireless Deployment	GD	2	22,901	0	0	0	0	22,901
PLANNED	Headquarter Facility Improvements	GD	2	200,000	0	0	0	0	200,000
PLANNED	IT Business Systems Replacement	GD	2	75,000	55,000	275,000	50,000	0	455,000
PLANNED	IT Communication Systems Replacement	GD	2	100,000	175,000	50,000	100,000	100,000	525,000
PLANNED	IT End-User Technology Replacement	GD	2	150,000	325,000	100,000	100,000	0	675,000
PLANNED	IT Network Infrastructure Replacement	GD	2	400,000	237,500	100,000	150,000	100,000	987,500
PLANNED	Security Equipment Reliability Program	GD	2	110,000	100,000	0	0	0	210,000
PLANNED	Vehicle Replacement Program	GD	2	3,050,500	945,000	1,000,000	1,000,000	500,000	6,495,500
PLANNED	Windows 2012 Upgrade	GD	2	0	13,500	64,800	0	0	78,300
22022	Network Perimeter Security Upgrades	GD	3	0	0	32,000	0	0	32,000
PLANNED	SCADA Master Plan Implementation	GD	3	0	200,000	100,000	75,000	0	375,000
Total				**7,207,401**	**2,566,000**	**2,092,800**	**1,860,000**	**1,147,000**	**14,873,201**

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El Dorado Irrigation District

FIVE YEAR

CAPITAL IMPROVEMENT PLAN

2024—2028 PROJECTS

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October 10, 2023

FERC
Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06019H

Project Name: FERC: C35 Oyster Creek

Project Category: Regulatory Requirements

Priority: 1 **PM:** Baron **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The District completed the installation of stabilization measures in Oyster Creek in 2019. Post-project monitoring and maintenance of stabilization measures is required for 5-years following project construction to evaluate performance of stabilization measures.

Basis for Priority:

EID would not be in compliance with Condition 35 of the El Dorado Relicensing Settlement Agreement, USFS 4(e) Condition 35, and SWRCB Water Quality Certification Condition 6 requirements contained in the FERC License.

Project Financial Summary:			
Funded to Date:	$ 489,950	Expenditures through end of year:	$ 396,525
Spent to Date:	$396,525	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:		Total Project Estimate:	$ 426,525
Project Balance	$ 93,425	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 10,000	$ 10,000				$ 20,000
Maintenance	$ 5,000	$ 5,000				$ 10,000
TOTAL	$ 15,000	$ 15,000	$ -	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06021H

Project Name: FERC C37.8 Water Temperature

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to implement an annual water temperature monitoring program at project reservoirs and stream reaches. The data collected from this monitoring effort will be used to determine if the coldwater beneficial uses are being met in designated project reaches.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Sections 7 and 12 of the Settlement Agreement, USFS 4(e) conditions 37 and 42, and SWRCB Water Quality Certification condition 14.

Project Financial Summary:			
Funded to Date:	$ 411,500	Expenditures through end of year:	$ 389,042
Spent to Date:	$ 366,042	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 23,000	Total Project Estimate:	$ 554,042
Project Balance	$ 22,458	Additional Funding Required	$ 142,542

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$20,000	$25,000	$25,000	$20,000	$25,000	$ 115,000
Reporting	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Staff Time	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
						$ -
TOTAL	$ 30,000	$ 35,000	$ 35,000	$ 30,000	$ 35,000	$ 165,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$7,542
		$0
		$0
Total	**100%**	**$7,542**

Funding Comments: Water temperature monitoring conducted in coordination with water quality monitoring every three years.

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06025H

Project Name: FERC: C41 Canal Release Pt

Project Category:

Priority: 1 **PM:** Mutschler **Board Approval:**

Project Description:

Required by the FERC Project No. 184 license Settlement Agreement and USFS 4(e) Condition 41, which states the District must develop and file for FERC approval a canal drainage structure and release point plan. The licensee shall implement the plan upon approval. The plan has been approved and implementation is underway. An update to the plan is needed in 2024 to include upgrades that have been implemented, identify future upgrades, and evaluate the condition of spillway channels. Future design and construction costs will depend on the scope of activities identified in the updated plan.

Basis for Priority:

This project is required by the Project 184 FERC License and is on-going.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 39,271
Spent to Date:	$ 34,271	2024 - 2028 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 49,271
Project Balance	$ 10,729	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 10,000					$ 10,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Funding Sources	Percentage	2024	Amount
Water FCC's	53%		$0
Water Rates	47%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06076H

Project Name: FERC C38.4b Caples Spillway Channel Stabilization

Project Category: Regulatory Requirements

Priority: 1 **PM:** Venable **Board Approval:**

Project Description:

This Project is a mandatory requirement of the conditions of the FERC license. The District completed the installation of stabilization measures in the spillway channel in 2020. Post-project monitoring and maintenance of stabilization measures is required for 5-years following project construction to evaluate performance of stabilization measures.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 8 of the Settlement Agreement, USFS 4(e) conditions 38.4b, and SWRCB Water Quality Certification condition 5.

Project Financial Summary:			
Funded to Date:	$ 1,196,857	Expenditures through end of year:	$ 1,099,295
Spent to Date:	$ 1,057,295	2024 - 2028 Planned Expenditures:	$ 45,000
Cash flow through end of year:	$ 42,000	Total Project Estimate:	$ 1,144,295
Project Balance	$ 97,562	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 10,000	$ 10,000	$ 10,000			$ 30,000
Maintenance	$ 5,000	$ 5,000	$ 5,000			$ 15,000
TOTAL	$ 15,000	$ 15,000	$ 15,000	$ -	$ -	$ 45,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06082H

Project Name: FERC: C50.1 Silver Lake Campground East Re-Construction

Project Category: Regulatory Requirements

Priority: 1 **PM:** Kelsch **Board Approval:**

Project Description:

Required by the License Settlement Agreement and the USFS 4(e) Conditions, the District must reconstruct the paved surfaces, toilets, and water system at the 62-unit USFS Silver Lake Campground, including upgrade of this facility to meet the current FS design standards and the USDA Forest Service Region 5 accessibility standards requirements of the Architectural Barriers Act (ABA). Campground improvements were completed in 2020, with the exception of the installation of a water line from the water source to the campground. The Project involves replacing the existing spring-fed water source, which is located over a mile away, with a new groundwater well within the campground. The new well will provide a more reliable source of water to serve both the Silver Lake East and Silver Lake West campgrounds. The Project will include permitting the new well and installing the new well, a small building to house a tank and equipment, and a new water line to serve both Silver Lake East and Silver Lake West campgrounds.

The well is scheduled to be drilled in fall 2023 and the remainder of the project is anticipated to be bid in fall 2023 and constructed summer 2024. The District received an additional one-year time extension from FERC and the new completion date for the installation of the water system is October 18, 2024.

Basis for Priority:

This project is required to comply with the FERC License Condition No. 50.1 and USFS 4(e) Condition requirements. The District completed the campground work in 2020. The District is requested and received a time extension from FERC to complete the Water System Work in 2024.

Project Financial Summary:			
Funded to Date:	$ 3,176,332	Expenditures through end of year:	$ 3,052,231
Spent to Date:	$ 2,792,231	2024 - 2028 Planned Expenditures:	$ 1,230,000
Cash flow through end of year:	$ 260,000	Total Project Estimate:	$ 4,282,231
Project Balance	$ 124,101	Additional Funding Required	$ 1,105,899

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction (Water System)	$ 1,230,000					$ 1,230,000
TOTAL	$ 1,230,000	$ -	$ -	$ -	$ -	$ 1,230,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$1,105,899
			$0
Total	100%		$1,105,899

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06086H

Project Name: FERC C33 Lake Aloha Trout Removal

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding only necessary in years when a spill occurs over the auxiliary dams at Lake Aloha. If spill occurs, EID is required to manually remove trout from the pools downstream of the auxiliary dams to help reduce potential impacts to Sierra Nevada yellow-legged frogs by trout predation.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 33, and SWRCB Water Quality Certification condition 4.

Project Financial Summary:			
Funded to Date:	$ 92,000	Expenditures through end of year:	$ 70,662
Spent to Date:	$ 70,662	2024 - 2028 Planned Expenditures:	$ 20,000
Cash flow through end of year:		Total Project Estimate:	$ 90,662
Project Balance	$ 21,338	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$20,000					$ 20,000
						$ -
TOTAL	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06087H

Project Name: FERC C37.1 Fish Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate the status of fish populations in selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 359,200	Expenditures through end of year:	$ 347,890
Spent to Date:	$ 347,890	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 512,890
Project Balance	$ 11,310	Additional Funding Required	$ 153,690

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 80,000	$ 55,000		$ 135,000
Staff time			$ 15,000	$ 15,000		$ 30,000
						$ -
TOTAL	$ -	$ -	$ 95,000	$ 70,000	$ -	$ 165,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments: Monitoring for hardhead required in 2026; monitoring for rainbow trout required in 2026 and 2027

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06088H

Project Name: FERC: C37.2 Macroinvertebrate Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate the status of macroinvertebrates in selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 279,000	Expenditures through end of year:	$ 271,209
Spent to Date:	$ 271,209	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 421,209
Project Balance	$ 7,791	Additional Funding Required	$ 142,209

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 70,000	$ 70,000		$ 140,000
Staff time			$ 5,000	$ 5,000		$ 10,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 75,000	$ 75,000	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06089H

Project Name: FERC: C37.3 Amphibian Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Amphibian surveys are required June through September if at any time flows in the South Fork of the American River (SFAR) are 100 cfs or less and the diversion into the canal causes the flow in the SFAR to change 50 cfs or more in 1 day. The objective of these surveys is to assess the effects of flow fluctuations on foothill yellow-legged frog egg masses and tadpoles. Amphibian surveys for Sierra Nevada yellow-legged frog (SNYLF) and foothill yellow-legged frog (FYLF) are also required every five years at project reservoirs and stream reaches as part of the El Dorado Hydroelectric Project No. 184 Adaptive Management Program. Amphibian surveys are also required in years when a spill occurs over the auxiliary dams at Lake Aloha. If spill occurs, EID is required to survey for SNYLF in the pools downstream of the auxiliary dams.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 403,648	Expenditures through end of year:	$ 379,974
Spent to Date:	$ 379,974	2024 - 2028 Planned Expenditures:	$ 135,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 514,974
Project Balance	$ 23,674	Additional Funding Required	$ 111,326

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
FYLF/SNYLF monitoring			$ 100,000			$ 100,000
Staff time			$ 10,000			$ 10,000
SFAR flow fluctuations	$ 10,000					$ 10,000
Lake Aloha monitoring	$ 15,000					$ 15,000
						$ -
TOTAL	$ 25,000	$ -	$ 110,000	$ -	$ -	$ 135,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$1,326
		$0
		$0
Total	100%	$1,326

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06090H

Project Name: FERC: C37.4 Riparian Species Composition

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate riparian species composition at selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 60,000	Expenditures through end of year:	$ 56,657
Spent to Date:	$ 56,657	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 86,657
Project Balance	$ 3,343	Additional Funding Required	$ 26,657

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 25,000			$ 25,000
Staff time			$ 5,000			$ 5,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: FERC

Project Number: 06091H

Project Name: FERC: C37.5 Riparian Vegetation Recruitment

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate riparian vegetation recruitment at selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 75,000	Expenditures through end of year:	$ 58,235
Spent to Date:	$ 58,235	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 88,235
Project Balance	$ 16,765	Additional Funding Required	$ 13,235

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 25,000			$ 25,000
Staff Time			$ 5,000			$ 5,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06092H

Project Name: FERC: C37.7 Geomorphology Evaluation

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to monitor representative stream channel areas for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 169,266	Expenditures through end of year:	$ 158,198
Spent to Date:	$ 158,198	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 238,198
Project Balance	$ 11,068	Additional Funding Required	$ 68,932

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 70,000			$ 70,000
Staff time			$ 10,000			$ 10,000
TOTAL	$ -	$ -	$ 80,000	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06095H

Project Name: FERC: C54 Visual Resources Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

This project is a requirement of the Article 402 of the Federal Energy Regulatory Commission (FERC) License for Project No. 184, Section 24 of the El Dorado Relicensing Settlement Agreement, and United States Forest Service (USFS) 4(e) Condition 54. These conditions require the District to prepare and implement a Visual Resources Management Plan (VRMP). The purpose of the Visual Resources Management Plan (VRMP) is to guide the decision-making process and facilitate the aesthetic/visual enhancement and management of specific Project No. 184 facilities and lands affecting the visual character of the Project No. 184 area. The current VRMP was approved in 2008 and is due to be reviewed and updated. Funding will be for professional services and staff time to update the plan and coordinate review and approval of the updated VRMP with the USFS and FERC.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 54.

Project Financial Summary:			
Funded to Date:	$ 55,381	Expenditures through end of year:	$ -
Spent to Date:	$ 40,381	2024 - 2028 Planned Expenditures:	$ 5,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 5,000
Project Balance	$ 5,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 5,000					$ 5,000
						$ -
TOTAL	$ 5,000	$ -	$ -	$ -	$ -	$ 5,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06096H

Project Name: FERC: C55 Heritage Resources

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to complete and implement the Heritage Properties Management Plan (HPMP). The HPMP provides management protocols and mitigation measures for the ongoing protection of archaeological resources located within the FERC boundary.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) conditions 55 and 56.

Project Financial Summary:			
Funded to Date:	$ 279,580	Expenditures through end of year:	$ 212,841
Spent to Date:	$ 212,841	2024 - 2028 Planned Expenditures:	$ 60,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 272,841
Project Balance	$ 66,739	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 50,000.00					$ 50,000.00
Staff Time	$ 10,000.00					$ 10,000.00
						$ -
						$ -
TOTAL	$ 60,000.00	$ -	$ -	$ -	$ -	$ 60,000.00

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: FERC

Project Number: 06097H

Project Name: FERC: C59 Facility Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Mutschler **Board Approval:**

Project Description:

Required by the License Settlement Agreement, and the USFS 4(e) Condition 59: Within 1 year of license issuance, the licensee shall file with FERC a Facility Management Plan that is approved by the FS. The licensee shall implement the plan upon approval. Every 5 years, the licensee shall prepare a 5-year plan that will identify the maintenance, reconstruction, and removal needs for Project facilities within the FERC boundary and located on Forest Service property. The plan was approved by the USFS and filed with FERC. The plan is due to be reviewed and updated. Future costs are subject to change based on the scope of the new plan. Items remaining to be evaluated include the following: winch house at the surge chamber and the water tank shed along the penstock.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 59.

Project Financial Summary:			
Funded to Date:	$ 70,000	Expenditures through end of year:	$ 54,197
Spent to Date:	$ 49,197	2024 - 2028 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 64,197
Project Balance	$ 15,803	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 10,000					$ 10,000
						$ -
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06098H

Project Name: FERC: C46 thru C49 Recreation Resource Management

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:**

Project Description:

Required by the new FERC License, Settlement Agreement, and the USFS 4(e) Conditions. Conditions 46-49: Condition No. 46 – Implementation Plan. A recreation implementation plan shall be developed by the licensee in coordination with the FS within 6 months of license issuance. Condition No. 47 - Recreation Survey. The licensee shall conduct a Recreational Survey and prepare a Report on Recreational Resources that is approved by the FS every 6 years from the date of license issuance. Condition No. 48 – Forest Service Liaison. The FS and the licensee shall each provide an individual for liaison whenever planning or construction of recreation facilities, other major Project improvements, and maintenance activities are taking place within the National Forest. Condition No. 49 - Review of Recreation Developments. The FS and the licensee shall meet at least every 6 years to review all recreation facilities and areas associated with the Project and to agree upon necessary maintenance, rehabilitation, construction, and reconstruction work needed and its timing, as described in Conditions No. 49 and 50. Following the review, the licensee shall develop a 6-year schedule for maintenance, rehabilitation, and reconstruction.

This is a mandatory requirement of the October 18, 2006 FERC Order Issuing New License

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 384,000	**Expenditures through end of year:**	$ 335,428
Spent to Date:	$ 305,428	**2024 - 2028 Planned Expenditures:**	$ 10,000
Cash flow through end of year:	$ 30,000	**Total Project Estimate:**	$ 345,428
Project Balance	$ 48,572	**Additional Funding Required**	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Survey						$ -
Reporting	$ 10,000					$ 10,000
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	**100%**	**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07003H

Project Name: FERC: C37.9 Water Quality

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to implement the water quality monitoring program at Project No. 184 reservoirs and stream reaches. The data collected from this monitoring effort will be used to characterize water quality under current project operations and help determine if applicable water quality objectives/criteria are being met and whether designated beneficial uses are protected.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 609,000	Expenditures through end of year:	$ 589,877
Spent to Date:	$ 589,877	2024 - 2028 Planned Expenditures:	$ 205,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 794,877
Project Balance	$ 19,123	Additional Funding Required	$ 185,877

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 60,000			$ 65,000		$ 125,000
Lab analysis	$ 25,000			$ 25,000		$ 50,000
Staff time	$ 15,000			$ 15,000		$ 30,000
TOTAL	$ 100,000	$ -	$ -	$ 105,000	$ -	$ 205,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$80,877
		$0
		$0
Total	100%	$80,877

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: FERC

Project Number: 07005H

Project Name: FERC: C51.3 RM Echo Trailhead

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:**

Project Description:

Required by the FERC License, Settlement Agreement, and the USFS 4(e) Condition 51.3, which requires the District to provide funding for the following activities at Echo Lakes Trailhead:

a. Toilet pumping
b. Trash removal/litter pick-up within the site

Funding under this CIP is required to cover the costs of toilet pumping as well as capitalized labor for operations staff to clean up litter within the site.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 30,000	Expenditures through end of year:	$ 24,593
Spent to Date:	$ 24,593	2024 - 2028 Planned Expenditures:	$ 40,000
Cash flow through end of year:		Total Project Estimate:	$ 64,593
Project Balance	$ 5,407	Additional Funding Required	$ 34,593

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Services	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Staff time	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 15,000
TOTAL	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 40,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$2,593
		$0
		$0
Total	100%	$2,593

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07006H

Project Name: FERC: C51.5 and C51.7 RM USFS Payments

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:**

Project Description:

Required by the FERC License, Settlement Agreement, and USFS 4(e) Condition 51, which in part, requires the District to provide funding for the following activities:

a. Special Use Administration Funding: The licensee shall annually pay, by October 1, the amount of $4,800 (year 2002 cost basis) to provide for performing monitoring and permit compliance assurance for the campground concessionaire special use permits at Caples Lake Campground and Silver Lake East Campground. The costs shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP).

b. Dispersed Area Patrol Funding on Lands Affected by the Project: The licensee shall annually pay, by October 1, $25,000 (year 2002 cost basis). The cost shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). These funds are to provide for patrol and operation of non-concessionaire developed and dispersed recreation facilities, as well as trails and other locations utilized by visitors to the Project, within and adjacent to the Project boundary. The licensee shall annually provide a boat and operator on Caples Lake and Silver Lake at least twice each season (time to be determined by mutual agreement between the licensee and the FS) to assist the FS in policing the shoreline along Silver Lake and Caples Lake, and to clean up litter.

Funding under this CIP is required to pay the annual fees to the USFS for special use administration and dispersed area patrol on USFS lands affected by the Project, and for capitalized labor to patrol the shoreline and clean up litter at Silver Lake and Caples Lake.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 722,421	Expenditures through end of year:	$ 717,762
Spent to Date:	$ 662,762	2024 - 2028 Planned Expenditures:	$ 281,030
Cash flow through end of year:	$ 55,000	Total Project Estimate:	$ 998,793
Project Balance	$ 4,659	Additional Funding Required	$ 276,372

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Fees	$49,195	$50,671	$52,191	$53,682	$55,292	$261,030
Staff time	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$20,000
TOTAL	$ 53,195	$ 54,671	$ 56,191	$ 57,682	$ 59,292	$281,030

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$48,536
		$0
		$0
Total	100%	$48,536

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07010H

Project Name: FERC: C15 Pesticide Use

Project Category: Regulatory Requirements

Priority: 1 **PM:** M. Heape **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is requested to implement the integrated pest management plan (IPMP). The IPMP addresses pesticide use at EID facilities within the jurisdiction of the El Dorado National Forest (ENF) and Lake Tahoe Basin Management Unit (LTBMU).

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 15.

Project Financial Summary:			
Funded to Date:	$ 998,000	Expenditures through end of year:	$ 986,694
Spent to Date:	$ 906,694	2024 - 2028 Planned Expenditures:	$ 400,000
Cash flow through end of year:	$ 80,000	Total Project Estimate:	$ 1,386,694
Project Balance	$ 11,306	Additional Funding Required	$ 388,694

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$ 65,000	$ 65,000	$ 65,000	$ 65,000	$ 65,000	$ 325,000
Equipment / Supplies	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
						$ -
						$ -
TOTAL	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 400,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$68,694
		$0
		$0
Total	100%	$68,694

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07011H

Project Name: FERC: C38 Adaptive Management Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is for staff time to implement the adaptive management program (Condition 38) of the FERC license. This program requires coordination with the Ecological Resources Committee (ERC), implementation of the resource monitoring program, and evaluation of monitoring results to determine if resource objectives are achievable and being met.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 14 of the Settlement Agreement, and USFS 4(e) condition 38.

Project Financial Summary:			
Funded to Date:	$ 727,000	Expenditures through end of year:	$ 714,657
Spent to Date:	$ 694,657	2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 964,657
Project Balance	$ 12,343	Additional Funding Required	$ 237,657

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Staff time	$50,000	$50,000	$50,000	$50,000	$50,000	$ 250,000
						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$37,657
			$0
			$0
Total	100%		$37,657

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07030H

Project Name: FERC: C57 Transportation System Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Mutschler **Board Approval:**

Project Description:

Condition 57 states within 1 year of license issuance, the licensee shall file with FERC a transportation system management plan that is approved by the FS for roads on or affecting National Forest System lands. The plan was prepared and approved and established the level of licensee responsibility for project-related roads. Also included in this CIP is the Trails Maintenance Plan. The plan is due to be reviewed and updated. Plan updates include consultation with the Forest Service. Future costs are subject to change based on the scope of the new plan.

Projects are for stabilizing the numerous access roads to the Project 184 system. Projects will be to repair and refurbish existing roads that are part of the Transportation System Management Plan that we have with the US Forest Service. Roads to be worked on include:

Powerhouse Road - 3.5 Miles - 2024
Camp 2 Road - 1 Mile, Five Beat Access Roads - 2 Miles - 2025
Camp 1 Road - 2 Miles - 2026
Flume 4-6 Access Road - 3 miles - 2027

Work will include replacing missing rock and treating the road with SoilTech mixture to prevent dust and erosion

Basis for Priority:

Project is required by Project 184 license and is on-going.

Project Financial Summary:			
Funded to Date:	$ 105,000	Expenditures through end of year:	$ 82,934
Spent to Date:	$ 77,934	2024 - 2028 Planned Expenditures:	$ 1,480,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 1,562,934
Project Balance	$ 22,066	Additional Funding Required	$ 1,457,934

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Update Plan	$ 10,000					$ 10,000
Construction	$ 390,000	$ 400,000	$ 250,000	$ 400,000	$ 30,000	$ 1,470,000
TOTAL	$ 400,000	$ 400,000	$ 250,000	$ 400,000	$ 30,000	$ 1,480,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$377,934
		$0
		$0
Total	100%	$377,934

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 08025H

Project Name: FERC C44 Noxious Weed Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:**

Project Description:

Mandatory requirement of the FERC license. Funding is requested to implement the noxious weed plan for the prevention and control of noxious weeds at Project No. 184 facilities. The plan requires annual surveys within the Project No. 184 boundary in areas where high priority noxious weeds are known to occur and in areas where ground disturbance occurred during the previous year. The plan also calls for surveys to be conducted every 5 years within the entire Project No. 184 boundary.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 8 of the Settlement Agreement, and USFS 4(e) condition 44.

Project Financial Summary:			
Funded to Date:	$ 347,342	Expenditures through end of year:	$ 331,727
Spent to Date:	$ 324,727	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 7,000	Total Project Estimate:	$ 496,727
Project Balance	$ 15,615	Additional Funding Required	$ 149,385

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$ 25,000	$ 25,000	$ 40,000	$ 25,000	$ 25,000	$ 140,000
Reporting	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
						$ -
						$ -
TOTAL	$ 30,000	$ 30,000	$ 45,000	$ 30,000	$ 30,000	$ 165,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$14,385
		$0
		$0
Total	100%	$14,385

Funding Comments: Annual

2024 CAPITAL IMPROVEMENT PLAN Program: FERC

Project Number: 10007

Project Name: FERC C51.1 and 51.2 RM Caples Auxiliary Dam and Boat Launch

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:**

Project Description:

Required by the FERC License, Settlement Agreement, and the USFS 4(e) Condition 51, which, in part, requires the District to provide funding for the following activities:

1. The licensee shall be responsible for one-half of the following maintenance at the Caples Lake Auxiliary Dam Parking Area: a) routine cleaning, repair, and maintenance of all constructed features, b) toilet pumping, c) trash removal/litter pick up at the site, d) maintenance of the signboards, and e) vegetation management.

2. The licensee shall be responsible for operating and maintaining the boat launching ramp, associated parking lot, and other public facilities constructed at this site for the term of the license. The licensee shall also be responsible for maintenance of signboards. The USFS shall be responsible for maintaining the information on those signboards to USFS standards.

Funding under this CIP is required to pay for services, capitalized labor, and materials necessary for operations and maintenance activities at the Caples Lake Auxiliary Dam parking area and at the Caples Lake Boat Launch.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	**$ 304,000**	**Expenditures through end of year:**	**$ 264,472**
Spent to Date:	**$ 264,472**	**2024 - 2028 Planned Expenditures:**	**$ 200,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 464,472**
Project Balance	**$ 39,528**	**Additional Funding Required**	**$ 160,472**

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Services	$25,000	$25,000	$25,000	$25,000	$25,000	$ 125,000
Staff time	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 50,000
Materials	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Construction						$ -
TOTAL	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$472
		$0
		$0
Total	**100%**	**$472**

Funding Comments:

Water Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 16003

Project Name: Permit 21112 Change in Point of Diversion

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leeper **Board Approval:**

Project Description:

The District's existing Water Right Permit 21112 allows for water diversion at Folsom Reservoir for consumptives uses. Long-term water supply planning forecasts indicate that a portion of the Permit 21112 water supply will be necessary to serve areas of the District that are east of El Dorado Hills and at a higher elevation. The District seeks to modify Permit 21112 to add an authorized point of diversion and re-diversion to more effectively and efficiently meet the future water demands. The District seeks to add a point of diversion that allows both direct diversion from the South Fork of the American River, as well as re-diversion of this water to storage in Jenkinson Lake. The additional point of diversion is proposed at the District's existing El Dorado Diversion Dam near Kyburz. In addition, the District's seeks to add Jenkinson Lake as an authorized point of re-diversion and an authorized place of storage for Permit 21112 water. Water diverted at the El Dorado Diversion Dam can be conveyed to Jenkinson Lake via the Hazel Creek Tunnel. To take all or any portion of Permit 21112 water upstream of Folsom Reservoir at a new diversion location, EID must successfully petition the State Water Resources Control Board (SWRCB) for water right permit changes to add points of diversion and rediversion and a new place of storage. This project requires extensive hydrologic modeling to support the petition process and environmental review. The SWRCB Change Petition process encompasses preparation of the Petition (including preliminary engineering, hydrologic, and biological analyses, mapping, legal review, and preliminary meetings with SWRCB staff, California Department of Fish & Wildlife staff, and other stakeholders); California Environmental Quality Act (CEQA) compliance through preparation of an environmental impact report; processing of the Petition and any protests by the SWRCB; and potentially evidentiary hearings before the SWRCB if protests are filed against the Petition and cannot be resolved through stakeholder negotiations. The planned annual expenditures reflect a timeline for CEQA compliance and Petition processing in 2024-2026. The estimated expenditures related to the Petition processing and potential SWRCB hearing proceedings are estimates only, and actual expenditures will be highly dependent on the technical and legal support necessary to advance the Petition. Any post-SWRCB hearing proceedings, including potential administrative appeals and/or litigation would require additional funding.

Basis for Priority:

This project provides measurable progress toward achieving the District's goals, including helping to meet future water demand as identified in long-term water supply planning efforts, reducing the cost of water conveyance and delivery through gravity flow, increasing flexibility and reliability in water delivery systems to benefit the District's entire service area, improving drought resiliency, maintaining compliance with regulatory and legal obligations regarding water operations, and optimizing existing water rights.

Project Financial Summary:			
Funded to Date:	$ 1,534,439	Expenditures through end of year:	$ 1,410,231
Spent to Date:	$ 1,140,231	2024 - 2028 Planned Expenditures:	$ 575,000
Cash flow through end of year:	$270,000	Total Project Estimate:	$ 1,985,231
Project Balance	$ 124,208	Additional Funding Required	$ 450,792

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Modeling	$ 50,000					$ 50,000
CEQA/Environmental	$ 125,000					$ 125,000
Petition Processing	$ 100,000	$ 100,000				$ 200,000
SWRCB Hearing		$ 100,000	$ 100,000			$ 200,000
TOTAL	$ 275,000	$ 200,000	$ 100,000	$ -	$ -	$ 575,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$150,792
Total	100%		$150,792

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17011

Project Name: Crestview Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:**

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. The District has an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment.

The Crestview Pump Station is in need of replacement due to maintenance issues with an existing buried pneumatic tank, which cannot be certified for the operating pressure due to the inability to examine the entire structure. This is a safety issue for the District as we cannot certify the existing tank for service. The existing single pump is also located within a confined space and is a potential maintenance hazard. Without the benefit of a second pump, 25 customers are taken out of water for any regular maintenance. Additionally, the station air compressors have failed due to being underground causing the pipeline to become air locked and causing various leaks on the distribution piping.

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 150,000	Expenditures through end of year:	$ 109,889
Spent to Date:	$ 29,889	2024 - 2028 Planned Expenditures:	$ 775,000
Cash flow through end of year:	$ 80,000	Total Project Estimate:	$ 884,889
Project Balance	$ 40,111	Additional Funding Required	$ 734,889

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor (Project Management & Inspection)	$ 75,000					$ 75,000
Construction	$ 700,000					$ 700,000
TOTAL	$ 775,000	$ -	$ -	$ -	$ -	$ 775,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$734,889
Total	100%		$734,889

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17035

Project Name: Green Valley Bridge Relocation

Project Category: State/County Road Projects

Priority: 1 **PM:** Carrington **Board Approval:**

Project Description:

El Dorado County plans to construct two new bridges on Green Valley Road; one at Mound Springs Creek and one at Indian Creek. The District has existing waterlines and two pressure reducing stations (Green Valley PRS #1 and Greenstone PRS #1) on Green Valley Road that will be impacted by the project and require relocation at District cost as they are located in the public right of way. Based on the County's current design, approximately 1,200 feet of 8 and 12-inch waterline will need to be relocated along with both pressure reducing stations. The relocation work needs to be completed in advance of the County's project as the District is in conflict with the new bridge abutments and road realignment. The District has pre-purchased all necessary pressure reducing valves, isolation valves, fittings, for both pressure reducing stations, and is working to complete the relocation design to be bid once the County has completed their right of way acquisition. The County plans to have right of way acquisition complete by the end of 2023. The project has been in the works for several years and dependent on County schedule.

Basis for Priority:

The District has facilities that are in the public right of way that will be impacted by the planned projects. The relocation must be done at the District's cost to make way for the County's project.

Project Financial Summary:			
Funded to Date:	$ 165,000	Expenditures through end of year:	$ 139,188
Spent to Date:	$ 114,188	2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 839,188
Project Balance	$ 25,812	Additional Funding Required	$ 674,188

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor (Inspection & Project Management)			$ 50,000			$ 50,000
Construction			$ 650,000			$ 650,000
TOTAL	$ -	$ -	$ 700,000	$ -	$ -	$ 700,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19050

Project Name: Construction Storage Facility

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Delongchamp **Board Approval:**

Project Description:

This project will evaluate a new storage facility in the EID upper yard to house material and equipment for increased security and protection from elements.

Basis for Priority:

Improve efficiency and provide safe and adequate storage.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 45,135
Spent to Date:	$ 25,135	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 345,135
Project Balance	$ 4,865	Additional Funding Required	$ 295,135

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Permitting	$ 75,000	$ 225,000				$ 300,000
Construction						$ -
TOTAL	$ 75,000	$ 225,000	$ -	$ -	$ -	$ 300,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$70,135
Total	100%		$70,135

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Water**

Project Number: 20030

Project Name: Drop Off Road Waterline Extension

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Delongchamp **Board Approval:**

Project Description:

This project will include the installation of approximately 1,100 linear feet of 8" ductile iron pipe (DIP) to connect existing 8" DIP on Drop Off Road with existing 6" PVC pipe on Dogwood Lane in Pollock Pines. Installation of this new waterline will allow for the abandonment of 1,300 feet of existing substandard steel waterline, a portion of which crosses over the existing Main Ditch just downstream from the Forebay Outlet. This project will also include the installation of one Pressure Reducing Station. This project was combined with the Forebay Road Waterline Replacement Project and approved for construction. The Forebay Road portion of the project will be complete in 2023, and the Drop Off Work will be complete in 2024.

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increases maintenance costs.

Project Financial Summary:			
Funded to Date:	**$ 1,408,963**	**Expenditures through end of year:**	**$ 127,967**
Spent to Date:	**$ 57,967**	**2024 - 2028 Planned Expenditures:**	**$ 1,100,000**
Cash flow through end of year:	**$ 70,000**	**Total Project Estimate:**	**$ 1,227,967**
Project Balance	**$ 1,280,997**	**Additional Funding Required**	**$ -**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Construction	**$ 1,000,000**					**$ 1,000,000**
Construction Inspection	**$ 60,000**					**$ 60,000**
Capitalized Labor	**$ 40,000**					**$ 40,000**
TOTAL	**$ 1,100,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,100,000**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water Rates	100%	$0
Total	**100%**	**$0**

Funding Comments: The Proejct does not increase capacity so it is funded with water rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21015

Project Name: Swansboro Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mackay **Board Approval:**

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. The District has an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment.

The current Swansboro Pump Station is at the end of its useful life as the pumps are approximately 45 years old and parts are no longer available. Currently pump number 2 is nearing a complete bearing failure and must be replaced. The pneumatic tank for the station has also reached the end of its useful life and has welded patches from previous repairs. This work would include removing the existing tank and install new pumps, above and below ground plumbing upgrade, and upgrade the SCADA panel.

Basis for Priority:

Replacement of assets to improve reliability and avoid interruption to service throughout the District in the event of failures.

Project Financial Summary:			
Funded to Date:	$ 91,000	Expenditures through end of year:	$ 92,164
Spent to Date:	$ 67,164	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 142,164
Project Balance	$ (1,164)	Additional Funding Required	$ 51,164

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 50,000				$ 50,000
Environmental						$ -
Construction						$ -
TOTAL	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$1,164
Total	100%		$1,164

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21040

Project Name: Water Facility Generators - FEMA Grant

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:**

Project Description:

The District applied for and was granted Hazard Mitigation Grant Program (HMGP) funding through the Federal Emergency Management Agency (FEMA) to provide a federal cost share for emergency backup generator installations at fifteen remote District facilities. Included in the application is generators for eight water pump stations. This project will provide local agency funding as required by the HMGP grant.

Basis for Priority:

The project will provide continual power of eight water pump stations during utility power outages. Grant timeline requires project completion by September 2022.

Project Financial Summary:			
Funded to Date:	$ 306,348	Expenditures through end of year:	$ 264,307
Spent to Date:	$ 214,307	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 764,307
Project Balance	$ 42,041	Additional Funding Required	$ 457,959

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction	$ 2,250,000					$ 2,250,000
FEMA Funding	$ (1,750,000)					$ (1,750,000)
TOTAL	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$457,959
			$0
			$0
Total	100%		$457,959

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21079

Project Name: Sly Park Intertie Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The Sly Park Intertie is a key component of supply reliability in times of drought and during emergencies. In service it provides water delivery flexibility between Reservoir A WTP and Reservoir 1 WTP. The Intertie includes approximately 3.5 miles of 22" and 30" steel waterline built under emergency conditions just after the 1976-77 drought. The unlined pipeline has corroded significantly due to lack of cathodic protection and due to the volume of leaks it was taken out of service. The Sly Park Intertie improvements were identified as a supply reliability project in the 2013 Integrated Water Resources Master Plan. Previous engineering reports from the mid 1990's and in 2006 explored the possibility of rehabilitating the pipeline with a non-structural liner. However, a 2020 study found that the wall loss was too significant to be cost effective to install a liner and thus explored a complete removal and replacement. The 2020 study includes analysis of changed operations that could reduce pumping head up to 180 feet by pumping water from Reservoir A to Reservoir 1 during annual Forebay outages with a new pump station placed at the outlet of Reservoir A, rehabilitation options, direct replacement alternatives analysis, and a financial analysis. The ability to move water between Reservoir 1 and Reservoir A will also allow for a long overdue inspection of the 60 year old Camino Conduit between Jenkinson Reservoir and Reservoir A WTP, additionally it will provide time for the rehabilitation of valves within the dam that are in need of service or replacement, and provide a longer window for scheduled Reservoir A WTP maintenance. The estimated pipeline construction project cost at this time is $28 million for an open cut replacement based on the 2020 Draft Evaluation of Rehabilitation Alternatives Technical Memorandum. Cost estimates are based on a 10% design level of confidence and include a 30% construction contingency. Typical contingencies for 10% design level cost estimates range between 30% and 100%. The contingency used for this cost estimate is at the low end of the range and higher actual costs are likely. Staff will continue to pursue any grant funding that may become available.

Basis for Priority:

Replacement of the pipeline and installation of a new pump station will ensuring water supply flexibility/reliability between the two major gravity supply sources that provide two thirds of the District's water supply.

Project Financial Summary:			
Funded to Date:	$ 2,721,464	**Expenditures through end of year:**	$ 1,606,383
Spent to Date:	$ 1,106,383	**2024 - 2028 Planned Expenditures:**	$ 20,900,000
Cash flow through end of year:	$ 500,000	**Total Project Estimate:**	$ 22,506,383
Project Balance	$ 1,115,082	**Additional Funding Required**	$ 19,784,918

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$300,000	$ 300,000				$ 600,000
Environmental	$ 100,000	$ 100,000				$ 200,000
Right of Way	$ 100,000					$ 100,000
Construction	$ 15,000,000	$ 15,000,000				$ 30,000,000
Grant Offset	$ (5,000,000)	$ (5,000,000)				$ (10,000,000)
TOTAL	$ 10,500,000	$ 10,400,000	$ -	$ -	$ -	$ 20,900,000

Estimated Funding Sources	Percentage	2024	Amount
Bond	100%	$	9,384,918
Total	**100%**	**$**	**9,384,918**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 22019

Project Name: Pleasant Oak Main Pressure Reducing Station #2 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:**

Project Description:

The current Pleasant Oak Main Pressure Reducing Station #2 (POM PRS #2) is due for replacement because of maintenance issues as the valves have outlived their useful lives. The valves that are currently in use received an emergency rebuild in the spring of 2020 and at that time it was determined that they would not accept another rebuild. The POM PRS #2 is an important pressure reducing station as the only feed to the District's Reservoir C site. From the Reservoir C site the Pleasant Oak Main transmission line, in conjunction with other transmission and distribution lines, provides water to the communities of Diamond Springs, Placerville, Cameron Park, and El Dorado Hills. Purchase of valves was completed in 2022 and construction is currently scheduled for the Winter of 2024-2025.

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 390,484	Expenditures through end of year:	$ 381,102
Spent to Date:	$ 6,102	2024 - 2028 Planned Expenditures:	$ 425,000
Cash flow through end of year:	$ 375,000	Total Project Estimate:	$ 806,102
Project Balance	$ 9,382	Additional Funding Required	$ 415,618

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000					$ 75,000
Construction	$ 100,000	$ 250,000				$ 350,000
TOTAL	$ 175,000	$ 250,000	$ -	$ -	$ -	$ 425,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$165,618
Total	100%		$165,618

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 22038

Project Name: Reservoir A Filter Valve Replacements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:**

Project Description:

The existing filter inlet valves (twelve in total) at Reservoir A Water Treatment Plant (Res A WTP) have reached the end of their service life and are located in a configuration that can't be safely accessed for ongoing maintenance. This project will replace the filter inlet valves and their associated piping with new AWWA compliant valves and electric operators. The valves were identified in the recently completed Draft WTP Asset Management Plan as critical infrastructure, categorized as "Very High Risk", requiring immediate replacement. The replacement of all valves is scheduled for between November 2023 through April 2024.

Basis for Priority:

If an inlet valve fails, it has the potential to remove all four adjacent filter cells, or one third of the plant capacity, from serice. This would reduce the capacity of Reservoir A well below required summer demands. Access to the existing valves also poses a significant safety hazard for District personnel. The project was identified in the Draft Water Treatment Plant Asset Mangement Plan as a high priority 2023 renewal and replacement project due to it age, condition and "High" risk category score.

Project Financial Summary:			
Funded to Date:	$ 349,280	Expenditures through end of year:	$ 749,540
Spent to Date:	$ 99,692	2024 - 2028 Planned Expenditures:	$ 1,432,917
Cash flow through end of year:	$ 649,848	Total Project Estimate:	$ 2,182,457
Project Balance	$ (400,260)	Additional Funding Required	$ 1,833,177

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design services during construction	$ 12,500					$ 12,500
Construction management and Inspection	$ 47,750					$ 47,750
Construction	$ 1,360,167					$ 1,360,167
Capitalized labor	$ 12,500					$ 12,500
TOTAL	$ 1,432,917	$ -	$ -	$ -	$ -	$ 1,432,917

Funding Sources	Percentage	2024	Amount
Water FCC	100%		$1,833,177
Total	100%		$1,833,177

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 23001

Project Name: AMR and Small Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** P. Heape **Board Approval:**

Project Description:

This project replaces old, inaccurate, or broken meters and adds automated meter read capability to existing meters enabling reading of all meters in time for billing. It also includes the targeted replacement of all remaining 5/8" meters in our system. The project decreases labor expenses associated with manually reading meters and inputting the data into the computer system. It also avoids loss of confidence due to inaccurate or estimated reads. Continued implementation of meter replacement and AMR technology keeps the District in compliance with AB 3206 and all provisions of 23 CCR § 700. As of September 1, 2023 there are 33,234 meters that are equipped with radio read devices. Project funding allows the installation of approximately 250 radio read meters per year.

Basis for Priority:

Inaccurate or broken meters reduce revenue received by the District and prevent us from knowing the true amount of non-revenue water, potentially affecting the District's decision making processes.

Project Financial Summary:			
Funded to Date:	$ 300,000	Expenditures through end of year:	$ 300,000
Spent to Date:	$160,455	2024 - 2028 Planned Expenditures:	$ 1,945,000
Cash flow through end of year:	$ 139,545	Total Project Estimate:	$ 2,245,000
Project Balance	$ -	Additional Funding Required	$ 1,945,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$325,000	$325,000	$350,000	$350,000	$350,000	$ 1,700,000
Capitalized Labor	$35,000	$35,000	$50,000	$50,000	$75,000	$ 245,000
TOTAL	$ 360,000	$ 360,000	$ 400,000	$ 400,000	$ 425,000	$ 1,945,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$360,000
Total	100%		$360,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 23002

Project Name: Serviceline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Russell **Board Approval:**

Project Description:

This program consists of targeted replacement of leaking water service lines throughout the District. Replacing leaking and substandard service lines with new copper water service tubing will reduce the potential for contamination of the drinking water supply, increase reliability, reduce maintenance expenditures, and decrease losses. Serviceline projects are prioritized with operations and engineering staff based on frequency of leaks and costs of repairs. These estimates and project locations are subject to change as the projects are better defined. The replacement work is being performed by District crews.

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increase maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:	$ 4,745,546	Expenditures through end of year:	$ 3,397,752
Spent to Date:	$ 2,647,752	2024 - 2028 Planned Expenditures:	$ 14,950,000
Cash flow through end of year:	$ 750,000	Total Project Estimate:	$ 18,347,752
Project Balance	$ 1,347,794	Additional Funding Required	$ 13,602,206

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Construction (Various)	$ 2,700,000	$ 2,700,000	$ 2,950,000	$ 2,950,000	$ 3,400,000	$ 14,700,000
TOTAL	$ 2,750,000	$ 2,750,000	$ 3,000,000	$ 3,000,000	$ 3,450,000	$ 14,950,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$1,402,206
Total	100%		$1,402,206

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23009

Project Name: Reservoir 1 Storage Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:**

Project Description:

The District owns and operates seven floating membrane (hypalon) covered reservoirs in its drinking water system. Hypalon covers have a life expectancy of 20-30 years depending on material selection and environmental factors, including ultraviolet light (UV) exposure from sunlight and contamination and wear from organic debris such as pine needles. All of the District's hypalon covers have exceeded their useful life and need replacement. Additionally, hypalon covers are vulnerable to wildfire, as demonstrated by the loss of several hypalon covers during the 2018 Camp Fire near the town of Paradise. Due to these vulnerabilities, the District is pursuing the replacement of the Reservoir 1 and Pollock Pines Reservoir hypalon covers.

The District is currently pursuing a grant opportunity from Federal Emergency Management Agency, through their hazard mitigation grant program for both reservoirs. This grant could cover 75% - 100% of the of the design and construction costs.

The Basis of Design Report will be complete in early 2024. Design will start in late 2024, to be complete in early 2025. Construction is expected to be complete in 2026. This CIP shows only constructing Reservoir 1 irregardless of the grant. If the District obtains the grant to also replace the Pollock Pines reservoir, the CIP will be adjusted.

Basis for Priority:

The District's floating covers on the Reservoir 1 and Pollock Pines Reservoirs are beyond their useful life and need repalcement. Additionally, the floating covers are suspectible to wildfire. The project will increase service reliability.

Project Financial Summary:			
Funded to Date:	$ 256,425	Expenditures through end of year:	$ 202,762
Spent to Date:	$ 2,762	2024 - 2028 Planned Expenditures:	$ 9,050,000
Cash flow through end of year:	$ 200,000	Total Project Estimate:	$ 9,252,762
Project Balance	$ 53,663	Additional Funding Required	$ 8,996,337

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 50,000					$ 50,000
Design	$ 500,000	$ 1,000,000				$ 1,500,000
Construction - Reservoir 1			$ 7,500,000			$ 7,500,000
Construction - Moose Hall						
FEMA Hazard Mitigation Grant						$ -
TOTAL	$ 550,000	$ 1,000,000	$ 7,500,000	$ -	$ -	$ 9,050,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$496,337
Total	**100%**		**$496,337**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23010

Project Name: Res 1 Water Treatment Plant Generator Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Petterson **Board Approval:**

Project Description:

The generator at Reservoir 1 is beyond its useful life and needs to be replaced. It is difficult to get parts for the generator as the unit is obsolete and past its life expectancy, in fact the District can no longer purchase parts for the generator, which means that any repairs to the generator requires a custom repair. In addition, the generator did not pass the load bank test in 2022. In addition, the sound attinuation for the generator is in a mode of failure requiriung a new enclosure around the generator. The District depends on this generator to keep the Reservoir 1 Water Treatment Plant operating during planned and unplanned power outages. In August 2023, the generator broke, and was not repairable. The District started working on ordering a replacement generator.

Basis for Priority:

Ability to maintain critical water supply during planned and unplanned power outages.

Project Financial Summary:			
Funded to Date:	$ 35,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 525,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 525,000
Project Balance	$ 35,000	Additional Funding Required	$ 490,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Replacement Generator	$ 150,000					$ 150,000
Design	$ 75,000					$ 75,000
Construction	$ 300,000					$ 300,000
TOTAL	$ 525,000	$ -	$ -	$ -	$ -	$ 525,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$490,000
Total	100%		$490,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23017

Project Name: El Dorado Hills WTP Clear Well Pump Replacement

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Petterson **Board Approval:**

Project Description:

Staff completes an annual clear well inspection at the El Dorado Hills Water Treatment Plant (EDHWTP), including condition assessment of the vertical turbine pumps that transmit treated water from the EDHWTP into the distribution system. Based on the most recent inspection, staff determined that pumps 311, 312, and 313 required immediate repair or replacement to continue reliably meeting customer demands of the growing El Dorado Hills region.

Basis for Priority:

Replacement has been approved by the Board. Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 153,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 153,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 153,000
Project Balance	$ 153,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Pumps And Install	$ 150,000					$ 150,000
Capitalized Labor	$ 3,000					$ 3,000
TOTAL	$ 153,000	$ -	$ -	$ -	$ -	$ 153,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23025

Project Name: Valve Replacement EDM1 And EDM2

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:**

Project Description:

The District has many isolation valves in both the water transmission system and the distribution system that have failed and no longer provide proper isolation for any required shutdown of the system. These valves often are broken in either the open or closed position leaving staff no option but to expand any shutdown in the distribution or transmission system to a larger area where isolation is possible. The District is in need of replacing one isolation valve and adding two additional isolation valves on El Dorado Main #1 and #2 to limit future customer impacts due to emergency shutdowns.

Basis for Priority:

Existing valves are failing due to age and degradation and no longer providing proper isolation of the distribution or transmission systems.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 45,616
Spent to Date:	$ 30,616	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 195,616
Project Balance	$ 4,384	Additional Funding Required	$ 145,616

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Inspection	$50,000					$ 50,000
Construction		$100,000				$ 100,000
TOTAL	$ 50,000	$ 100,000	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$45,616
Total	100%		$45,616

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Construction Spoils Management

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** TBD **Board Approval:**

Project Description:

The District's water construction crews utilize hydro excavation to perform repairs on the District's water distribution system year round. Hydro excavation creates wet spoils that require processing and disposal. This project will construct a wet spoils handling facility on the western end of the District's service area to properly process and prepare spoils for disposal.

Basis for Priority:

A proper wet spoils handling facility will improve and streamline water operations efficiency in handling spoils from our excavations and replacement work.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 1,170,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,170,000
Project Balance	$ -	Additional Funding Required	$ 1,170,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 20,000					$ 20,000
Design	$ 150,000					$ 150,000
Construction	$ 250,000	$ 750,000				$ 1,000,000
						$ -
TOTAL	$ 420,000	$ 750,000	$ -	$ -	$ -	$ 1,170,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$420,000
			$0
			$0
Total	100%		$420,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: EDH Water Treatment Plant Phase 1-3 Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:**

Project Description:

This program consists of long term capital improvements identified in the El Dorado Hills Water Treatment Plant (EDHWTP) Master Plan prepared as part of the WTP Asset Management Plan (AMP). The improvements are organized by 4 phases of work. Phase 1-3 replace and/or upgrade all major treatment plant processes with some limited added capacity with the ability to expand the WTP plant capacity up to 30 mgd (buildout) in Phase 4. A Phase 1-3 Basis of Design report (BODR), detailed design, and the first two phases of construction are planned for the 2024-2028 CIP planning horizon. Cost estimates were prepared consistent with Association for the Advancement of Cost Engineering guidelines for a Class 4 estimate. Class 4 estimates are based on limited information and are typically used for project screening, determination of feasibility, conceptual evaluation, and preliminary budget approval for the next stage. The typical expected accuracy range for this class estimate is 30% - 50% percent on the high side. Cost estimates will be updated through the project phases with contingencies appropriate for the respective level of design detail. Note, Phase 3 construction is not included in cash flow projections as it occurs beyond 2028.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls, and end of life facilities will support regulatory compliance, improve service reliability, and reduce maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:		**2024 - 2028 Planned Expenditures:**	$ 63,039,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 63,039,000
Project Balance	$ -	**Additional Funding Required**	$ 63,039,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Basis of Design Report	$ 1,500,000	$ -	$ -	$ -	$ -	$ 1,500,000
Design	$ 1,000,000	$ 4,000,000	$ 1,000,000	$ -	$ -	$ 6,000,000
EIR	$ 75,000	$ 275,000	$ 200,000			$ 550,000
Phase 1 Construction			$ 8,050,000	$ 8,050,000	$ -	$ 16,100,000
Phase 2 Construction	$ -	$ -	$ -	$ 10,000,000	$ 20,500,000	$ 30,500,000
Eng. during construction			$ 1,154,000	$ 1,154,000	$ 1,154,000	$ 3,462,000
Constructon management			$ 1,154,000	$ 1,154,000	$ 1,154,000	$ 3,462,000
Inspection			$ 300,000	$ 300,000	$ 300,000	$ 900,000
Capitalized labor	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 565,000
TOTAL	$ 2,688,000	$ 4,388,000	$ 11,971,000	$ 20,771,000	$ 23,221,000	$ 63,039,000

Estimated Funding Sources	Percentage	2024	Amount
Bond	100%		$2,688,000
Total	**100%**		**$2,688,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: El Dorado Hills Raw Water Pump Station 4160 Enclosure

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

OSHA requires that live electrical parts be deenergized before the employee works on or near them, unless the employer can demonstrate that deenergizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. It is infeasible to troubleshoot deenergized equipment. Enclosing 4160 volt gear will protect electrical workers from harsh weather conditions and reduce the risk of electrocution. Additionally an eye wash station should not be out in the hot sun because the water in the station can become too hot and cause burns to the eyes. The American National Standards Institute (ANSI) standard Z358.1-2014 states that the flushing fluid temperature should be between 60°F and 100°F. If the water in the eye wash station is too hot, it can cause thermal burns to the eyes and skin. This project only includes design money and no construction funding until the design is complete.

Basis for Priority:

Installation of structure provides safe access for electricians during inclimate weather allowing for repairs and maintenance during winter months.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Facility Improvements						$ -
Design	$ 150,000					$ 150,000
Construction						$ -
TOTAL	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$150,000
Total	100%		$150,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Large Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program will replace old and inaccurate large meters in the District. The project is required because it provides for replacement of inaccurate large meters and enables all meters to be read on time for billing. The liability to the District if this project is not implimented includes increased labor expenses for manually reading the meters and inputting manual data into the computer system, loss of revenue due to inaccurate reads and increased apparent losses.

Basis for Priority:

Loss of revenue due to under reporting large meters.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Various Large Meters					$ 250,000	$ 250,000
TOTAL	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Placerville Drive Hangtown Creek Bridge Replacement

Project Category: State/County Road Projects

Priority: 1 **PM:** Delongchamp **Board Approval:**

Project Description:

The City of Placerville is planning on replacing the existing Placerville Drive Hangtown Creek Bridge in 2024. Currently, the District has an existing 8" waterline in the existing bridge to provide water to western Placerville. The District has a secondary connection that will be used to feed that portion of the District during construction. The District will replace the existing line with a new line in the bridge concurrent with the City's project. This will be bid as part of the City's project through an agreement with the City of Placerville. The City of Placerville anticipated completing their environmental permitting in 2023 and design for the project to be completed in 2024 with construction to begin in the spring of 2025.

Basis for Priority:

The District must replace the waterline to accommodate the City's bridge project.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 1,050,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,050,000
Project Balance	$ -	Additional Funding Required	$ 1,050,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000					$ 75,000
Construction Inspection		$ 75,000				$ 75,000
Construction		$ 900,000				$ 900,000
TOTAL	$ 75,000	$ 975,000	$ -	$ -	$ -	$ 1,050,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pleasant Valley Road Bulk Water Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** TBD **Board Approval:**

Project Description:

The existing bulk water station located at 4280 Pleasant Valley Road in Placerville has had multiple near miss accidents reported to the District. The District would like to make updates to the driveway entrance to make it safer for the public and for District staff who access the site.

Basis for Priority:

100% safety is one of the District's guiding principles. By making updates to the driveway the District can help prevent near miss accidents.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 195,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 195,000
Project Balance	$ -	Additional Funding Required	$ 195,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 20,000				$ 20,000
Design		$ 50,000				$ 50,000
Construction			$ 125,000			$ 125,000
TOTAL	$ -	$ 70,000	$ 125,000	$ -	$ -	$ 195,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pressure Reducing Station Rehabilitation and Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The District has 246 pressure reducing stations throughout the service area to keep line pressures within acceptable ranges as it travels from Pollock Pines down to El Dorado Hills. Many of these stations are in varying degrees of repair or rehabilitation based on age, construction, and design life cycle. This program is to identify specific stations to rehabilitate, replace or upgrade to maintain service reliability throughout the District. Staff examines each pressure reducing station to determine if the station can be rehabilitated in place or if a new station needs to be constructed in parallel with the existing station. Staff has been able to rehabilitate the larger transmission stations in place utilizing the existing vaults while adding a protective layer of coating on the vault and all pipework, new isolation valves, and installing new pressure reducing valves. Due to the construction of the smaller below ground pressure reducing stations they typically require a complete replacement to an above ground location where possible. By moving the smaller facilities above ground it removes the confined space entry for operation and maintenance while also providing a dry environment for prolonged life for external coatings. Loss of pressure control or valve failure can result in extensive water line damage or complete failure. Program management expenditures identified include prioritizing and designing each PRS replacement. Staff reviews the list of pressure reducing valves each year and based on failures or other noted deficiencies prioritizes the stations to be included in this program. Actual PRS replacement costs for each individual station will be brought to the Board for specific approval.

2024: Design Control for DSM PRS22

2025: Construct DSM PRS22, Design EDM1 PRS13 (located at Reservoir 6)

2026: Construct EDM1 PRS13 and EDM2 PRS2 ARV, Design EDM1 PRS3

2027: Construct EDM1 PRS 3, Design EDM1 PRS8, Replace EDH PRS3 and HEP PRS1

2028: Construct EDM1 PRS 8, Replace LL PRS1

Basis for Priority:

Existing stations are incurring increasing maintenance costs and reduced service reliability due to age and degradation.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	$ -
Spent to Date:		**2024 - 2028 Planned Expenditures:**	$ 2,250,000
Cash flow through end of year:		**Total Project Estimate:**	$ 2,250,000
Project Balance	$ -	**Additional Funding Required**	$ 2,250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$50,000	$200,000	$50,000	$100,000		$ 400,000
Construction			$700,000	$250,000	$900,000	$ 1,850,000
TOTAL	$ 50,000	$ 200,000	$ 750,000	$ 350,000	$ 900,000	$ 2,250,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	**100%**		**$50,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pump Station Rehabilitation and Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. This is an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment. Staff reviews the list of pumps each year and based on failures or other noted deficiencies prioritizes the stations to be included in this program. Actual Pump Station replacement costs for each individual station will be brought to the Board for specific approval. This programmatic CIP is for pump station replacement and rehabilitation projects tha have been idenetied, but have not been assigned a project number. Pump station replacement projects have been deferred in the CIP to meet financial plan objectives.
2024: Evaluate Strawberry raw water pump station
2025-26: Design Monte Vista Pump Station
2027: Construct Montevista Pump Station, Design Reservoir 8 Pump Station
2028: Construct Reservoir 8 Pump Station, Design Oak Lane Pump Station

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,850,000
Cash flow through end of year:		Total Project Estimate:	$ 1,850,000
Project Balance	$ -	Additional Funding Required	$ 1,850,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000	$ 75,000	$ 100,000	$ 100,000		$ 350,000
Construction				$ 900,000	$ 600,000	$ 1,500,000
TOTAL	$ 75,000	$ 75,000	$ 100,000	$ 1,000,000	$ 600,000	$ 1,850,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Res 1 Water Treatment Plant Phase 1 Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program consists of long term capital improvements identified in the El Dorado Hills Water Treatment Plant (EDHWTP) Master Plan prepared as part of the WTP Asset Management Plan (AMP). The improvements are organized by 4 phases with a cost of $145 million over 20 years. Based on other WTP improvement prioities and the more immediate need to fully upgrade the El Dorado Hills WTP, only the most critical Phase 1 and 2 improvements will be addressed in this CIP planning horizion. The modified Phase 1 and 2 improvements will include a new filter washwater equalization tank, chemical building with storage and feed piping, an earthen sludge storage pond at the current reservoir location, and a new flocculation basin. Cost estimates were prepared consistent with Association for the Advancement of Cost Engineering guidelines for a Class 4 estimate. Class 4 estimates are based on limited information and are typically used for project screening, determination of feasibility, conceptual evaluation, and preliminary budget approval for the next stage. The typical expected accuracy range for this class estimate is 30% - 50% percent on the high side. Cost estimates will be updated through the project phases with contingencies appropriate for the respective level of design detail.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls, and end of life facilities will support regulatory compliance, improvement service reliability, and reduce maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 30,206,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 30,206,000
Project Balance	$ -	Additional Funding Required	$ 30,206,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Basis of Design Report	$ 425,000					$ 425,000
Design		$ 900,000	$ 1,000,000			$ 1,900,000
EIR		$ 225,000	$ 200,000			$ 425,000
Construction				$ 11,500,000	$ 11,500,000	$ 23,000,000
Service during construction				$ 861,500	$ 861,500	$ 1,723,000
Construction management				$ 861,500	$ 861,500	$ 1,723,000
Inspection				$ 225,000	$ 225,000	$ 450,000
Capitalized labor	$ 112,000	$ 112,000	$ 112,000	$ 112,000	$ 112,000	$ 560,000
TOTAL	$ 537,000	$ 1,237,000	$ 1,312,000	$ 13,560,000	$ 13,560,000	$ 30,206,000

Estimated Funding Sources	Percentage	2024	Amount
Bond	100%		$537,000
Total	**100%**		**$537,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Reservoir A Backwash to Waste Valve Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The Reservoir A WTP has backwash-to-waste valves that are an integral part of the backwashing of all twelve filter cells. These valves have reached the end of their useful life, have signs of degradation, corrosion, and operate unreliably. They are located deep in a tight pit in the center of each filter cluster with access being a safety concern due to confined spaces and a constant corrosive atmosphere. As the valves age even further the need to access the backwash-to-waste valves to assist in their proper operation has significantly increased. The unreliability of the valves to operate properly requires that a treatment plant operator be onsite while performing daily backwashes. Backwashing the filters is integral to the successful operation of the entire treatment plant. Properly operated backwashing processes can significantly reduce the risk of complete filter failures. These valves are used to drain the the daily backwash water used to begin the residual drying process and recycle the water used back to the headwork of the plant. This project will replace the backwash-to-waste valves and controls that have reached their end of service life and raise them out of the corrosive environment that they exist in now up to the filter deck eliminating the safety hazard when maintenance is performed.

Basis for Priority:

The valves do not always fully close thus allowing some waste to add to the backwash return flow being returned to the headwork and they cannot provide good isolation which impacts the overall process. Additionally, when maintenance is performed the access to the controls to manually assit closing and opening is a safety concern including confined space and safe access down into the bottom of the valve gallery. As demands pick up, and/or water quality drastically changes so can the use of these valves. Another issue we are encountering is that the age of the valves and controls makes securing repair parts very difficult. We frequently have to mix and match parts from different manufacturers and make custom modifications to the controllers to get proper operations and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 2,120,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 2,120,000
Project Balance	$ -	Additional Funding Required	$ 2,120,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 195,000				$ 195,000
Construction			$ 1,750,000			$ 1,750,000
Services During construction			$ 175,000			$ 175,000
TOTAL	$ -	$ 195,000	$ 1,925,000	$ -	$ -	$ 2,120,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments: This project does not increase capacity, therefore should be fundied with rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Ridgeview Pump Station Rehabilitation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The Ridgeview pump station is located next to the 1 MG Ridgeview tank and needs to be assessed for replacement. The CIP will evaluate the facility, determine remaining useful life and identify components that must be replaced, or if full replacement is warranted.

Basis for Priority:

Life cycle evaluation of an aging asset to maintain service reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ -	Additional Funding Required	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design		$ 100,000				$ 100,000
Construction						$ -
						$ -
TOTAL	$ -	$ 100,000	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: SCADA Water Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This funding is designated to be a rolling CIP to replace end of life cycle SCADA hardware District wide. This program would focus on replacing and reprogramming of the end of life PLC hardware and associated SCADA reconfigurations. Many sites are beyond the PLC hardware life expectancy of 15 years.

Basis for Priority:

Rolling CIP to replace end of life cycle SCADA hardware, ensure service reliability, and reduce problem areas of the SCADA system that cause overtime.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Hardware	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
Professional Services	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 225,000
TOTAL	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$100,000
Total	100%		$100,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Outlet Control Facility Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The project includes design and installation of more reliable power distribution for the facility. The site currently has multiple installations dating back to 1953 and is no longer in compliance with National Fire Protection Agency. The site requires a new PG&E meter and main, automatic transfer switch, and panel board for distribution. Furthermore, the District is in need of replacing the hydraulic lines for the isolation valves at the dam. This will include the replacement of hydraulic fluid and any necessary upgrades to provide reliable isolation moving forward.

Basis for Priority:

The project will improve reliability of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 50,000				$ 50,000
Design			$ 100,000			$ 100,000
Construction						$ -
						$ -
TOTAL	$ -	$ 50,000	$ 100,000	$ -	$ -	$ 150,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Spillway Improvements

Project Category: Regulatory Requirements

Priority: 1 **PM:** Kessler **Board Approval:**

Project Description:

Following the February 2017 Oroville Dam Spillway failure event, the California Department of Water Resources - Division of Safety of Dams required various dam owners to perform a spillway condition assessment applying the lessons learned from Oroville. Sly Park Spillway was one of the facilities selected, and while the condition assessment found Sly Park does not currently have the significant issues as did Oroville, there were several recommendations for improvement. These include: 1) Designing and installing a more durable surface on the invert of the flip bucket near the end of the spillway chute where concrete erosion and exposure of steel reinforcement has been occurring (2025 planned construction); and 2) Reviewing spillway hydraulics, and based on the spillway rated capacity, develop plans for raising the height of sidewalls in the vicinity of the flip bucket where historic photos show a water stain reaching the top of the walls from previous spills much less than the design capacity (2025 planned construction). The risk of spill water overtopping the sidewalls is the potential for erosion of soil and rock outside the chute that could then undermine the structure and cause it to fail (as occurred at Oroville). In addition, the right bank of the channel downstream of the concrete spillway chute needs erosion protection. The exposed soil bank is oversteepened and not durable to the high velocity flows that can discharge from the spillway. If left untreated, it could compromise the spillway structure (2025 planned construction).

Basis for Priority:

Compliance with DSOD dam safety program requirements

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 320,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 320,000
Project Balance	$ -	**Additional Funding Required**	$ 320,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 120,000					$ 120,000
Construction		$ 200,000				$ 200,000
						$ -
TOTAL	$ 120,000	$ 200,000	$ -	$ -	$ -	$ 320,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$120,000
Total	**100%**		**$120,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Transmission Slope Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The District owns and maintains various transmission mains across the District to be able to provide large volumes of water from 4,000 feet to 700 feet in elevation. These facilities are typically 16" and larger and transmit water between multiple pressure reducing stations to reservoirs and tanks in the distribution system. These facilities typically are exposed to higher velocities in an effort to provide water during high flow events. Additionally, many of these facilities were constructed across rugged terrain prior to major roadways being available in the 50's, 60's, and 70's. Due to the location of these pipelines the potential for slope failure is greatly increased. During the storms of 2017 there were two major slides that occurred, one on El Dorado Main #2 and one on Moose Hall Transmission. These lines are in need of various slope stabilization measures to protect not only the pipelines but the District's access to them for future maintenance and repairs. This program will consist of completing slope stabilization designs, access improvements where possible, bidding, and construction of all necessary repairs. Actual slope stabilization project costs for each individual pipeline will be brought to the Board for specific approval.

Basis for Priority:

Slope stabilization for transmission pipelines due to slides causing damage to pipe benches and access roads to the facilities.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 675,000
Cash flow through end of year:		Total Project Estimate:	$ 675,000
Project Balance	$ -	Additional Funding Required	$ 675,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Engineering		$75,000				$ 75,000
Stabilization EDM#2			$ 300,000			$ 300,000
Stabilization Moose Hall			$ 300,000			$ 300,000
TOTAL	$ -	$ 75,000	$ 600,000	$ -	$ -	$ 675,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Valve Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Russell **Board Approval:**

Project Description:

The District has many isolation valves in both the water transmission system and the distribution system that have failed and no longer provide proper isolation for any required shutdown of the system. These valves often are broken in either the open or closed position leaving staff no option but to expand any shutdown in the distribution or transmission system to a larger area where isolation is possible. If the valve cannot be repaired it will be replaced under this program. The District also has over 270 pressure reducing stations with isolation valves within. If the pressure reducing stations cannot be rebuilt due to failure of the isolation valves the isolation valves will be repalced under this program. This program does not identify specific valves to replace. Program management expenditures identified include prioritizing of each valve replacement.

Basis for Priority:

Existing valves are failing due to age and degradation and no longer providing proper isolation of the distribution or transmission systems.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:		Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction		$100,000	$125,000	$125,000	$150,000	$ 500,000
TOTAL	$ -	$ 100,000	$ 125,000	$ 125,000	$ 150,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:**

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 175,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Distribution Radio Path Program

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:**

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path upgrade would optimize and create reliable wireless communication options for the District's remote facilities.

Basis for Priority:

Many remote facilities depend on antiquated serial radios. Quickly evolving technology requires EID to move to an IP-based communication to retain maintainable parts. Performing large migrations without a proper design and proven concepts creates great risk for improper implementation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ -	Additional Funding Required	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor	$ 50,000	$ 50,000				$ 100,000
TOTAL	$ 50,000	$ 50,000	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Model - Validation and Update

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:**

Project Description:

The District maintains a system-wide hydraulic water model. Regular updates are needed to verify fire flow and water quality.

Basis for Priority:

Hydraulic water modeling is necessary to inform capacity limitations and water age in the system.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000		$ 50,000		$ 50,000	$ 150,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ 150,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$50,000
			$0
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Storage Tank Replacement & Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program consists of targeted replacement and rehabilitation of drinking water storage tanks and reservoirs within the distribution system. The District operates 24 welded steel storage tanks and 7 bolted steel storage tanks, ranging in age from 8 to 58 years of age, most of which were constructed in the last 18 years as part of the District line and cover program. Additionally, the District operates 7 floating cover drinking water reservoirs ranging in age from 26 to 33 years of age. This program is to identify specific tanks and reservoirs to rehabilitate, replace, or upgrade to maintain service reliability throughout the District. This program also includes tank recoating for the welded storage tanks. Program management expenditures identified include prioritizing and designing each tank and reservoir improvement project. Actual replacement and recoating costs for each individual tank and reservoir will be brought to the Board for specific approval.

2024: Reservoir 4 and Reservoir 7A Strucutral Replacement; Reservoir 7B Exterior Recoating

2025: Cathodic Protection in the 835 Valley View Tank and Oakridge Tanks. Design for Reservoir 6 Tank Replacement; Reservoir 4 and 7 B Recoating

2026: Design for Reservoir 6 Tank Replacement; Rancho Del Sol Tank & Reservoir 5 Tank & EDHWTP Backwash Make Up Tank Recoating

2027: Construction of Reservoir 6 Tank Replacement; Oakridge Tank #1 & Sly Park Hills Recoating

2028: Cathodic Protection in the Outingdale Lower Tank; Oak Ridge Tank #2 Recoating

Basis for Priority:

Life cycle replacement of District assets due to age and degradation.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	$ -
Spent to Date:		**2024 - 2028 Planned Expenditures:**	$ 16,692,573
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 16,692,573
Project Balance	$ -	**Additional Funding Required**	$ 16,692,573

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Planning		$ 150,000	$ 450,000			$ 600,000
Construction	$ 2,785,670	$ 2,794,723	$ 808,360	$ 6,730,209	$ 2,973,612	$ 16,092,573
TOTAL	$ 2,785,670	$ 2,944,723	$ 1,258,360	$ 6,730,209	$ 2,973,612	$ 16,692,573

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$2,785,670
Total	**100%**		**$2,785,670**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Waterline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program consists of targeted replacement of leaking waterlines including formerly private lines within the District. Replacing leaking and substandard waterlines in the distribution system will reduce the potential for contamination of the drinking water supply, increase reliability, reduce maintenance expenditures, and decrease losses. This program also targets any pipelines near leech fields, gas lines, and electrical conduits that need to be relocated to meet current District standards. Pipeline projects are prioritized with Operations and Engineering staff based on frequency of leaks and costs of repairs. Operations staff will complete main replacements where possible with available funding for high leak prone areas and where undersized pipe is causing low pressure. These estimates and project locations are subject to change as the projects are better defined. Major expenditures have been deferred in the CIP to meet financial plan objectives however specific projects may be accelerated if funding is available.

2025: Design Highway 50 Crossings

2026: Construct Highway 50 Crossings, Design Forni Road Waterline Replacement

2027 and 2028: Construct Forni Road Waterline Replacement

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increase maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	$ -
Spent to Date:		**2024 - 2028 Planned Expenditures:**	$ 8,150,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 8,150,000
Project Balance	$ -	**Additional Funding Required**	$ 8,150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 125,000	$ 125,000	$ 125,000	$ 525,000
Various Small Waterline Replacements			$ 80,000	$ 80,000	$ 80,000	$ 240,000
Construction (Various)			$ 1,795,000	$ 2,795,000	$ 2,795,000	$ 7,385,000
TOTAL	$ -	$ 150,000	$ 2,000,000	$ 3,000,000	$ 3,000,000	$ 8,150,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs			$0
Total	**0%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: Planned

Project Name: Wholesale Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program replaces old and inaccurate large wholesale meters in the District. The project is required because it provides for replacement of inaccurate large meters and enables all meters to be read in time for billing. The liability to the District if this project is not implemented includes increased labor expenses for manually reading the meters and inputting manual data into the computer system, loss of revenue due to inaccurate reads and increased apparent losses. Actual wholesale meter replacement costs for each individual site will be brought to the Board for specific approval.

Basis for Priority:

Loss of revenue due to under reporting large wholesale meters.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	
Spent to Date:		2024 - 2028 Planned Expenditures:	
Cash flow through end of year:		Total Project Estimate:	
Project Balance		Additional Funding Required	

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Woodman Circle 6" Meter		$250,000				$ 250,000
Coloma Court (Combellack Road) 8" & 2" Meters				$275,000		$ 275,000
Coloma Court 8" & 2" Meters						$ -
New Jersey 8" Fire and 2" Meters						$ -
Poverty Hill 6" Fire & 2" Meters						$ -
TOTAL	$ -	$ 250,000	$ -	$ 275,000	$ -	$ 525,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Treatment Plant Asset Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This is an annual program to replace water treatment plant assets that have failed or reached end of useful life. Assets to be replaced or upgraded under this program include mechanical, electrical and instrumentation systems, treatment plant equipment and other plant assets. This program is also used to replace assets aligned with Water Treatment Plant Master Planning efforts.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls and substandard facilities will support regulatory compliance, improvement service reliability and reduce maintenance costs.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,000,000
Project Balance	$ -	Additional Funding Required	$ 1,000,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Facility Improvements	$ 500,000	$ 500,000				$ 1,000,000
Design						$ -
Construction						$ -
TOTAL	$ 500,000	$ 500,000	$ -	$ -	$ -	$ 1,000,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$500,000
Total	100%		$500,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Treatment Plant Flow Meters Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This CIP is for the replacement and testing of our source water meters to establish accuracy of our source meters to comply with SB 555 and the Water Loss Reduction program which requires all public water systems to submit a level 1 validated water audit to DWR meeting the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34. The validated water audit must be prepared in accordance with the method adopted by the American Water Works Association Water Audit and Loss Control Programs, Manual M36. In this methodology all measurements to determine the value of water lost starts with the amount of watering leaving our plants and entering our distribution system. Annual calibration and testing are required to assign data validity scores to our data. By the year 2028 the District is expected to show some level of improvement of those scores year over year. Replacing existing meters that were previously tested in 2005 and in 2019, would allow us at the same time to install testing ports or locations. The District has two finished water meters and one raw water meter at the Reservoir A Water Treatment Plant. These meters have outlived their useful lives and are in need of being replaced. The meters are for the finished water transmission lines, the Camino Conduit and the Pleasant Oak Main. The raw water meter provides determines the flow entering the plant. Flow meter installation will require excavation and installation of vaults for future maintenance needs.

Basis for Priority:

Flow meters need to be upgraded to meet SB 555.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 100,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 100,000
Project Balance	$ -	**Additional Funding Required**	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Reservoir A Raw Water Meter Study/Design					$ 100,000	$ 100,000
Reservori A Raw Water Meter Construction						$ -
TOTAL	$ -	$ -	$ -	$ -	$ 100,000	$ 100,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
Total	**100%**		**$0**

Funding Comments:

Wastewater Projects

2024 CAPITAL IMPROVEMENT PLAN Program: Wastewater

Project Number: 15036

Project Name: Silva Valley - El Dorado Hills Sewer Pipeline

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The 2013 Wastewater Facility Master Plan (WWMP) identified 2,100 feet of the 18"/21" sewer pipeline along Silva Valley Road and 4,500 feet of 18" sewer pipeline between Highway 50 and the El Dorado Hills Wastewater Treatment Plant as needing capacity upgrades. In order to refine the extent and timing of improvements required, flow monitoring and survey work to determine manhole invert and ground elevations was completed. Flow monitoring and survey data was incorporated into the District's collection system model to determine remaining pipeline capacity. The current capacity analysis indicates the peak wet weather flow rate in approximately 9,000 feet of sewer pipeline exceeds design capacity and is in need of capacity upgrades.

A Basis of Design (BODR) report is needed to determine the most cost effective and constructible pipe alignment considering environmental concerns and easement acquisition. Because project development is conceptual at this time, construction expenditures are not included. Once the BODR is completed, construction expenditures will be programmed into the Capital Improvement Plan.

Basis for Priority:

This project will replace undersized assets to ensure reliability and continual operation of the El Dorado Hills collection system. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:	$ 245,920	Expenditures through end of year:	$ 216,593
Spent to Date:	$ 211,593	2024 - 2028 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 1,216,593
Project Balance	$ 29,327	Additional Funding Required	$ 970,673

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 300,000	$ 250,000	$ 250,000	$ 800,000
Environmental				$ 100,000	$ 100,000	$ 200,000
Construction						$ -
TOTAL	$ -	$ -	$ 300,000	$ 350,000	$ 350,000	$ 1,000,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Wastewater**

Project Number: 17046

Project Name: Strolling Hills Pipeline Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:**

Project Description:

The Motherlode Force Main transitions to gravity flow before it enters Strolling Hills Road and continues downhill toward the Deer Creek Wastewater Treatment Plant. Several services are connected directly to the 12-inch PVC pipe that conveys flows along this segment. Hydraulic capacity is restricted during large storm events and this segment of pipeline will continue to restrict flows in the Motherlode Force Main until the pipeline is upsized.

This project will include a Basis of Design report, plans and specifications, a phasing plan, and construction of approximately 6,000 feet of increased diameter pipe. The Strolling Hills pipe was identified in the 2013 Wastewater Master Plan and confirmed in the 2021 Deer Creek Collection System Modeling Project as a capacity upgrade project. The Basis of Design report will address pipe alignment and identify easement requirements.

Basis for Priority:

This project will replace undersized assets to ensure reliability and continual operation of the upstream Deer Creek collection system. This project is required to ensure full capacity of the newly upsized Motherlode Force Main can be used without compromising the strolling hills pipeline.

Project Financial Summary:			
Funded to Date:	**$ 50,000**	**Expenditures through end of year:**	**$ 31,661**
Spent to Date:	**$ 26,661**	**2024 - 2028 Planned Expenditures:**	**$ 6,500,000**
Cash flow through end of year:	**$ 5,000**	**Total Project Estimate:**	**$ 6,531,661**
Project Balance	**$ 18,339**	**Additional Funding Required**	**$ 6,481,661**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	**$ 400,000**					**$ 400,000**
Environmental	**$ 100,000**					**$ 100,000**
Construction		**$ 3,000,000**	**$ 3,000,000**			**$ 6,000,000**
TOTAL	**$ 500,000**	**$ 3,000,000**	**$ 3,000,000**	**$ -**	**$ -**	**$ 6,500,000**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Wastewater FCCs	100%	$481,661
		$0
Total	**100%**	**$481,661**

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Wastewater**

Project Number: 18003

Project Name: Indian Creek Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:**

Project Description:

The Indian Creek Lift Station (ICLS) was originally constructed in 1988 and serves approximately 105 equivalent dwelling units. The lift station is comprised of a wet well to collect influent flow, a separate dry well with dry pit pumps, and an electrical control house approximately 600 feet east of the wells. ICLS is one of twenty lift stations in the collections system that has a PLC 10 years beyond its useful life and is need of replacement. The pumps, generator, and other mechanical components are also beyond useful life and in need of replacement. This configuration of the remote electrical control house and separated dry pit pumps pose operational safety concerns during regular maintenance and emergency situations.

The Indian Creek Lift Station Upgrades project would replace mechanical and electrical components consistent with the District's lift station standards. The PG&E power connection and main disconnect will remain at the remote control house while the new PLC, MCC, and generator will be installed near the wet well. New submersible pumps will be installed so that the dry pit pumps can be removed and the dry well can be abandoned. Minor civil improvements include a retaining wall and new fence installed around the lift station perimeter. This project has been deferred in the CIP to meet financial plan objectives, however the project may be accelerated based on priority and available funding.

Basis for Priority:

This project will upgrade a degrading lift station and ensure reliability and continual operation of the station.

Project Financial Summary:			
Funded to Date:	**$ 495,788**	**Expenditures through end of year:**	**$ 422,459**
Spent to Date:	**$ 392,459**	**2024 - 2028 Planned Expenditures:**	**$ 2,575,000**
Cash flow through end of year:	**$ 30,000**	**Total Project Estimate:**	**$ 2,997,459**
Project Balance	**$ 73,329**	**Additional Funding Required**	**$ 2,501,671**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	**$ 25,000**					**$ 25,000**
Environmental	**$ 50,000**					**$ 50,000**
Construction	**$ 1,250,000**	**$ 1,250,000**				**$ 2,500,000**
TOTAL	**$ 1,325,000**	**$ 1,250,000**	**$ -**	**$ -**	**$ -**	**$ 2,575,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$1,251,671
			$0
Total	**100%**		**$1,251,671**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 20040

Project Name: Deer Park LS SCADA Hardware Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This project will replace and reprogram the end of life PLC hardware and associated SCADA application at this sewer lift station.

Basis for Priority:

Replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 41,525
Spent to Date:	$ 39,525	2024 - 2028 Planned Expenditures:	$ 65,000
Cash flow through end of year:	$ 2,000	Total Project Estimate:	$ 106,525
Project Balance	$ 8,475	Additional Funding Required	$ 56,525

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000					$ 35,000
Installation	$ 15,000					$ 15,000
Capitalized Labor	$ 15,000					$ 15,000
TOTAL	$ 65,000	$ -	$ -	$ -	$ -	$ 65,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$56,525
			$0
Total	100%		$56,525

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: 21007

Project Name: Town Center Force Main Phase 4 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The Town Center force main and lift station were originally designed and constructed in 1980 to collect wastewater from Prospector's Plaza and pump it to the Motherlode force main at Pleasant Valley Road and Motherlode Drive. The Town Center force main was originally constructed of 8" asbestos cement (AC) pipe, which has experienced several failures causing SSO's in past years due to corrosion. The force main is in need of replacement with corrosion-resistant PVC to extend the life of this asset. Phase 4 is the final phase which will replace the force main from the upstream Town Center lift station to the beginning of phase 2A, south of Highway 50.

Project funding includes design completion and environmental only.

Basis for Priority:

This project will replace failing assets to ensure reliability and continual operation of the wastewater collection system.

Project Financial Summary:			
Funded to Date:	**$ 50,000**	**Expenditures through end of year:**	**$ 29,062**
Spent to Date:	**$ 24,062**	**2024 - 2028 Planned Expenditures:**	**$ 100,000**
Cash flow through end of year:	**$ 5,000**	**Total Project Estimate:**	**$ 129,062**
Project Balance	**$ 20,938**	**Additional Funding Required**	**$ 79,062**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design					**$ 50,000**	**$ 50,000**
Environmental					**$ 50,000**	**$ 50,000**
Construction						**$ -**
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ 100,000**	**$ 100,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: 21026

Project Name: St. Andrews Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:**

Project Description:

The St. Andrews Lift Station (SALS) was originally constructed in 1985 and serves approximately 5070 equivalent dwelling units. The lift station has undergone several upgrades throughout the years including new pumps, discharge piping, and electrical upgrades. This project will include discharge manifold modifications, upsizing of the bypass port for maintenance or emergency bypassing, and a programming update of the remote SCADA system. Although newer electrical equipment was previously installed, only a minimum amount of data points are collected and transmitted into the remote SCADA system. Increasing the amount of data remotely visible per District standards will aid in operational decision making to reduce the likelihood of sanitary sewer overflows.

Basis for Priority:

This project will optimize pump operation, maximize bypassing capabilities, and increase data remote visibility that informs operational decision making and reduces the likelihood sanitary sewer overflows, hazards to the public, and regulatory fines.

Project Financial Summary:			
Funded to Date:	**$ 48,610**	**Expenditures through end of year:**	**$ 34,961**
Spent to Date:	**$ 19,961**	**2024 - 2028 Planned Expenditures:**	**$ 350,000**
Cash flow through end of year:	**$ 15,000**	**Total Project Estimate:**	**$ 384,961**
Project Balance	**$ 13,649**	**Additional Funding Required**	**$ 336,351**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	**$ 25,000**					**$ 25,000**
Environmental	**$ 25,000**					**$ 25,000**
Construction	**$ 50,000**	**$ 250,000**				**$ 300,000**
TOTAL	**$ 100,000**	**$ 250,000**	**$ -**	**$ -**	**$ -**	**$ 350,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$86,351
			$0
Total	**100%**		**$86,351**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21041

Project Name: Wastewater Facility Generators - FEMA Grant

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:**

Project Description:

The District applied for and was granted Hazard Mitigation Grant Program (HMGP) funding through the Federal Emergency Management Agency (FEMA) to provide a federal cost share for emergency backup generator installations at fifteen remote District facilities. Included in the application is generators for seven wastewater lift stations. This project will provide local agency funding as required by the HMGP grant.

Basis for Priority:

The project will provide continual power at seven wastewater lift stations during utility power outages. Grant timeline requires project completion by September 2022.

Project Financial Summary:			
Funded to Date:	$ 306,347	Expenditures through end of year:	$ 262,284
Spent to Date:	$ 212,284	2024 - 2028 Planned Expenditures:	$ 210,000
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 472,284
Project Balance	$ 44,063	Additional Funding Required	$ 165,937

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction	$ 1,960,000					$ 1,960,000
FEMA Funding	$ (1,750,000)					$ (1,750,000)
TOTAL	$ 210,000	$ -	$ -	$ -	$ -	$ 210,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$165,937
			$0
Total	100%		$165,937

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21081

Project Name: Motherlode Force Main Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Carrington **Board Approval:**

Project Description:

The Motherlode force main (MLFM) was originally constructed in 1977 and conveys wastewater from the El Dorado lift station approximately nine miles west to the Deer Creek Wastewater Treatment Plant. Six additional lift stations pump directly into the force main as well as several private lift stations. The MLFM was originally constructed with 12-inch asbestos cement pipe and has several peaks and valleys as it progresses through the terrain. As wastewater is pumped over the peaks in the force main, the high points regularly become empty and are susceptible to high levels of hydrogen sulfide gas corrosion. The long term impact of hydrogen sulfide gas exposure is varying levels of degradation in the pipe.

The project began construction in 2023. To date, approximately 50% of the forcemain has been replaced with larger diameter, plastic pipe. This project will replace approximately 3.3 miles of existing 12-inch asbestos cement pipe with 18-20-inch plastic pipe.

Basis for Priority:

Project is under construction.

Project Financial Summary:			
Funded to Date:	$ 15,491,836	Expenditures through end of year:	$ 7,756,264
Spent to Date:	$ 756,264	2024 - 2028 Planned Expenditures:	$ 5,000,000
Cash flow through end of year:	$ 7,000,000	Total Project Estimate:	$ 12,756,264
Project Balance	$ 7,735,572	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design						$ -
Environmental						$ -
Construction	$ 5,000,000					$ 5,000,000
TOTAL	$ 5,000,000	$ -	$ -	$ -	$ -	$ 5,000,000

Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Camino Heights Wastewater Treatment Plant Disposal Improvements

Project Category: Regulatory Requirements

Priority: 1 **PM:** Carrington **Board Approval:**

Project Description:

The Camino Heights Wastewater Treatment Plant (CHWWTP) was originally constructed in 1964 and serves the Camino Heights subdivision and a small commercial area along Highway 50. The plant is comprised of headworks, pond system, disinfection, and irrigation system. The irrigation system is a combination of direct land application and sub-surface drip system. In recent years, storm events have caused excess influent flows at the treatment plant as well as difficulty with effluent disposal due to saturated soil conditions. Operations staff has relied on pump trucks to haul excess flow to the Deer Creek sewer system for disposal. A recent State Resources Control Board inquiry letter required the District to reconcile the approved discharge methods with alternative methods used during storm events. A new wet weather water balance was performed and improvement alternatives to align CHWWTP with approved discharge methods have been developed.

This project will include funding necessary to engage with regulatory agencies, perform preliminary geotechnical studies, and develop construction plans and specifications for bidding. Because project development is conceptual at this time, construction expenditures are not included. Once regulatory and study efforts are complete, construction expenditures will be programmed into the Capital Improvement Plan.

Basis for Priority:

This project will respond to a regulatory compliance inquiry from the State Water Resources Control Board.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 350,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 350,000
Project Balance	$ -	Additional Funding Required	$ 350,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 150,000			$ 300,000
Environmental			$ 50,000			$ 50,000
Construction						$ -
TOTAL	$ -	$ 150,000	$ 200,000	$ -	$ -	$ 350,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Collections Pipeline Replacement and Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:**

Project Description:

The District owns and operates four collection systems within El Dorado County. Aging infrastructure and limited funding necessitates active inspection and assessment of the collection system. This program will systematically develop projects to replace or rehabilitate the most critical infrastructure within the wastewater collection systems including, but not limited to pipelines and appurtenances.

Basis for Priority:

This programmatic project will replace or rehabilitate the most critical aging infrastructure in the collection system. One significant spill to waters of the state could cost the District $10 per gallon in fines.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 5,500,000
Cash flow through end of year:		Total Project Estimate:	$ 5,500,000
Project Balance	$ -	Additional Funding Required	$ 5,500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000		$ 150,000		$ 300,000
Environmental		$ 100,000		$ 100,000		$ 200,000
Construction	$ 2,500,000		$ 1,250,000		$ 1,250,000	$ 5,000,000
TOTAL	$ 2,500,000	$ 250,000	$ 1,250,000	$ 250,000	$ 1,250,000	$ 5,500,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$2,500,000
Total	100%		$2,500,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: PLANNED

Project Name: Collections SCADA and PLC Upgrade Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This program is to upgrade overall communication at the remote lift station sites. Initially, the program will implement required updates to the collections system back-end SCADA application. Once back-end programming is complete, user interface programming and replacement of end of life PLC and radio equipment at the remote lift station sites will be completed.

Basis for Priority:

The project will update the system to todays industry standards and improve reliability of a critical wastewater equipment.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,100,000
Project Balance	$ -	Additional Funding Required	$ 1,100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 200,000	$ 100,000				$ 300,000
Environmental	$ 50,000					$ 50,000
Construction	$ 150,000	$ 300,000	$ 300,000			$ 750,000
						$ -
TOTAL	$ 400,000	$ 400,000	$ 300,000	$ -	$ -	$ 1,100,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$400,000
			$0
Total	100%		$400,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: PLANNED

Project Name: DCWWTP PLC Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This project is to replace remaining aged PLC controllers at the facility. The spare parts are becoming scarce and very expensive to repair. This project will replace and reprogram the end of life PLC hardware and associated SCADA application at DCWWTP.

Basis for Priority:

Replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 450,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 450,000
Project Balance	$ -	Additional Funding Required	$ 450,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services		$ 75,000	$ 75,000	$ 75,000		$ 225,000
Construction		$ 50,000	$ 50,000	$ 50,000		$ 150,000
Capitalized Labor		$ 25,000	$ 25,000	$ 25,000		$ 75,000
						$ -
TOTAL	$ -	$ 150,000	$ 150,000	$ 150,000	$ -	$ 450,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: DCWWTP Process Control Device Integration

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This funding is designated to install process control hardware and instrumentation; project will provide system integration of existing monitoring and control devices; project will replace monitoring and control devices that are past the end of life cycle. The upgrades will aid in facility operations and improve efficiency of the system. DCWWTP lacks instrumentation and control devices in certain key areas of the plant. The improvements will contribute in energy savings at the plant. DCWWTP SCADA system lacks integration with CHWWTP, recycled water and radio system. This project will address needed remote facility integration and allow remote operations.

Basis for Priority:

CIP to replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Hardware	$ 35,000	$ 35,000				$ 70,000
Capitalized Labor	$ 15,000	$ 15,000				$ 30,000
Professional Services	$ 25,000	$ 25,000				$ 50,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$75,000
			$0
Total	100%		$75,000

Funding Comments: The project replaces existing facilities, therefore is funded by wastewater rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: EDHWWTP PLC Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

Replacement of end of life PLC equipment at the El Dorado Hills Wastewater Treatment Plant.

Basis for Priority:

This project will replace end-of-life assets to ensure reliability and continual operation of the communication network servicing the El Dorado Hills Wastewater Treatment Plant.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:		Total Project Estimate:	$ 1,100,000
Project Balance	$ -	Additional Funding Required	$ 1,100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 250,000				$ 250,000
Environmental		$ 50,000				$ 50,000
Construction			$ 400,000	$ 400,000		$ 800,000
TOTAL	$ -	$ 300,000	$ 400,000	$ 400,000	$ -	$ 1,100,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%	$	-
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: El Dorado Hills Lift Station Consolidation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The 2019 El Dorado Hills Collection System Modeling Project identified capacity issues within the system as well as lift station consolidation opportunities. Six lift stations on the western side of El Dorado Hills, bordering Folsom Lake, can potentially be consolidated to a larger lift station near the Brown's Ravine area. This project includes a Basis of Design Report to identify and describe necessary improvements to consolidate the six lift stations and compare to the alternative of continual operation and upgrades of the existing stations independently.

Basis for Priority:

Project will investigate operational efficiencies and methods to reduce Capital Improvement Expenditures via consolidating lift stations.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 300,000
Project Balance	$ -	Additional Funding Required	$ 300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 50,000			$ 200,000
Environmental			$ 100,000			$ 100,000
Construction						$ -
TOTAL	$ -	$ 150,000	$ 150,000	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
Total	100%		$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: **PLANNED**

Project Name: **El Dorado Lift Station Site Improvements**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **TBD** **Board Approval:**

Project Description:

The El Dorado lift station is located adjacent to Pleasant Valley Road in the town of El Dorado. The site has a large vacant area that is currently used to store spare pipe segments and appurtenances for routine or emergency repairs of the collection system. This project will dedicate funding to design and construct material storage bays and improve access to the site. Additionally, the existing wastewater vactor dump station will be improved for maneuverability and odor containment.

Basis for Priority:

Improve efficiency and provide safe and adequate storage.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 250,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 250,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 250,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design			**$ 200,000**			**$ 200,000**
Environmental			**$ 50,000**			**$ 50,000**
Construction						**$ -**
TOTAL	**$ -**	**$ -**	**$ 250,000**	**$ -**	**$ -**	**$ 250,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: **PLANNED**

Project Name: **Ponderosa Heights Force Main Replacement**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Carrington** **Board Approval:**

Project Description:

The Ponderosa Heights force main was originally constructed in 19XX to convey wastewater from the Ponderosa Heights lift station in Shingle Springs. During exploratory activties, staff discovered the asbestos cement force main pipe in a degraded condition and is in need of replacement.

Basis for Priority:

This project will replace failing assets to ensure reliability and continual operation of the wastewater collection system.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 1,750,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 1,750,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 1,750,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design		**$ 200,000**				**$ 200,000**
Environmental		**$ 50,000**				**$ 50,000**
Construction			**$ 750,000**	**$ 750,000**		**$ 1,500,000**
TOTAL	**$ -**	**$ 250,000**	**$ 750,000**	**$ 750,000**	**$ -**	**$ 1,750,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: **PLANNED**

Project Name: **Promontory Village Inflow & Infiltration Study**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **TBD** **Board Approval:**

Project Description:

The 2020 update of the El Dorado Hills Collection System Hydraulic Model indicated capacity issues in the Promontory Village subdivision. Flow monitoring indicates higher than normal peak flow rates which is typically due to inflow and infiltration (I&) within the collection system. If location(s) of I&I are determined then improvements will be focused on reducing peak wet weather flow rather than more costly system upgrades.

Basis for Priority:

The collection system model identified these gravity sewer pipelines as having capacity limitations. Performing an I&I study will attempt to located the source of additional flows during storm events. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 125,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 125,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 125,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design				**$ 25,000**	**$ 100,000**	**$ 125,000**
Environmental						**$ -**
Construction						**$ -**
TOTAL	**$ -**	**$ -**	**$ -**	**$ 25,000**	**$ 100,000**	**$ 125,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: PLANNED

Project Name: SCADA Wastewater Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This funding is designated to be a rolling CIP to replace end of life cycle wastewater SCADA hardware District wide. This program would focus on replacing and reprogramming of the end of life PLC hardware and associated SCADA reconfigurations. Many sites are beyond the 15 year life expectancy for the PLC hardware.

Basis for Priority:

Rolling CIP to replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 500,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 500,000
Project Balance	$ -	**Additional Funding Required**	$ 500,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Hardware	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
Professional Services	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 225,000
						$ -
TOTAL	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater Rates	100%		$100,000
			$0
Total	**100%**		**$100,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:**

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 175,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
						$ -
						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Wastewater

Project Number: PLANNED
Project Name: Wastewater Asset Replacement Program
Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:**

Project Description:

This is an annual program to replace wastewater assets that have failed or reached end of useful life. This program differs from ongoing maintenance programs in that the equipment, facilities, and labor attributed to these assets constitute a replacement of a capitalized asset. Assets to be replaced or upgraded under this program include, but are not limited to mechanical, electrical and instrumentation systems, treatment plant and lift station equipment, generators, and collection system assets that with replacement will extend the life of the associated system or facility. Items to be replaced each year will be prioritized using ongoing condition assessments and the asset management policies of the District.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 2,500,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 2,500,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 2,500,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design						**$ -**
Environmental						**$ -**
Construction	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 2,500,000**
TOTAL	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 2,500,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$500,000
Total	**100%**		**$500,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Collection System Hydraulic Modeling

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:**

Project Description:

The District commissioned two hydraulic modeling updates for the collection system; one for the El Dorado Hills system and one for the Deer Creek system. As new developments are presented to the District and as capital projects are completed, it is beneficial to update the model to confirm available capacity or update capacity on a system level.

Basis for Priority:

The collection system model identifies gravity sewer pipelines that have capacity limitations. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Environmental						$ -
Construction						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: **PLANNED**

Project Name: **Wastewater Lift Station Upgrade Program**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Carrington** **Board Approval:**

Project Description:

The District currently maintains sixty wastewater lift stations. Twenty-nine of these lift stations are within the Deer Creek shed, and the remaining thirty-one are in the El Dorado Hills shed.

The age, condition, and capacity of each station varies significantly. In order to prioritize rehabilitation and replacement efforts District staff will continue to assess and prioritize repairs at deficient lift stations.

Basis for Priority:

This project provides replacement of failing components at this critical facility; thereby providing safe, reliable collection system assets.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 5,525,000
Cash flow through end of year:		**Total Project Estimate:**	$ 5,525,000
Project Balance	$ -	**Additional Funding Required**	$ 5,525,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design		$ 150,000	$ 100,000	$ 200,000		$ 450,000
Environmental		$ 25,000	$ 25,000	$ 25,000		$ 75,000
Construction			$ 1,500,000	$ 1,250,000	$ 2,250,000	$ 5,000,000
TOTAL	$ -	$ 175,000	$ 1,625,000	$ 1,475,000	$ 2,250,000	$ 5,525,000

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Wastewater FCCs	100%		$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Treatment Plant Assessments

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:**

Project Description:

The Deer Creek and El Dorado Hills Wastewater Treatment Plants were originally constructed in the 1960's and have undergone several expansions beginning in the early 1990's. This assessment will look at each of the plants individually and provide a roadmap for projects at the plants. Due to the overall age of the facilities, key elements of the existing treatment process need to be examined for rehabilitation or replacement to maintain permit compliance and capacity. The general goal and objectives are to review, evaluate, and assess the condition of the structures and equipment taking into account past and future maintenance activities and regulatory requirements. Additionally, recommendations will include timelines for use in future CIP projects, including budgetary level cost estimates for each recommendation offered. The assessments will be completed in phases similar to the recently completed Water Treatment Plant Assessments

Basis for Priority:

Determine replacement and improvement strategy to support regulatory compliance, improve service reliability, and reduce maintenance costs.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 700,000
Project Balance	$ -	Additional Funding Required	$ 700,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 200,000	$ 250,000	$ 250,000		$ 700,000
Environmental						$ -
Construction						$ -
TOTAL	$ -	$ 200,000	$ 250,000	$ 250,000	$ -	$ 700,000

Funding Sources	Percentage	2024 Amount
Wastewater FCCs	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: WWTP Process Improvement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This program is to perform minor modifications to civil, mechanical, and electrical components within the wastewater treatment plants. Modifications included in this program, but not limited to, variable frequency drives, cathodic protection, and reconfiguration of piping.

Basis for Priority:

This programmatic project will enhance reliability at the wastewater treatment plants.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 875,000
Cash flow through end of year:		Total Project Estimate:	$ 875,000
Project Balance	$ -	Additional Funding Required	$ 875,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 125,000
Environmental						$ -
Construction	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 750,000
TOTAL	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 875,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$175,000
			$0
Total	100%		$175,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: WWTP Solids Handling Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The El Dorado Hills and Deer Creek Wastewater Treatment Plants both utilize a belt press to dewater solids from the treatment process. Both belt presses are past their useful life and are showing signs of deterioration. This project will analyze available soilds handling technologies and construct a cost effective solution to replace the belt press units.

Basis for Priority:

This project will replace deteriorating assets at the wastewater treatment plants.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 4,300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 4,300,000
Project Balance	$ -	Additional Funding Required	$ 4,300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 250,000				$ 250,000
Environmental		$ 50,000				$ 50,000
Construction			$ 2,000,000	$ 2,000,000		$ 4,000,000
						$ -
TOTAL	$ -	$ 300,000	$ 2,000,000	$ 2,000,000	$ -	$ 4,300,000

Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

Recycled Water Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Water Asset Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This is an annual program to replace or upgrade recycled water assets and facilities that have failed, reached the end of useful life, or require increased operational efficiency or redundancy. The equipment, facilities, and labor attributed to these assets constitute a replacement or installation of a capitalized asset, which distinguishes this program from ongoing maintenance programs. Assets and facilities to be replaced or upgraded under this program include, but are not limited to, mechanical, electrical and instrumentation systems, pump station equipment, generators, and distribution system assets that with replacement or upgrade will extend the life of the associated system or facility. Items that need to be replaced or upgraded each year will be prioritized based on ongoing condition assessments and the District's asset management policies.

Basis for Priority:

Program purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 475,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 475,000
Project Balance	$ -	Additional Funding Required	$ 475,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 100,000
Environmental	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Construction	$ 50,000	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 350,000
TOTAL	$ 75,000	$ 175,000	$ 75,000	$ 75,000	$ 75,000	$ 475,000

Funding Sources	Percentage	2024	Amount
Recycled Water Rates	100%		$75,000
			$0
Total	100%		$75,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Recycled Water**

Project Number: PLANNED

Project Name: Recycled Water Distribution Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The District owns and operates a recycled water distribution system that serves portions of El Dorado Hills and Cameron Park with reclaimed water. The recycled water system's original pipelines and appurtenances were installed in 1974 and are now in need of condition inspection and assessment to determine necessary replacements and improvements. This program will systematically develop projects to replace or rehabilitate most critical and high risk pipelines and appurtenances within the recycled distribution system.

Basis for Priority:

Program purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 925,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 925,000
Project Balance	$ -	**Additional Funding Required**	$ 925,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	$ 45,000	$ 100,000				$ 145,000
Environmental	$ 5,000	$ 25,000				$ 30,000
Construction			$ 250,000	$ 250,000	$ 250,000	$ 750,000
TOTAL	$ 50,000	$ 125,000	$ 250,000	$ 250,000	$ 250,000	$ 925,000

Funding Sources	**Percentage**	**2024**	**Amount**
Recycled Water Rates	100%		$50,000
			$0
Total	**100%**		**$50,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Water Radio Path Design and Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path design would include radio study to determine the most optimal and reliable wireless communication options for the District's remote facilities. The design would include field radio path verification of the modeled radio telemetry design. This design will encompass recycled water facilities.

Basis for Priority:

Many remote facilities rely on antiquated serial radios. Quickly evolving technology requires EID to move to an IP based communication to retain maintainable parts. Performing large migrations without a proper design and proven concepts creates great risk for improper implementation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 75,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 75,000
Project Balance	$ -	Additional Funding Required	$ 75,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 35,000				$ 35,000
Construction		$ 25,000				$ 25,000
Capitalized Labor		$ 15,000				$ 15,000
						$ -
TOTAL	$ -	$ 75,000	$ -	$ -	$ -	$ 75,000

Funding Sources	Percentage	2024	Amount
Recycled Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Storage Tank Replacement & Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This program consists of targeted replacement and rehabilitation of recyled water tanks tanks within the recycled water distribution system. The District operates 4 steel storage tanks, ranging in age from 14 to 21 years of age. This program is to identify specific tanks and reservoirs torehabilitate, replace, or upgrade to maintain service reliability. This program also includes tank recoating for the welded storage tanks. Program management expenditures identified include prioritizing and designing each tank and reservoir improvement project. Actual replacement and recoating costs for each individual tank and reservoir will be brought to the Board for specific approval.

Basis for Priority:

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 4,172,074
Cash flow through end of year:	$ -	Total Project Estimate:	$ 4,172,074
Project Balance	$ -	Additional Funding Required	$ 4,172,074

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Planning	$ 75,000	$ 100,000	$ 100,000	$ 100,000		$ 375,000
Construction/structural	$ 784,084	$ 1,088,510	$ 1,289,340	$ 635,140		$ 3,797,074
TOTAL	$ 859,084	$ 1,188,510	$ 1,389,340	$ 735,140	$ -	$ 4,172,074

Funding Sources	Percentage	2024	Amount
Recycled Water FCCs	100%		$859,084
Total	**100%**		**$859,084**

Funding Comments:

Hydroelectric Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 17028

Project Name: Flume 48 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

Flume 48 was originally constructed of wood in 1876 and supported by an un-mortared, hand-stacked rock bench located north of Highway 50 near Camp 5. In 1948, the wooden flume was completely replaced. District crews have been performing extensive maintenance work of the asset to extend the service life of the critically degraded structure until the full replacement can occur. The District is evaluating two replacement alternatives for this flume. Alternative 1 is to stabilize the hand-stacked rock bench utilizing stabilization measures and the degraded wood flume would be replaced with new concrete precast flume. Alternative 2 would be to construct a 500 foot tunnel between Flume 48 and Highway 50 and abandon approximately 700 feet of canal and 448 feet of elevated wood flume. Option 2, if feasible, could result in significantly lower construction costs but would require acquisition of an easement on an adjacent parcel and a FERC boundary adjustment. The District was able to purchase the parcel that the majority of the tunnel would be placed in 2018. This parcel will also be used as a staging area whether or not the tunnel option is feasible. A geotechnical study was conducted in 2019 and determined that Option 2 is feasible. During the design process the costs of Options 1 and 2 will be determined. The costs below reflect completing alternatives analysis and design to get the project ready for construction, however construction costs have been deferred assuming the Sly Park Intertie is constructed thereby increasing the reliability of the water system should we have an unplanned outage of the flume. Funding will be timed with a future bond issuance that is yet to be determined.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that may result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the District's water supply would be out of service for an extended period to make emergency repairs resulting in possible interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 461,912	Expenditures through end of year:	$ 457,224
Spent to Date:	$ 432,224	2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 1,157,224
Project Balance	$ 4,688	Additional Funding Required	$ 695,312

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 150,000	$ 150,000	$ 150,000		$ 500,000
Environmental		$ 50,000	$ 100,000	$ 50,000		$ 200,000
Construction						$ -
Warranty-FERC QCIP						$ -
TOTAL	$ 50,000	$ 200,000	$ 250,000	$ 200,000	$ -	$ 700,000

Estimated Funding Sources	Percentage	2024	Amount
Bond	100%		$45,312
			$0
			$0
Total	100%		$45,312

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: 18010

Project Name: Penstock Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:**

Project Description:

Water is provided from Forebay Reservoir to the El Dorado Powerhouse through a 60-inch diameter penstock for power generation. FERC regulations and our standard operating procedures require the penstock to be inspected and assessed at regular intervals. This project was initiated in 2015 to perform a comprehensive assessment of the penstock and determine if any upgrades or replacements need to be made for continued reliability. The condition assessment continued into 2017 and identified the following needed improvements:

1) Improving access in the steepest section of penstock to support conducting O&M and capital improvements safely
2) Restoring grounds across compression couplings in the low-pressure section of penstock;
3) Relining the interior of the surge tank and the buried section between the penstock tunnel and surge tank at welded joints where the original lining was applied in the field;
4) Investigating restoring the tramway to service along the high-pressure penstock;
5) Improving the anchoring of the surge tank to meet seismic loading;

Work planned for 2024 includes construction for improving access on the steepest section of the penstock; In addition, 2024 work will include preparing plans and specifications, and conducting environmental review/permitting for subsequent phases. Relining of the surge tank and portions of the penstock are scheduled for 2025. The cost of improvements beyond 2024 will be updated upon completion of design for later phases. Penstock stabilization is being planned and performed under CIP 21016.

Basis for Priority:

The project is to maintain penstock safety and service reliability. The ability for the District to receive an average $4 million annually in power generation revenues depends on the availability of the penstock. The penstock is one of the highest pressure and oldest in the United States.

Project Financial Summary:			
Funded to Date:	**$ 360,000**	**Expenditures through end of year:**	**$ 122,671**
Spent to Date:	**$ 122,671**	**2024 - 2028 Planned Expenditures:**	**$ 745,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 867,671**
Project Balance	**$ 237,329**	**Additional Funding Required**	**$ 507,671**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning	**$ 30,000**	**$ 20,000**	**$ 10,000**	**$ 10,000**	**$ 10,000**	**$ 80,000**
Design	**$ 50,000**	**$ 50,000**	**$ 60,000**	**$ 50,000**	**$ 50,000**	**$ 260,000**
Construction	**$ 120,000**	**$ 130,000**	**$ 115,000**	**$ 20,000**	**$ 20,000**	**$ 405,000**
						$ -
TOTAL	**$ 200,000**	**$ 200,000**	**$ 185,000**	**$ 80,000**	**$ 80,000**	**$ 745,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water FCCs	100%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: 19021

Project Name: Canal RTU Replacement Control Sites

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement of alarm and spillway control sites located along the Project 184 canal. The current system has served the District well, unfortunately it is no longer supported by a modern computer. Costs will be revised when design is completed.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability and operational capabilities of the system. Additionally, new replacement parts are not available due to obsolescence. This system cannot be supported on a modern computer.

Project Financial Summary:			
Funded to Date:	**$ 80,000**	**Expenditures through end of year:**	**$ 48,214**
Spent to Date:	**$ 48,214**	**2024 - 2028 Planned Expenditures:**	**$ 1,125,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 1,173,214**
Project Balance	**$ 31,786**	**Additional Funding Required**	**$ 1,093,214**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design/Planning	**$ 125,000**					**$ 125,000**
Construction		**$ 300,000**	**$ 300,000**	**$ 300,000**		**$ 900,000**
Capitalized Labor	**$ 25,000**	**$ 25,000**	**$ 25,000**	**$ 25,000**		**$ 100,000**
TOTAL	**$ 150,000**	**$ 325,000**	**$ 325,000**	**$ 325,000**	**$ -**	**$ 1,125,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water FCCs	100%		$118,214
			$0
Total	**100%**		**$118,214**

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: 19024H

Project Name: Echo Conduit Rehabilitation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:**

Project Description:

The Echo Conduit was installed in 1922 and is comprised of approximately 2,320 lineal feet of 36" diameter steel pipeline, 750 lineal feet of canal, and 1,106 lineal feet of tunnel. In 1953 and 1967, sections of the 36-inch diameter pipe were replaced. After experiencing a tunnel collapse in 2005, the timber-reinforced tunnel was lined with a 36" diameter HDPE pipeline, including filling the annular space with grout. The pipe is overall degraded and misshaped from snow load and rock fall, and is not a candidate for slip lining. While the pipeline has been maintained serviceable with weld repairs and neoprene patches held with steel band strapping, the extent of pipe wall thinning and deformation is resulting in diminishing options for repair. If the pipeline were to rupture, it could cause significant environmental damage, affect traffic safety on Highway 50 and diminish District water supplies for consumptive and power generation use. Typically over 1,500 acre feet of water is drawn from storage or directly diverted annually from Echo Lake for water supply and power generation. Conceptual engineering for the foundation, elevated section, pipeline, and consideration of constructability was completed in 2021.

Damage from snow load occurred during winter 2022/2023 necessitating emergency replacement of the trestle section consisting of 200 lf, and an additional on-grade section upstream for 400 lf. Planning, constructability and design for remaining sections of pipe including planning for pipe installation in the canal section is planned for 2024. Converting canal section to pipeline effectively improves capacity over the entire range of operating conditions, leading to fuller utilization of storage during the normal 3-week drawdown period between Labor Day and annual outage season starting in October. The construction schedule for replacing the balance of pipeline and installing pipe in the canal section will be established according to information gathered during annual condition assessments.

Basis for Priority:

Maintaining operability of Echo Conduit provides the District continued use of this pre-1914 water right for consumptive water supply and power generation. Replacing the conduit restores diminished capacity as has occurred over time, and improves the District's ability to utilize its storage and direct diversion water rights.

Project Financial Summary:			
Funded to Date:	**$ 100,000**	**Expenditures through end of year:**	**$ 86,579**
Spent to Date:	**$ 86,579**	**2024 - 2028 Planned Expenditures:**	**$ 80,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 166,579**
Project Balance	**$ 13,421**	**Additional Funding Required**	**$ 66,579**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning	**$ 30,000**					**$ 30,000**
Design	**$ 50,000**					**$ 50,000**
Construction						**$ -**
						$ -
TOTAL	**$ 80,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 80,000**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water FCCs	100%	$66,579
		$0
		$0
Total	**100%**	**$66,579**

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Hydroelectric

Project Number: 19031
Project Name: Silver Lake Dam Replacement
Project Category: Regulatory Requirements

Priority: 1 **PM:** Kessler **Board Approval:**

Project Description:

The long-term reliability of the dam came into question in the spring of 2015 when a sink hole was discovered. In response, DSOD restricted the reservoir level, and the District conducted emergency repairs and a geotechnical investigation. The likely cause of the sink hole was the creation of voids in the dam as a result of rotting interior logs that have been encapsulated as fill and were part of the original rock and soil filled timber crib structure constructed in 1876. Other evidence of voids occurring within the fill of the dam is uneven crest settlement and shifting locations of leakage discharge. In addition, the upstream gunite face of Silver Lake Dam is at the end of its useful life and no longer reliable. Repairs have been employed since the late 1990's to stem leakage and extend the life of the 50-year old gunite. However, the gunite continues to thin, crack and crumble making repairs increasingly less durable and sustainable. Unforeseeable periods of leakage have also caused delayed filling or early drawdown of the reservoir resulting in loss of water supply and power generation. The leakage through the dam has to be controlled to acceptable rates in order to prevent creation of more voids in the dam as caused by soil particle migration (piping).

The District has evaluated rehabilitation/replacement alternatives to remediate the three major defects (upstream face, interior fill, spillway capacity). The alternatives analysis was submitted to FERC and DSOD in fall 2016, and District staff met with their representatives in January 2017. FERC and DSOD agreed with the District's preliminary findings that the most effective, reliable and least cost alternative is to replace the dam. The project will need to undergo a progression of design and environmental activities over the next several years. In 2022, the Design Criteria Memorandum and subsurface exploration plan was completed, and subsurface exploration was conducted by performing drilling and seismic refraction surveys to support the next phases of design. In 2023, 30% design and initial environmental review are being performed. The project will require environmental assessment under CEQA, NEPA and a FERC License Amendment, as well as various federal, state and local permits. As these steps and the design evolve to better define the project, the District will have a basis for estimating construction costs (preliminary estimate included at this time). Construction is scheduled for 2027. Funding is expected to be subject to a future bond issuance with possible grant support.

Basis for Priority:

Compliance with FERC and DSOD dam safety program requirements.

Project Financial Summary:			
Funded to Date:	$ 3,256,395	**Expenditures through end of year:**	$ 844,419
Spent to Date:	$ 744,419	**2024 - 2028 Planned Expenditures:**	$ 49,880,000
Cash flow through end of year:	$ 100,000	**Total Project Estimate:**	$ 50,724,419
Project Balance	$ 2,411,976	**Additional Funding Required**	$ 47,468,024

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Environmental	$200,000	$300,000	$ 700,000			$ 1,200,000
Design/CM	$500,000	$ 1,680,000	$ 1,500,000	$ 2,500,000	$ 2,500,000	$ 8,680,000
Construction				$ 20,000,000	$ 20,000,000	$ 40,000,000
TOTAL	$ 700,000	$ 1,980,000	$ 2,200,000	$ 22,500,000	$ 22,500,000	$ 49,880,000

Estimated Funding Sources	Percentage	2024 Amount
Bond	100%	$0
		$0
Total	**100%**	**$0**

Funding Comments: Seeking Grant opportunities; Construction Cost is Order-of-Magnitude until 30% Design is completed in September

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21003

Project Name: Diversion Repeater Site

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:**

Project Description:

The project is to design and implement more reliable communication path for the diversion facility and for the Project 184 upper country radio system. The repeater site would serve as a primary communication pathway and would be independent of unreliable service from PG&E and AT&T.

Basis for Priority:

The project will improve reliability of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 3,194
Spent to Date:	$ 3,194	2024 - 2028 Planned Expenditures:	$ 175,000
Cash flow through end of year:		Total Project Estimate:	$ 178,194
Project Balance	$ 46,806	Additional Funding Required	$ 128,194

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000					$ 25,000
Construction	$ 100,000					$ 100,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 175,000	$ -	$ -	$ -	$ -	$ 175,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$128,194
		$0
		$0
Total	100%	$128,194

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: 21004

Project Name: A18 Fiber Communication Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This project is to install fiber optic line from the new A18 building to the Upper Butterfly Valve House. Second phase of the project will replace end of life cycle fiber optic line that spans to the Powerhouse. The new fiber optic line will drastically improve the efficiency and reliability of the powerhouse operation and maintaining the Forebay lake level.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability and operational capabilities of the system. The existing fiber is aged and has no available spare fiber pairs.

Project Financial Summary:			
Funded to Date:	$ 50,000	**Expenditures through end of year:**	$ 3,974
Spent to Date:	$ 3,974	**2024 - 2028 Planned Expenditures:**	$ 300,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 303,974
Project Balance	$ 46,026	**Additional Funding Required**	$ 253,974

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Professional Services	$ 50,000					$ 50,000
Construction	$ 200,000					$ 200,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$253,974
			$0
			$0
Total	**100%**		**$253,974**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21008

Project Name: Diversion - Facility Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Delongchamp **Board Approval:**

Project Description:

The project is to implement a more reliable power distribution from utility and backup generator. Currently the site has multiple voltage feeds, large voltage swings and suffers from load imbalances. The load imbalance and voltage swings are causing faster equipment degradation and increasing maintenance cost. Consolidating power to a single feed will alleviate the current problems and improve reliability of the site. The current generator is no longer sized adequately for the current load at the facility. This project will include installation of a larger generator. Otherfacility improvements include relocating the air compressor/fish screen blower system outside of the existing control room to reduce heat load to electrical and network equipment and enclosing the compressor tank to prevent temperature issues.

The project was awarded for Construction in April 2023. The building and generator will be installed in the fall of 2023. Construction is expected to continue into spring of 2024 due to electrical procurement issues.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility. This project started Construction in September 2023.

Project Financial Summary:			
Funded to Date:	$ 1,378,727	Expenditures through end of year:	$ 1,075,271
Spent to Date:	$ 275,271	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ 800,000	Total Project Estimate:	$ 1,375,271
Project Balance	$ 303,456	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor	$ 50,000					$ 50,000
Construction Inspection	$ 50,000					$ 50,000
Construction	$ 200,000					$ 200,000
						$ -
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21009

Project Name: Diversion - Fish Ladder Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Kelsch **Board Approval:**

Project Description:

The project is to design and add a new flow meter to precisely and more instantaneously measure instream flow releases reducing the over-release caused by the existing controls, and increasing the water that can be diverted into the El Dorado Canal and improve the fish ladder as required by CA Dept. of Fish & Wildlife. Schedule and costs will be updated as the project progresses.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 20,093
Spent to Date:	$ 20,093	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:		Total Project Estimate:	$ 120,093
Project Balance	$ 29,907	Additional Funding Required	$ 70,093

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Permitting		$ 50,000				$ 50,000
Design/Permitting			$ 50,000			$ 50,000
Construction						$ -
						$ -
TOTAL	$ -	$ 50,000	$ 50,000	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21013

Project Name: Flumes 45A, 46A, 47A, and 47B Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

The CIP will seek design services for Flume 45A, 46A, 47A, and 47B. These four flumes are similar in nature in that they are between 128 to 200 foot long elevated flumes located on previous landslide locations. A brief description of the flumes are as follows:

- Flume 45A is 155 feet in length and is constructed of wood supports with fiberglass flume section and was last replaced in 2001.
- Flume 46A is 128 feet in length and is a wood flume with timber supports and was last replaced in 2011.
- Flume 47A is 201 feet in length and is a wood flume with timber supports and was last replaced in 1990.
- Flume 47b is 128 feet in length and is a wood flume with timber supports and was last replaced in 1990.

Since these flumes are similar in nature one general design has been done for all four flumes. Priority and costs were developed with the Canal and Flume Assessment Studies. Costs will be updated as design progresses.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 553,268	Expenditures through end of year:	$ 386,802
Spent to Date:	$ 386,802	2024 - 2028 Planned Expenditures:	$ 2,000,000
Cash flow through end of year:		Total Project Estimate:	$ 2,386,802
Project Balance	$ 166,466	Additional Funding Required	$ 1,833,534

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction 45A						$ -
Construction 46A						$ -
Construction 47A						$ -
Construction 47B					$ 2,000,000	$ 2,000,000
TOTAL	$ -	$ -	$ -	$ -	$ 2,000,000	$ 2,000,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Hydroelectric

Project Number: 21016

Project Name: Penstock Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:**

Project Description:

Water is provided from Forebay Reservoir to the El Dorado Powerhouse through a 60-inch diameter penstock for power generation. The penstock tapers and bifurcates as it approaches the powerhouse. FERC regulations and our standard operating procedures require the penstock condition and suitability for reliable service to be assessed through inspection and comprehensive evaluations at regular intervals. This project was initiated in 2015 to perform a comprehensive assessment of the penstock and determine if any upgrades or replacements need to be made for continued reliability. The condition assessment continued into 2017 and identified the following needed improvements under this Penstock Stabilization CIP:

1) Stabilizing the bench and slopes above and below the penstock downstream of the penstock tunnel section where rockfall and landslide potential exists - planned for 2025;
2) Performing drainage improvements to the high-pressure penstock section where a channel continues to erode including around saddles and anchor blocks - planned for 2025

The geotechnical assessment and design are in-progress, and will continue into early 2024. Concurrently, the District will conduct environmental review/permitting such that stabilization and drainage improvements can be constructed in 2025. Other penstock improvements are being planned and performed under CIP 18010.

Basis for Priority:

The project is to maintain penstock stabilization and service reliability. The ability for the District to receive an average $4 million annually in power generation revenues depends on the reliability of the penstock. The high-head section of penstock operates up to 830 psi, and is the original hammer-forge welded steel pipe installed in 1924.

Project Financial Summary:			
Funded to Date:	$ 400,611	Expenditures through end of year:	$ 170,840
Spent to Date:	$ 170,840	2024 - 2028 Planned Expenditures:	$ 770,000
Cash flow through end of year:		Total Project Estimate:	$ 940,840
Project Balance	$ 229,771	Additional Funding Required	$ 540,229

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 30,000	$ 20,000	$ 10,000			$ 60,000
Design	$ 50,000	$ 50,000	$ 60,000			$ 160,000
Construction		$ 450,000	$ 100,000			$ 550,000
						$ -
TOTAL	$ 80,000	$ 520,000	$ 170,000	$ -	$ -	$ 770,000

Estimated Funding Sources	Percentage	2024 Amount
Water FCCs	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21028

Project Name: Powerhouse Automation Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

The project is to design, replace and reprogram end of life hydro-turbine governors, PLC hardware, and related SCADA reconfigurations.

Basis for Priority:

The project will enhance reliability of a critical power generation facility. This hardware is failing, and posing a service reliability and maintenance issue. The life of this equipment is cycling out. The original installation took place over 25 years ago. Parts for these units are no longer manufactured, and they are difficult to service.

Project Financial Summary:			
Funded to Date:	$ 269,460	Expenditures through end of year:	$ 266,792
Spent to Date:	$ 126,792	2024 - 2028 Planned Expenditures:	$ 575,000
Cash flow through end of year:	$ 140,000	Total Project Estimate:	$ 841,792
Project Balance	$ 2,668	Additional Funding Required	$ 572,332

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design						$ -
Construction		$ 500,000				$ 500,000
Capitalized Labor	$ 75,000					$ 75,000
TOTAL	$ 75,000	$ 500,000	$ -	$ -	$ -	$ 575,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$72,332
		$0
		$0
Total	100%	$72,332

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: 22014

Project Name: Flume 45 Section 3 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This section of Flume 45 is an elevated wood flume approximately 940 feet in length and last replaced in 2001. This portion of the flume was constructed to span a section of the historic rock bench that had previously failed and replaced by PG&E. Because of the historic rock wall, the design will need to be approved by the State Historic Preservation Office. The design will be finalized and the wall will be monitored until construction funding is scheduled.

Basis for Priority:

The flume will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 776,523	**Expenditures through end of year:**	$ 407,250
Spent to Date:	$ 257,250	**2024 - 2028 Planned Expenditures:**	$ 540,000
Cash flow through end of year:	$ 150,000	**Total Project Estimate:**	$ 947,250
Project Balance	$ 369,273	**Additional Funding Required**	$ 170,727

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	$ 400,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 440,000
Environmental	$ 100,000					$ 100,000
Construction						$ -
						$ -
TOTAL	$ 500,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 540,000

Funding Sources	**Percentage**	**2024**	**Amount**
Bond	100%		$130,727
			$0
			$0
Total	**100%**		**$130,727**

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN

Program: Hydroelectric

Project Number: 22030

Project Name: Flume 47A Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

Flume 47A is a wood flume with timber supports approximately 201 feet in length and last replaced in 1990. Design is complete and the replacement of this flume section is scheduled to occur during the 2024 scheduled canal outage.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 100,000	Expenditures through end of year:	$ 40,924
Spent to Date:	$ 30,924	2024 - 2028 Planned Expenditures:	$ 3,200,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 3,240,924
Project Balance	$ 59,076	Additional Funding Required	$ 3,140,924

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 3,200,000					$ 3,200,000
						$ -
TOTAL	$ 3,200,000	$ -	$ -	$ -	$ -	$ 3,200,000

Funding Sources	Percentage	2024 Amount
Water FCCs	100%	$3,140,924
		$0
		$0
Total	**100%**	**$3,140,924**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 23016

Project Name: Camp 2 Structure

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The District maintained a residence at Camp 2, near the Plum Creek siphon, along Project 184. This residence burned in 2021 during the Caldor Fire. The Camp 2 location is critical for accessing Plum Creek Siphon House as well as an access point for the Project 184 conveyance system. Staff desires to rebuild a structure for storage adjoined with a warming shed, water, and wastewater service in lieu of a full residence. This project will include design, necessary permits, and construction of the Camp 2 Structure. District staff anticipates insurance reimbursement.

Basis for Priority:

This project will replace a damaged asset necessary for the operation and maintenance of Project 184.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 250,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 250,000
Project Balance	$ -	**Additional Funding Required**	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 75,000			$ 75,000
Environmental			$ 25,000			$ 25,000
Construction			$ 150,000			$ 150,000
						$ -
TOTAL	$ -	$ -	$ 250,000	$ -	$ -	$ 250,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Diversion - A11 Flow Control

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The project is to implement a more reliable and accurate flow control method. The site currently has two over sized gates the struggle and regularly fail to control the facilty during low flow periods. After hours time is required of staff to regualy troubleshoot and keep in service gates 1 & 2 of the canal flow.

A study was done by Water Works Engineering to determine the correct gate sizes and the limitations of the current gates. Their study confirmed that the acutators that are installed are in fact being used in an incorrect application and that the gates are too big to shave off the revenue generating flow that the Disitrict requires during low flow periods. Their study recommends to add a third smaller gate to be used as a fine tuning device during low flows. Reinforcement of the existing dam will be required.

Costs have been updated based on final design and the design engineers estimate. Project is scheduled to bid early next year for a Fall construction.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:		Total Project Estimate:	$ 80,000
Project Balance	$ -	Additional Funding Required	$ 80,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design	$ 5,000					$ 5,000
Construction	$ 75,000					$ 75,000
						$ -
TOTAL	$ 80,000	$ -	$ -	$ -	$ -	$ 80,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$80,000
			$0
			$0
Total	100%		$80,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: 14 Mile Tunnel Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

14-Mile Tunnel is approximately 490 feet long and delivers water from the Project 184 canal, underneath Forebay Road to the Forebay Reservoir. Due to water intrusion, the concrete near the upstream portal is beginning to weaken. The project will stabilize this section of the tunnel after the approved Forebay waterline replacement should eliminate the water intrusion. Construction cost estimates will be refined as the design progresses.

Basis for Priority:

The degradation of the existing concrete will continue to weaken the tunnel support and will lead to the failure of the upstream portion of the tunnel. This failure will mean that 1/3 of the Districts water supply will not be able to get to Forebay Reservoir for water consumption and hydroelectric generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 2,200,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 2,200,000
Project Balance	$ -	Additional Funding Required	$ 2,200,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design	$ 200,000					$ 200,000
Construction		$ 2,000,000				$ 2,000,000
						$ -
TOTAL	$ 200,000	$ 2,000,000	$ -	$ -	$ -	$ 2,200,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$200,000
			$0
			$0
Total	100%		$200,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: PLANNED

Project Name: Annual Canal and Flume Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:**

Project Description:

Canals and flumes are assessed annually by District staff to assess and prioritize necessary improvements that will be implemented during the annual Canal outage. These improvements are needed to extend the service life of the asset and maintain system reliability. Improvements to the degraded canal and flume sections include materials, concrete, shotcrete, helicopter support, equipment, and District crew labor. Canal rehabilitation, flume, and spillway improvements are necessary in order to maintain reliability of the water supply. Annual system improvements will be determined by District Hydro Operations each spring for implementation to be achieved during the scheduled Canal outage. Expenditures for 2024, 2025, 2026, 2027, 2028 will include $75,000 for canal & flume maintenance such as re-lining and concrete repairs. Expenditures for 2024, will include $425,000 for canal & flume maintenance such as re-lining and concrete repairs. Expenditures for 2025, 2026, 2027, and 2028 will include $300,000 for canal & flume maintenance such as re-lining and concrete repairs.

Basis for Priority:

These are projects that provide measurable advancement towards attaining the objectives of the District, but over which the District has a moderate level of control as to when they should be performed.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ 93,340**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 1,625,000**
Cash flow through end of year:	**$ 93,340**	**Total Project Estimate:**	**$ 1,718,340**
Project Balance	**$ 363,994**	**Additional Funding Required**	**$ 1,261,006**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 425,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,625,000
						$ -
TOTAL	$ 425,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,625,000

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water FCCs	100%	$61,006
		$0
		$0
Total	**100%**	**$61,006**

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: PLANNED

Project Name: Annual Reservoir and Dam Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:**

Project Description:

The District dams and reservoirs are in need of upgrades to extend their life and comply with safety standards. Many of these improvements are follow-up items/requirements resulting from inspections performed by staff, FERC and DSOD dam safety personnel in order to meet dam safety standards. Work planned for 2024 includes the following:
- Caples Lake Auxiliary Dam - Repair spalling concrete ($30K)
- Echo Lake - Restore rock armoring at the base of the upstream gunite face to eliminate undercutting by wave action ($35K)
- Weber Dam - Rehabilitate upstream dam face ($20K)
- Lake Aloha Dam - Develop plan for adding remote control to outlet gate ($30K) -

Repair spalling to Stream Gage Weirs A-6 in Caples Creek and A-9 in Silver Fork American River ($50K)
For 2025, 2026, 2027, and 2028 funds will be used to conduct minor repairs on the dams as waranted.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 365,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 365,000
Project Balance	$ -	**Additional Funding Required**	$ 365,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning	$ 30,000					$ 30,000
Design						$ -
Construction	$ 135,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 335,000
						$ -
TOTAL	$ 165,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 365,000

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water FCCs	100%	$165,000
		$0
		$0
Total	**100%**	**$165,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Camp 5 Generator Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

The project is to design and implement more reliable power distribution from utility and backup generator. The site currently has multiple voltage feeds, large voltage swings, and suffers from load imbalances. The load imbalance and voltage swings are accelerating equipment degradation and increasing maintenance cost. The current generator is no longer sized adequately for the current load at the facility. This project would require installation of a larger generator.

Basis for Priority:

The project will improve power reliability to the facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 300,000
Project Balance	$ -	Additional Funding Required	$ 300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 50,000				$ 50,000
Construction			$ 250,000			$ 250,000
						$ -
TOTAL	$ -	$ 50,000	$ 250,000	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: **PLANNED**

Project Name: **Ditch SCADA Hardware Replacement**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Leanos** **Board Approval:**

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement sites are: Crawford Ditch, North Fork Ditch, Camp Creek Ditch, and associated repeater radio system at Reservoir B. This system has served the district well and is no longer supported. This CIP will replace the existing system over multiple years.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability of the system. Additionally, new replacement parts are not available due to obsolescence. This system is not longer supported on a modern computer.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 200,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 200,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 200,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design			**$ 50,000**			**$ 50,000**
Construction				**$ 150,000**		**$ 150,000**
TOTAL	**$ -**	**$ -**	**$ 50,000**	**$ 150,000**	**$ -**	**$ 200,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%	$	-
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Flume 4 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

Flume 4 is approximately 200 feet in length and is an elevated flume that spans a steep portion of the forest. This elevated section could not be quickly replaced after the Caldor Fire and thus underwent repairs. The wood substructure was constructed in 1993 and the wood members are currently undersized. In addition to the elevated section, there is just upstream of Flume 4 a section of canal that has a rock cribbed wall that has experienced a failure in 2022. This cribbed wall would be replaced with an MSE wall and have the drainage system upgraded. Funding is to initiate design in 2024. No construction costs are indicated.

Basis for Priority:

Fume 4 will continue to deteriorate potentially cause a flume failures that would result in significant impacts to the public and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 50,000				$ 50,000
Design		$ 200,000	$ 250,000			$ 450,000
Construction						$ -
						$ -
TOTAL	$ -	$ 250,000	$ 250,000	$ -	$ -	$ 500,000

Funding Sources	Percentage	2024	Amount
Water FCC's	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: PLANNED

Project Name: Hydro Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:**

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for the District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 215,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 215,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 215,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Professional Services	**$ 35,000**	**$ 50,000**	**$ 35,000**	**$ -**	**$ 35,000**	**$ 155,000**
Capitalized Labor	**$ 15,000**	**$ 15,000**	**$ 15,000**	**$ -**	**$ 15,000**	**$ 60,000**
						$ -
						$ -
TOTAL	**$ 50,000**	**$ 65,000**	**$ 50,000**	**$ -**	**$ 50,000**	**$ 215,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$50,000
			$0
Total	**100%**		**$50,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Equipment and Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:**

Project Description:

This is a program to replace equipment and facilities used in the hydro system that have failed or reached end of useful life. Funding will be used for hydro facilities rehabilitation, such as building improvements that will extend the life of the asset. In 2024, the Building J and Krakoski building need to be repaired. Improvements to Camp 5 include materials/sand shed, as well as other hydro facility assets.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: PLANNED

Project Name: Lakes Remote Telemetry Units Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement is for monitoring sites at Echo Lake, Aloha Lake, Silver Lake and associated radio communication equipment. This system has served the district well and is no longer supported.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability of the system. Additionally, new replacement parts are not available due to obsolescence. This system cannot be supported on a modern computer.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 325,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 325,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 325,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design	**$ 50,000**					**$ 50,000**
Construction		**$ 200,000**				**$ 200,000**
Capitalized Labor		**$ 75,000**				**$ 75,000**
						$ -
TOTAL	**$ 50,000**	**$ 275,000**	**$ -**	**$ -**	**$ -**	**$ 325,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$50,000
			$0
			$0
Total	**100%**		**$50,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Powerhouse Equipment and Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:**

Project Description:

This is a program to replace equipment used in the powerhouse that have failed or reached end of useful life. Funding will be used for powerhouse equipment rehabilitation, such as replacing the relay protection systems (Beckwith), rebuilding cooling pumps, replacing/rebuilding HPS systems, instrumentation, trip sensor and other aged out and critical components.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: STUDY 26

Project Name: Powerhouse Turbine Runner Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:**

Project Description:

The Unit 1 and Unit 2 Pelton turbine runners (impulse turbines or water wheels) were installed in 1958 with a life expectancy of 30 - 40 years depending on operating and water conditions. It requires approximately 18 months to procure a new turbine runner if one were to fail. A spare turbine runner can be used for either of the two turbine-generator units as the units are identical. The estimated revenue loss of waiting for a new runner to be manufactured is $3 million based on loss of availability of one 10 MW unit for 18 months. The existing turbine runners are constructed of carbon steel and are not as resilient to wear and cracking as modern runners constructed of stainless steel. The District expended approximately $150,000 in welding and restoration of the two turbine runners in 2016. The primary risk of continuing to extend the service life of the aging turbine runners is that they can incur a sudden failure from stresses induced by previous weld repairs, and associated with the accumulation of start-ups and shutdowns of the turbine-generator units. While staff carefully inspects and monitors the condition of the runners for early warning signs, and makes repairs to areas subject to cracking and wear, the risk of sudden failure increases with time. In 2023, the District contracted for a detailed inspection of the turbines with results supporting the need for replacement. The 2024 costs are to explore options for replacing the turbine runner with a modern design which will also consider improvements in efficiency (to produce more power per unit of water over a greater span of its operating range). The 2024 work will also address upgrades to the needle/servo assembly where two previous failures have occurred and to the unit alignment where differences in hydraulic and magnetic center are causing excesive wear to the bearings.

Basis for Priority:

Both generating units have turbine runners that have operated significantly past their predicted service life, and are subject to failure. The revenue loss in waiting for a new runner to be manufactured is approximately $3 million. Staff believes it is prudent to study options for replacing both runners together in consideration of: 1) Lost revenue associated with a risk of failure that increases over time; 2) Manufacturing cost savings of two runners together; and 3) Potential reliability/efficiency improvements. Preliminary indication from turbine suppliers is that efficiency improvements of new runners could yield additional annual generation revenue on the order of $100,000 - $200,000/year. This estimate would be updated with higher confidence when the District seeks proposals.

Project Financial Summary:			
Funded to Date:	**$ 50,000**	**Expenditures through end of year:**	**$ 36,499**
Spent to Date:	**$ 34,999**	**2024 - 2028 Planned Expenditures:**	**$ 100,000**
Cash flow through end of year:	**$ 1,500**	**Total Project Estimate:**	**$ 136,499**
Project Balance	**$ 13,501**	**Additional Funding Required**	**$ 86,499**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning	**$ 50,000**	**$ 50,000**				**$ 100,000**
Design						**$ -**
Construction						**$ -**
						$ -
TOTAL	**$ 50,000**	**$ 50,000**	**$ -**	**$ -**	**$ -**	**$ 100,000**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water Rates	100%	$36,499
		$0
		$0
Total	**100%**	**$36,499**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Spill 3 Crib Wall Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:**

Project Description:

This section of canal has Spillway No. 3 and is located on the south side of the American River above the USFS 30-Mile Tract subdivision. Spillway No. 3 is no longer used due to the presence of erosive soils in the spillway channel. The spillway structure and canal bench at this location is supported by an earth fill bench and degraded timber crib wall, which was identified for replacement during a recent comprehensive inspection of all flumes and spillways in the Project 184 conveyance between Kyburz and Forebay Reservoir. In 2018 District staff placed temporary measures to buttress the canal to hold in place until design and construction can be completed. Priority for this project was developed with the Canal and Flume Assessment studies. Construction costs are not known. Cost will be developed as design progresses.

Basis for Priority:

The canal has temporary measures in place to keep the integrity in place. Failures that would result in significant impacts to environmentally sensitive areas. Additionally, one third of the District's water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 325,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 325,000
Project Balance	$ -	Additional Funding Required	$ 325,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning/Env			$ 25,000			$ 25,000
Design			$ 100,000	$ 200,000		$ 300,000
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ 125,000	$ 200,000	$ -	$ 325,000

Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2024 Canal Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This project will evaluate the Project 184 canal and provide a condition assessment report. This report will be used to categorize the canal system for future CIP projects. Canal assessments are planned to occur every 5 years to give an overall condition of the system and to prioritize projects.

Basis for Priority:

The canal system was last assessed in 2018. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a canal breach resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:		Total Project Estimate:	$ 50,000
Project Balance	$ -	Additional Funding Required	$ 50,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000					$ 50,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$50,000
		$0
		$0
Total	100%	$50,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: STUDY

Project Name: 2025 Canal Release Points Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This project will evaluate the Project 184 canal release points and provide a condition assessment report. This report will be used to categorize the release points system for future CIP projects. Canal release point assessments are planned to occur every 5 years to give an overall condition of the system, track changes, and to prioritize projects.

Basis for Priority:

The canal release points were evaluated in 2021. It takes 14 hours for water to travel from the American River Diversion to Forebay Reservoir, making spillway releases at intervals along the canal a critical component of the Project 184 operations. Evaluating the release points for erosion and overall condition is required by Condition No. 41 of our FERC license.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:		Total Project Estimate:	$ 80,000
Project Balance	$ -	Additional Funding Required	$ 80,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 80,000				$ 80,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ 80,000	$ -	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2027 Flume Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This project will provide structural and geotechnical evaluation on the wooden Flumes and geotechnical evaluation on the concrete flumes. Flume material, year built and length will also be verified and included in the update. This study is set for every five years to evaluate the flumes.

Basis for Priority:

The Project 184 flumes have not been fully evaluated by structural and geotechnical experts since around 2012. Flumes were last inspected in 2022. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a flume failure resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 49,069
Spent to Date:	$ 69	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 49,000	Total Project Estimate:	$ 99,069
Project Balance	$ 931	Additional Funding Required	$ 49,069

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design				$ 50,000		$ 50,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ 50,000	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2024 Siphon Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

Plume Creek and Alder Creek Siphon were last inspected in 2019 and 2018 respectively. Siphon assessments should be completed every five years to determine the condition of the siphon and to note any changes from the last inspection. A list of CIP projects will be developed from the assessment and a report generated. The inspection of the siphons are done with cameras that are mounted on guided remote operated vehicles and done while the siphon is empty.

Basis for Priority:

One third of the District's water supply would be out of service for an extended period in the event of a failure in the siphon resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 60,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 60,000
Project Balance	$ -	Additional Funding Required	$ 60,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 60,000					$ 60,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 60,000	$ -	$ -	$ -	$ -	$ 60,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$60,000
			$0
			$0
Total	100%		$60,000

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: STUDY

Project Name: 2026 Tunnel Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:**

Project Description:

This project will evaluate the following tunnels and provide a condition assessment report:

- Mill to Bull Tunnel
- Hazel Creek
- Pacific
- Esmerelda
- El Dorado
- 14 Mile
- Camp Creek

The tunnels were inspected in 2021 as part of the 5 year assessment. This inspection will be done by EID staff only. Tunnel assessments are being scheduled every 5 years.

Basis for Priority:

The Project 184 tunnels should be inspected by competent persons every 5 years to determine what issues are needing to be addressed. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a tunnel collapse resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 50,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 50,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 50,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Design			**$ 50,000**			**$ 50,000**
Environmental						**$ -**
Construction						**$ -**
						$ -
TOTAL	**$ -**	**$ -**	**$ 50,000**	**$ -**	**$ -**	**$ 50,000**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water Rates	100%	$0
		$0
		$0
Total	**100%**	**$0**

Funding Comments:

Recreation Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: 18023

Project Name: Acorn Day Use Area

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Bertram **Board Approval:**

Project Description:

Funds will be used to design an expansion of Day Use parking capacity near the entrance of Sly Park Recreation Area (SPRA) by creating a new day use parking area that will be known as the Acorn Day Use Area. The area will include the addition of 30 parking stalls, 2 handicap accessible parking stalls, 2 handicap accessible bathroom stalls, a handicap accessible trail to the lake, and scattered picnic tables along the trail. Funds will also be used to hire a consultant to look into the possibility of seeking grant funding to apply towards the development and construction of this project. The District will have a "shovel ready" project which will increase the possibility of seeking grant funding during 2024 to offset the cost of construction in fall of 2025. SPRA has experienced an annual average increase of 8% in the number of day use visitors over the last 5 years, often resulting in the closure of the park on busy summer weekends due to safety concerns and a lack of parking and amenities. Increasing the day use capacity near the entrance of the park will help offset the amount of time the park is closed and allow the capture of some of the lost revenue. The rate of return on this project is estimated to be 15-20 years without grant funding.

Basis for Priority:

Revenue generation and increased customer satisfaction.

Project Financial Summary:			
Funded to Date:	$ 148,978	Expenditures through end of year:	$ 109,163
Spent to Date:	$ 109,163	2024 - 2028 Planned Expenditures:	$ 25,000
Cash flow through end of year:		Total Project Estimate:	$ 134,163
Project Balance	$ 39,815	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Planning	$ 5,000					$ 5,000
Design		$ 20,000				$ 20,000
TOTAL	$ 5,000	$ 20,000	$ -	$ -	$ -	$ 25,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Boat Launching Facility Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Kelsch **Board Approval:**

Project Description:

The two boat launching facilities located within the Sly Park Recreation Area experience heavy use and require repair and improvements The four-lane boat ramp at the main boat launching facility reduces to one lane when the lake drops below 60% capacity in the summer, restricting access to the lake. This project scope includes widening the and extending the boat ramp at the main boat launching facility. Improvements will also include repair to parking and stalls, replacement of restrooms, and addition fish cleaning stations. solar lighting and bear-resistant garbage enclosures. The district has applied for funding from the California State Parks Division of Boating and Waterways to fund the design of improvements to the two facilities, and will apply for construction funding once design is complete.

Basis for Priority:

Project purpose is to repair and maintain boat launching facilities, increase ADA accessibility and maintain use of boat launching facilities when lake levels are low.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 25,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 25,000
Project Balance	$ -	Additional Funding Required	$ 25,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Grant Management	$ 25,000					$ 25,000
Design	$ 300,000					$ 300,000
Construction						$ -
DBW Grant	$ (300,000)					$ (300,000)
TOTAL	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$25,000
			$0
			$0
Total	100%		$25,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Recreation**

Project Number: **PLANNED**

Project Name: **Recreation Facility Replacement Program**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Bertram** **Board Approval:**

Project Description:

This is a program to replace infrastructure at District-owned recreation facilities that have failed or reached end of useful life. Funding will be used for recreation facilities such as road and campground improvements that will extend the life of the asset. Shoreline stabilization projects to protect water quality and existing assets such as road ways, boat ramps, day use areas and campgrounds. Need to make numerous repairs to the roadways within SPRA; all campground access roads need to be replaced and have storm water mitigation features incorporated. Campground spurs require paving or aprons to prevent damage to existing pavement and campsites. Retaining walls at Jenkinson Campground are crumbling and need to be replaced. Within the next five years, the main park roadway and Lakewood Drive will need to be resealed. Access road to Scout Hill youth camp should be chip sealed, at a minimum, to reduce the amount of annual rehabilitation that occurs every spring. Sierra Campground Loop is nearing the end of its useful life and needs to be resurfaced and improved with storm water control devices to reduce sediment laden runoff from entering Jenkinson Lake. Silver Lake West Campground and Sandy Cove Day Use area will need roadways and restrooms replaced due to end of life for those amenities.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 500,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 500,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 500,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Jenkinson Campground	**$ 150,000**					**$ 150,000**
Sierra CG Loop Paving	**$ 25,000**	**$ 100,000**				**$ 125,000**
Hilltop CG Loop Paving			**$ 25,000**	**$ 100,000**		**$ 125,000**
Scout Hill Paving					**$ 100,000**	**$ 100,000**
TOTAL	**$ 175,000**	**$ 100,000**	**$ 25,000**	**$ 100,000**	**$ 100,000**	**$ 500,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$175,000
Total	**100%**		**$175,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Silver Lake West Campground Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Delongchamp **Board Approval:**

Project Description:

The 2021 Caldor fire operations along the Highway 88 resulted in damage to the pavement at the District's Silver Lake West Campground. Repaving will be completed in conjunction with other improvements following the construction of the Silver Lake Dam, to minimize mobilization costs to the remote area.

Basis for Priority:

Replacement of necessary damaged or destroyed assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 175,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 175,000
Project Balance	$ -	Additional Funding Required	$ 175,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design				$ 35,000		$ 35,000
Capitalized Labor					$ 25,000	$ 25,000
Construction					$ 115,000	$ 115,000
TOTAL	$ -	$ -	$ -	$ 35,000	$ 140,000	$ 175,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Recreation**

Project Number: PLANNED

Project Name: Sly Park Recreation Area Facility Improvements

Project Category: Master Planning

Priority: 3 **PM:** Bertram **Board Approval:**

Project Description:

The scope of this program will be to analyze and implement park improvements as described in the Sly Park Master Plan. The addition of these new facilities will generate more income, enhance the level of environment protection, improve water quality, provide facilities that enhance the visitor's experience, and increase the level of safety for park visitors and EID employees. These projects would include but would not be limited to;

1) Expanding the number of day use facilities, improving and enlarging existing day use facilities and the associated parking areas, and developing new day use facilities on the south side of the lake. This expansion/improvement would help reduce the need to close the park during periods of high use, resulting in increased revenue. These improvements would also reduce camper/day user conflict and provide a way to lessen the impact to the Mormon Immigrant Trail accessed day use areas. Day Use access to SPRA was restricted for one (1) to three (3) hours every Sat & Sun, from 5/27/17-9/3/2017 due to reaching facility capacity thresholds.
2) Improved campsite parking spur delineation and campground roadways to reduce soil compaction and improve storm water runoff control and capture to reduce erosion and improve water quality. Currently, many of the day use areas and campgrounds in SPRA have minimal or zero storm water management systems in place. Storm water could be directed and contaminants captured before entering Jenkinson Lake by clearly delineating parking areas and improving roadways with culverts and oil separators. Clearly defined parking areas will also reduce the amount of soil compaction which and lead to increased revegetation throughout SPRA, thus improving water quality.
3) Repositioning the Sly Park Recreation Area (SPRA) entrance gatehouse to increase the distance between the gate and CR E-16, thus reducing traffic backups on E-16 and the potential for traffic accidents.

Basis for Priority:

Continued increased risk to the environment and water quality, health and safety risk for SPRA visitors and EID staff, revenue generation and increased customer satisfaction.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 200,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 200,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 200,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Bumpy Meadows / Waterfall Trailhead Parking and DUA Expansion	**$ 25,000**	**$ 125,000**				**$ 150,000**
Day Use Area Upgrades			**$ 25,000**			**$ 25,000**
Main DUA Expansion				**$ 25,000**		**$ 25,000**
TOTAL	**$ 25,000**	**$ 125,000**	**$ 25,000**	**$ 25,000**	**$ -**	**$ 200,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$25,000
Total	**100%**		**$25,000**

Funding Comments:

General District Projects

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: 18044

Project Name: WAN Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Stevenson **Board Approval:**

Project Description:

Project implements new network router equipment and establishes new fiber-optic service delivery points to provide needed upgrades to the District's existing Wide Area Network (WAN) infrastructure. The project deploys a next generation solution to meet the District's site to site connectivity requirements, improves service reliability and performance while creating a more scalable and flexible architecture to meet future business needs.

The remaining location to complete for this project scope is Camino Heights in mid 2024.

Basis for Priority:

Major elements of the District's Wide Area Network (WAN) essential to District operations, services, and security, have reached the end of their useful life and require replacement.

Project Financial Summary:			
Funded to Date:	$ 479,697	**Expenditures through end of year:**	$ 448,153
Spent to Date:	$ 448,153	**2024 - 2028 Planned Expenditures:**	$ 15,000
Cash flow through end of year:		**Total Project Estimate:**	$ 463,153
Project Balance	$ 31,544	**Additional Funding Required**	$ -

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 15,000					$ 15,000
						$ -
TOTAL	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 18055

Project Name: Hansen 7 Software Replacement

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Sundaram **Board Approval:**

Project Description:

This project replaces the existing Hansen 7 enterprise software application with a modern enterprise solution providing superior features and functionality, including mobile device access and easier integration to other District systems. The project is anticipated to transform and streamline many current business processes and operations that now require time-consuming workarounds developed to overcome limitations in the current software.

Basis for Priority:

The Hansen 7 enterprise software application has reached the end of its useful and can no longer be adapted to meet business needs. The software is used daily by over 150 employees for customer service, utility billing, asset maintenance, and many other purposes.

Project Financial Summary:			
Funded to Date:	$ 11,008,557	Expenditures through end of year:	$ 8,650,940
Spent to Date:	$ 8,140,940	2024 - 2028 Planned Expenditures:	$ 2,374,000
Cash flow through end of year:	$ 510,000	Total Project Estimate:	$ 11,024,940
Project Balance	$ 2,357,617	Additional Funding Required	$ 16,383

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Consulting Services	$ 1,800,000	$ -				$ 1,800,000
Software & Equipment	$ 24,000					$ 24,000
Capitalized Labor	$ 550,000	$ -				$ 550,000
						$ -
TOTAL	$ 2,374,000	$ -	$ -	$ -	$ -	$ 2,374,000

Funding Sources	Percentage	2024 Amount
Water Rates	60%	$9,830
Wastewater Rates	40%	$6,553
Total	100%	$16,383

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 19027

Project Name: Windows Server 2016 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Stevenson **Board Approval:**

Project Description:

This project replaces about 60 individual Windows 2008 Server applications which have been in service for up to 10 years with the District's current Windows Server solution. Expecting to complete this project by early 2024.

Basis for Priority:

The systems have reached their functional or technical limits and can no longer be adapted to meet essential needs, including regulatory, operational, technology, or security requirements. Continued use of obsolete or failing IT infrastructure causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse.

Project Financial Summary:			
Funded to Date:	$ 180,000	Expenditures through end of year:	$ 132,565
Spent to Date:	$ 112,565	2024 - 2028 Planned Expenditures:	$ 35,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 167,565
Project Balance	$ 47,435	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 35,000					$ 35,000
						$ -
TOTAL	$ 35,000	$ -	$ -	$ -	$ -	$ 35,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: 19028

Project Name: Datacenter SCADA Segmentation

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Proctor **Board Approval:**

Project Description:

The project replaces end-of-life network equipment and makes improvements to the secure gateway into the Supervisory and Data Acquision (SCADA) network. The SCADA network provides mission critical industrial process control of automated treatment and operations functions. The solution implements segmentation and controls between the District's business and SCADA networks that is designed to meet current security best practices while also improving performance and reliability.

Basis for Priority:

Equipment that comprises significant portions of the secure SCADA network gateway has reached the end of its useful life and requires replacement. If the aging equipment or operating system software was to fail or become unavailable for any reason, the best case scenario is a minor financial impact due to a loss of productivity. However, the potential for significant disruption, or worse, is very real.

Project Financial Summary:			
Funded to Date:	**$ 324,569**	**Expenditures through end of year:**	**$ 268,794**
Spent to Date:	**$ 248,794**	**2024 - 2028 Planned Expenditures:**	**$ 33,000**
Cash flow through end of year:	**$ 20,000**	**Total Project Estimate:**	**$ 301,794**
Project Balance	**$ 55,775**	**Additional Funding Required**	**$ -**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 33,000					$ 33,000
						$ -
TOTAL	$ 33,000	$ -	$ -	$ -	$ -	$ 33,000

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: 22021

Project Name: Camino Heights SCADA Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Proctor **Board Approval:**

Project Description:

This project aims to replace existing the existing rack mounted servers at the SCADA site with a full hardware upgrade to match other SCADA sites. This will include 3 servers, VMware Licensing, 1 storage array, 2 switches, 2 firewalls and 1 stand-alone server rack with climate control.

Basis for Priority:

The current support for the Dell servers expired in July 2021 and is currently under support with Service Express. This site only has two servers and is currently monitored by Deer Creek Waste Water. The goal is to upgrade this site to be the same as the other 10 remote SCADA sites.

Project Financial Summary:			
Funded to Date:	$ 40,000	Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ 40,000	Additional Funding Required	$ 60,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 100,000					$ 100,000
						$ -
TOTAL	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$60,000
			$0
			$0
Total	100%		$60,000

Funding Comments: Original funding ($40k) was for design. Estimating the total cost of the project will be $140,000. Need $100,000 in additional funding.

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 22022

Project Name: Network Perimeter Security Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Stevenson **Board Approval:**

Project Description:

IT staff have identified needed upgrades to the District's existing firewalls, two factor authentication and cellular modems infrastructure. The focus of this project is to design and deploy a next generation solution to meet the District's cyber security and backup data paths for site-to-site connectivity requirements. With an emphasis on incorporating a solution that reduces cost, speeds deployment, integrates security and creates a more agile architecture to support todays and future business needs.

Basis for Priority:

Major elements of the District's Network Perimeter essential to District operations, services, and security, have reached the end of their useful life and require replacement.

Project Financial Summary:			
Funded to Date:	$ 264,630	Expenditures through end of year:	$ 231,258
Spent to Date:	$ 161,258	2024 - 2028 Planned Expenditures:	$ 32,000
Cash flow through end of year:	$ 70,000	Total Project Estimate:	$ 263,258
Project Balance	$ 33,372	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction			$ 32,000			$ 32,000
						$ -
TOTAL	$ -	$ -	$ 32,000	$ -	$ -	$ 32,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: 22044

Project Name: Remote Site Wireless Deployment

Project Category:

Priority: 2 **PM:** Stevenson **Board Approval:**

Project Description:

The "IT Network Infrastructure Replacement" is an ongoing project that maintains the reliability and performance of the District's networks, data processing, storage and network security systems required to conduct daily District business by implementing new technologies, replacing end-of-life or over-utilized equipment and systems.

IT staff have identified a need to deploy wireless to the District's remote sites to support the increasing number of wireless devices utilized by District staff. The focus of this project is to design and deploy a next generation wireless solution with an emphasis on incorporating a solution that reduces cost, speeds deployment, integrates security and creates a more agile architecture to support todays and future business needs.

The funding for this project is contained in the "IT Network Infrastructure Replacement" CIP that is included in the currently adopted 2022-26 Capital Improvement Plan.

Basis for Priority:

Project Financial Summary:			
Funded to Date:	**$ 68,000**	**Expenditures through end of year:**	**$ 45,099**
Spent to Date:	**$ 45,099**	**2024 - 2028 Planned Expenditures:**	**$ 22,901**
Cash flow through end of year:		**Total Project Estimate:**	**$ 68,000**
Project Balance	**$ 22,901**	**Additional Funding Required**	**$ 0**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 22,901					$ 22,901
						$ -
TOTAL	$ 22,901	$ -	$ -	$ -	$ -	$ 22,901

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: PLANNED

Project Name: Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:**

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 89,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 89,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 89,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Professional Services	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ 35,000**	**$ 65,000**
Capitalized Labor	**$ 12,000**	**$ -**	**$ -**	**$ -**	**$ 12,000**	**$ 24,000**
						$ -
						$ -
TOTAL	**$ 42,000**	**$ -**	**$ -**	**$ -**	**$ 47,000**	**$ 89,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$25,200
Wastewater Rates	40%		$16,800
Total	**100%**		**$42,000**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: **PLANNED**

Project Name: **Headquarter Facility Improvements**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Royal** **Board Approval:**

Project Description:

The following building upgrade projects are planned for 2024 - 2028
2024: Convert remaining indoor lighting to LED, upgrade fire alarm system pannel to new upgraded pannel. install security gates behind HQ building, access walkway.
2025: Walkway accessibility from upper yard to H/Q building improvement. Backup power supply for upper fleet yard to support fleet operations and warehouse operations using old existing generator from HQ.
2026: Covered parking improvement for upper parking lot. Parking and road improvement for construction and fleet yard. 2027: none
2028: none

Roof repair project No.23027 = $322,641.00 funded for 2023 cip project start date is September 25 2023 finish date is oct 15,2023
HVAC control project No. 23030 = $131,372.00 funded for the 2023 start project in november 2023.

Project Financial Summary:			
Funded to Date:	**$ -**	**Expenditures through end of year:**	**$ -**
Spent to Date:	**$ -**	**2024 - 2028 Planned Expenditures:**	**$ 200,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 200,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 200,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						**$ -**
Design						**$ -**
Construction	**$ 200,000**			**$ -**	**$ -**	**$ 200,000**
TOTAL	**$ 200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 200,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$120,000
Wastewater Rates	40%		$80,000
Total	**100%**		**$200,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Business Systems Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Sundaram **Board Approval:**

Project Description:

Ongoing program to ensure the reliability, security, and performance of technologies and software used by staff daily to perform business processes in support of District operations. Technologies are typically a mix of cloud-based services and on-premise equipment or database software, and include:

- Administration Technologies: document management, accounting, purchasing, contracting, or support desk systems
- Engineering Technologies: asset management, drafting, modeling, analyzing, or construction management systems
- Operations Technologies: work management, specialty inspections, energy management, or laboratory information management systems

Business system technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Anticipated initiatives include:
2023 - Upgrade to next generation modeling software, develop contract management and IT change management solutions in ITSM software.
2024 - Develop plant operator rounds solution in LIMS software.
2025 - Upgrade to next generation GIS software.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Business system technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 455,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 455,000
Project Balance	$ -	Additional Funding Required	$ 455,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Admin & Finance Technology	$ 50,000	$ 25,000	$ 250,000			$ 325,000
Operations Technology		$ 30,000				$ 30,000
Engineering Technology	$ 25,000		$ 25,000	$ 50,000		$ 100,000
TOTAL	$ 75,000	$ 55,000	$ 275,000	$ 50,000	$ -	$ 455,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$45,000
Wastewater Rates	40%	$30,000
Total	100%	$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Communication Systems Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:**

Project Description:

Ongoing program to ensure the reliability, security, and performance of technologies and software used by staff daily to communicate, collaborate, and coordinate with other staff, customers, vendors, regulators, and others in support of District operations. Technologies are typically a mix of cloud-based services and on-premise equipment, and include:

- Voice & Video Calling: telephones, voice or video gateway equipment, call processing or routing software
- Meeting Technology: audio-visual equipment and software to conduct and manage physical or virtual meetings
- Email & Messaging: software applications to compose, manage, search and securely send or receive message and file transmissions
- Sharing & Collaboration: software platforms for individuals, teams or groups to create and publish content to an intranet or the Internet

Communications and collaboration technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Communications and collaboration technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 525,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 525,000
Project Balance	$ -	Additional Funding Required	$ 525,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Voice & Video Calling Upgrades	$ 75,000	$ 50,000			$ 100,000	$ 225,000
Meeting Technology Upgrades	$ 25,000		$ 50,000	$ 100,000		$ 175,000
Cloud Email & Intranet Upgrades		$ 125,000				$ 125,000
TOTAL	$ 100,000	$ 175,000	$ 50,000	$ 100,000	$ 100,000	$ 525,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	60%		$60,000
Wastewater Rates	40%		$40,000
Total	100%		$100,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: PLANNED

Project Name: IT End-User Technology Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:**

Project Description:

Ongoing program to ensure the reliability, security, and performance of workstations, productivity software and related technology used by staff daily to operate the District. End-user technologies include:
- Virtual Machines (VMs): cloud-based workstations served by Virtual Desktop Infrastructure (VDI), client terminals and imaging software
- Personal Computers (PCs): traditional physical desktop and laptop computers, operating software, and computer management software
- Personal Productivity Software Suites: common software applications to create, view, edit and manage files or documents
- Endpoint Security Software: software designed to secure workstations from a variety of cyber threats

End-user technologies evolve quickly and manufacturers will typically cease product support and security fixes when the product is beyond five years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Planned initiatives include:
2023-24: Windows 10 replacement on all physical PCs and VMs
2024: Virtual desktop infrastructure and VM image replacement
2024-25: Replace end-of-life VM terminals and physical PCs unable to support Win 10 replacement

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Personal productivity technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched personal computer systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 675,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 675,000
Project Balance	$ -	**Additional Funding Required**	$ 675,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
VM Upgrades	$ 100,000	$ 100,000				$ 200,000
PC Upgrades	$ 50,000	$ 125,000		$ 100,000		$ 275,000
Personal Productivity & Security Software Upgrades		$ 100,000	$ 100,000			$ 200,000
TOTAL	$ 150,000	$ 325,000	$ 100,000	$ 100,000	$ -	$ 675,000

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$90,000
Wastewater Rates	40%		$60,000
Total	**100%**		**$150,000**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: PLANNED

Project Name: IT Network Infrastructure Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:**

Project Description:

Ongoing program to ensure the reliability, security, and performance of mission critical networking and data processing technologies include:
- Local & Wide Area Networks (LANs/WANs): network equipment providing connectivity to facilities, servers, workstations, and other services
- Data Processing & Storage: cloud or on premise platforms providing shared computing, data storage and backup
- Access & Identity Management: enterprise software to manage, monitor and control access to computers, software, data, and services
- Network Security Systems: equipment and software designed to monitor, detect, and respond to a variety of cyber threats

Network infrastructure technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Network infrastructure technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched computer systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 987,500
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 987,500
Project Balance	$ -	**Additional Funding Required**	$ 987,500

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Network Upgrades	$ 150,000	$ 100,000	$ 50,000	$ 50,000	$ 50,000	$ 400,000
Server, Data Processing & Storage Upgrades	$ 200,000	$ 87,500		$ 50,000		$ 337,500
Identity, Access & Security Upgrades	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
TOTAL	$ 400,000	$ 237,500	$ 100,000	$ 150,000	$ 100,000	$ 987,500

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$240,000
Wastewater Rates	40%		$160,000
Total	**100%**		**$400,000**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: **Planned**

Project Name: **New Security Systems**

Project Category: **Regulatory Requirements**

Priority: **1** **PM:** **Newsom** **Board Approval:**

Project Description:

There are six treated water facilities that need a security system. In addition, all 20 current District security systems need a new security system. Currently, about 30% of sensors that are used for alarms are not working. Operations management reports that personnel are being called out after-hours and that supervisors are receiving a lot of false alarms. The District's alarm and access control systems need to be replaced right now. This process is expected to take two years. After each site is converted, a new monitoring company will be used. Six new security systems will be installed between 2026 and 2030, as well as additional cameras and the replacement of existing ones, to conform with industry standards or the recommendations of the RFI security assessment. The new cameras will have better analytics to reduce false alarms, and supervisors will have the ability to review footage quickly on their mobile devices if needed. Materials, labor costs, license fees, and monitoring are all included in the price of this project.

Basis for Priority:

Meet the requirements of the Safe Drinking Water Act and America's Water Infrastructure Act through compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Department of Homeland Security, Federal Emergency Management Agency, California Government Code requirements for routine video storage, and the Department of Energy requirements for Emergency Action Plans and Critical Infrastructure security

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 2,171,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 2,171,000
Project Balance	$ -	**Additional Funding Required**	$ 2,171,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 500,000	$ 515,000	$ 371,000	$ 385,000	$ 400,000	$ 2,171,000
						$ -
TOTAL	$ 500,000	$ 515,000	$ 371,000	$ 385,000	$ 400,000	$ 2,171,000

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	70%		$350,000
Wastewater Rates	30%		$150,000
			$0
Total	**100%**		**$500,000**

Funding Comments: Following a review of the RFI security evaluation, several of the components of the District's current security systems have either reached end of life or are no longer functional. The District has attempted to replace components that have broken here and there, but the security systems continue to malfunction. The District spends around $25,000 per year on a maintenance contract with a security firm to replace broken equipment as needed. After the alarm systems have been changed, that contract will no longer be required. Furthermore, no contractor in the Sacramento area currently understands how to work on our current access control system Entre. In the last 5-10 years, security technology has advanced dramatically. For similar reasons, both South Tahoe PUD and El Dorado County recently installed new security systems.

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: PLANNED

Project Name: SCADA Master Plan Implementation

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:**

Project Description:

This CIP outlines improvements and sustainability plan as recommended by our hired consultant. Please refer to the SCADA Master Plan.

Basis for Priority:

Meet the requirements of the Department of Homeland Security to maintain Critical Infrastructure security and software up to date and supported.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
EDHWW SCADA upgrade		$ 200,000				$ 200,000
Camp 5 SCADA upgrade			$ 100,000			$ 100,000
SCADA Enterprise System Upgrade				$ 75,000		$ 75,000
TOTAL	$ -	$ 200,000	$ 100,000	$ 75,000	$ -	$ 375,000

Estimated Funding	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: Security Equipment Reliability Program

Project Category: Regulatory Requirements

Priority: 2 **PM:** Newsom **Board Approval:** 11/14/22

Project Description:

Integrated security systems have been protecting District critical infrastructure and key resources since 2006, providing alarm verification through real-time CCTV system viewing of alarm events. As technology evolves and our systems reach end of life cycle we acquire the most effective solutions in hardware and software to maintain integrated security systems that provide timely detection and law enforcement response elements to mitigate theft, vandalism, trespassing, other malevolent incidents impacting critical infrastructure. The integrated system also provides an important emergency response capability required for compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Emergency Operations and Department Emergency Actions Plans as required by the Federal Safe Drinking Water Act, Title IV - Drinking Water Security and Safety, and America's Water Infrastructure Act of 2018.

Basis for Priority:

Meet the requirements of the Safe Drinking Water Act and America's Water Infrastructure Act through compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Department of Homeland Security, Federal Emergency Management Agency, and the Department of Energy requirements for Emergency Action Plans and Critical Infrastructure security.

Project Financial Summary:			
Funded to Date:	$ 680,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 210,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 280,000
Project Balance	$ 680,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Consulting Services	$ 10,000					$ 10,000
Replacement	$ 100,000	$ 100,000				$ 200,000
						$ -
TOTAL	$ 110,000	$ 100,000	$ -	$ -		$ 210,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: **Planned**

Project Name: **Vehicle Replacement Program**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Royal** **Board Approval:**

Project Description:

The following vehicle replacements are planned for 2024 - 2028.
2024: (3) 1/2 ton pickups, (1) compact 4x4 pickup truck, (10) 1 ton utility truck 4x4, (3) 1 ton 4x4 pickup truck,
(1) 1-1/2 ton utility 4x4 truck with crane, (1) 1-1/2 ton cab and chassis 4x4 truck (2) 1 1/2 ton mechanic service truck, (4) 1 1/2 ton crew cab utility 4x4 crew truck with power unit (1) 52,000lb septic pumper truck, (1) 4 thousand gallon water truck. **Note**: (6) dump trucks and (1) 4 thousand gallon water truck were ordered in 2022 but will not show up until 2024.
2025: (5) 1/2 ton pickups, (4) suv's, (1) 3/4 ton pickup 4x4, (1) 21-24 ft patrol boat, (2) 410 backhoe, (1) fx40 vacuum excavation trailer.
2026: (11) 1/2 ton pickup's, (1) 4 door sedan's, (3) suv's, (1) 3/4 ton utility 4x2 truck, (1) 1 ton 4x4 pickup (1) 1 ton flatbed 4x4 truck's, (1) jeep 4x4, (1) 410 backhoe, (1) truck vactor hydro cleaning 10-12 yard
2027: (3) 1/2 ton pickup's, (1) 1 ton utility 4x2 truck, (1) 1-1/2 ton flatbed dump 4x4, (1) sewer service foam truck, (1) truck dump 10-11 cubic yard with plow (1) 410 backhoe. (1) sewer camera inspection truck
2028: (9) 1/2 ton pickups, (2) compact 4x4 pickup trucks, (2) 1 ton utility truck 4x2. (2) TKT40LP tilt equipment trailers.

Basis for Priority:

Enhances District assets through life-cycle replacement of existing vehicles.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:	**$ -**	**2024 - 2028 Planned Expenditures:**	
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ -**
Project Balance	**$ -**	**Additional Funding Required**	**$ -**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Vehicles/Equipment	**$ 3,050,500**	**$ 945,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 500,000**	**$ 6,495,500**
						$ -
TOTAL	**$ 3,050,500**	**$ 945,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 500,000**	**$ 6,495,500**

Estimated Funding Sources	**Percentage**	**2024 Amount**
Water Rates	60%	$1,830,300
Wastewater Rates	40%	$1,220,200
		$0
Total	**100%**	**$3,050,500**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: Planned

Project Name: Windows 2012 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:**

Project Description:

This project replaces about 60 individual Windows 2012 Server applications which have been in service for up to 10 years with the District's current Windows Server solution.

Basis for Priority:

The systems have reached their functional or technical limits and can no longer be adapted to meet essential needs, including regulatory, operational, technology, or security requirements. Continued use of obsolete or failing IT infrastructure causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ -
Cash flow through end of year:		Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design		$ 13,500				$ 13,500
Implementation			$ 64,800			$ 64,800
						$ -
TOTAL	$ -	$ 13,500	$ 64,800	$ -	$ -	$ 78,300

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

El Dorado Irrigation District

2024 – 2028 DRAFT

CAPITAL IMPROVEMENT PLAN WORKSHOP

October 10, 2023

Summary

- Annual budget development – Draft CIP developed and presented in a workshop September/October each year
- Adopted by Board by November prior to operating budget

Completed / Substantially Complete Projects

- Wastewater collections facility relocation
- Flume 45 abutment section replacement
- Reservoir A WTP Programmable Logic Controller replacement
- El Dorado Hills WTP Waste Activated Sludge Dissolved Air Flotation Thickener (WAS DAFT) rehabilitation
- DCWWTP Blower replacement
- Wastewater collection system pipeline rehabilitation
- Battery storage at water and wastewater facilities
- Hydro crew room upgrade

Wastewater Collections Facility Relocation

Flume 45 Abutment Section Replacement

Wastewater Collection System Pipeline Rehabilitation

Projects under construction

- Motherlode force main replacement
- Forebay Road and Drop Off Road waterline replacement
- Bass Lake tanks recoating and structural replacement
- Silver Lake East campground water system
- EDHWWTP Filters 5 and 6 rehabilitation
- EDHWWTP Secondary Effluent pump station modifications
- Echo Conduit emergency replacement of damaged sections
- Diversion facility upgrades
- EDHWTP Clarifier rehabilitation
- Headquarters Roof replacement
- Sly Park day use area stabilization

Motherlode Force Main Replacement

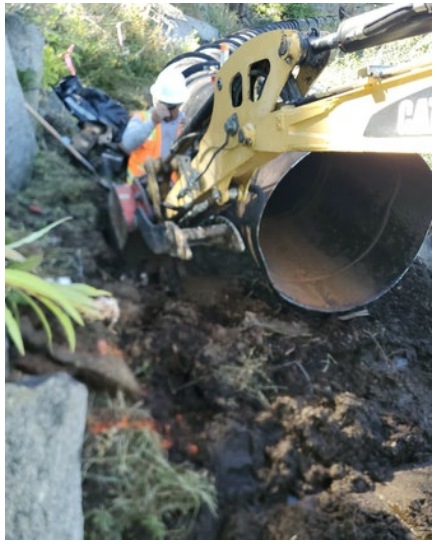
Forebay Road and Drop Off Road Waterline Replacement

Bass Lake Tanks
Recoating & Structural Replacement

EDHWWTP Filters 5 & 6 Rehabilitation

El Dorado Hills Wastewater Treatment Plant Secondary Effluent Pump Station

Echo Conduit Emergency Replacement of Damaged Sections



Other Ongoing Projects

- Water service line replacement program
- Emergency backup generator upgrades
- EDM2 condition assessment
- Reservoir 1 and Pollock Pines reservoir replacement design
- Water Right Permit 21112 change petition
- Water Master Plan update
- Sly Park Intertie replacement design
- Crestview pump station upgrade design
- Flume 45 Section 3 replacement design
- Flume 48 replacement design
- Silver Lake Dam replacement design
- Penstock improvements design
- Vehicle replacement program
- Hansen Upgrade

EDM2 Condition Assessment

Flume 45 Section 3 Replacement

Flume 48 Replacement

Draft 2024-2028 CIP

- Challenges
  - WTP Condition Assessments - $370M need
    - Included $93M in 5-year plan for EDHWTP and Reservoir 1 WTP
  - Silver Lake Dam reconstruction
    - 30% design nearly complete
    - Included $50M
  - Storage tank recoating moved from operating expense to CIP
    - $12.5M for water and recycled water tanks
  - $155M in new costs not included in past CIP
  - New financial plan developed concurrently with COSA
    - $233M for water capital expenditures
    - $39M for wastewater expenditures
  - Deferrals and cuts needed to other water projects

El Dorado Irrigation District

2024-2028 CAPITAL IMPROVEMENT PLAN

Draft October 10, 2023

	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$2,191,195	$727,671	$999,191	$945,682	$332,292	$5,196,031
Water	$26,871,587	$27,794,723	$32,166,360	$49,361,209	$48,829,612	$185,023,491
Wastewater	$11,050,000	$7,775,000	$11,500,000	$6,525,000	$4,925,000	$41,775,000
Recycled Water	$984,084	$1,563,510	$1,714,340	$1,060,140	$325,000	$5,647,074
Hydroelectric	$7,090,000	$7,055,000	$4,715,000	$24,015,000	$25,140,000	$68,015,000
Recreation	$230,000	$245,000	$50,000	$160,000	$240,000	$925,000
General District	$7,207,401	$2,566,000	$2,092,800	$1,860,000	$1,147,000	$14,873,201
TOTAL	**$55,624,267**	**$47,726,904**	**$53,237,691**	**$83,927,031**	**$80,938,904**	**$321,454,797**

Project deferrals and reductions

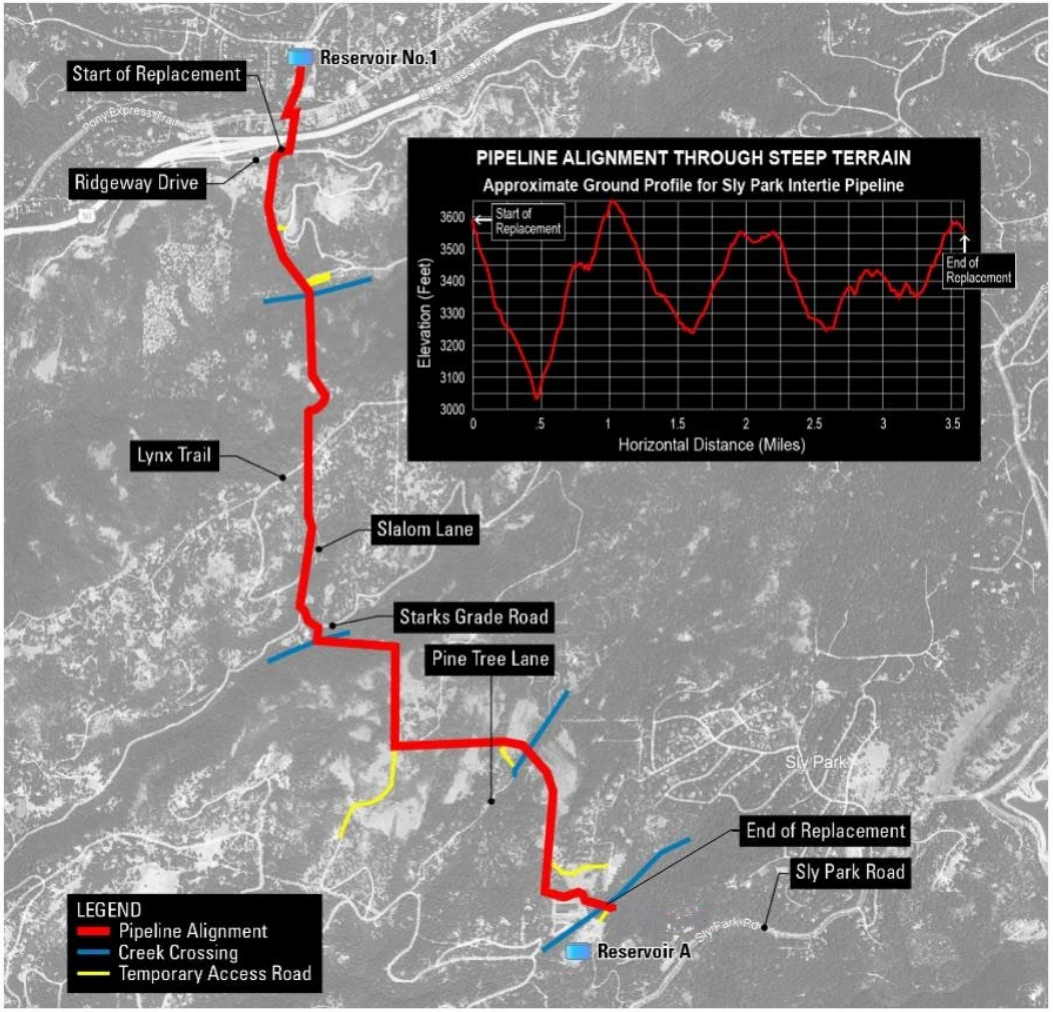
- Initial 5-year CIP started at $388M
- Staff made deferrals and cuts of approximately $90M
- Revised estimate upward for Silver Lake dam
- Added tank recoating projects to CIP

Project deferral examples

Project	Potential Effect	Basis for deferral
Service Line replacement	Additional unplanned service line leaks and repairs	Efficiency improvements to reach 800 service line goal annually
Water construction storage facility	Materials exposed to UV degradation, shorten service life	Identify alternative means to prevent degradation
Sly Park outlet control improvements	Failure locks outlet flow in existing position, no remote operation of valves	Continue to control manually, additional monitoring
Flume replacement	Loss of water supply and hydro revenue	Sly Park Intertie improves reliability to withstand outage
Water line replacement	Additional leaks and unplanned outages	WTP upgrade criticality
Pressure reducing station upgrades	Station failure causing over pressurization	WTP upgrade criticality

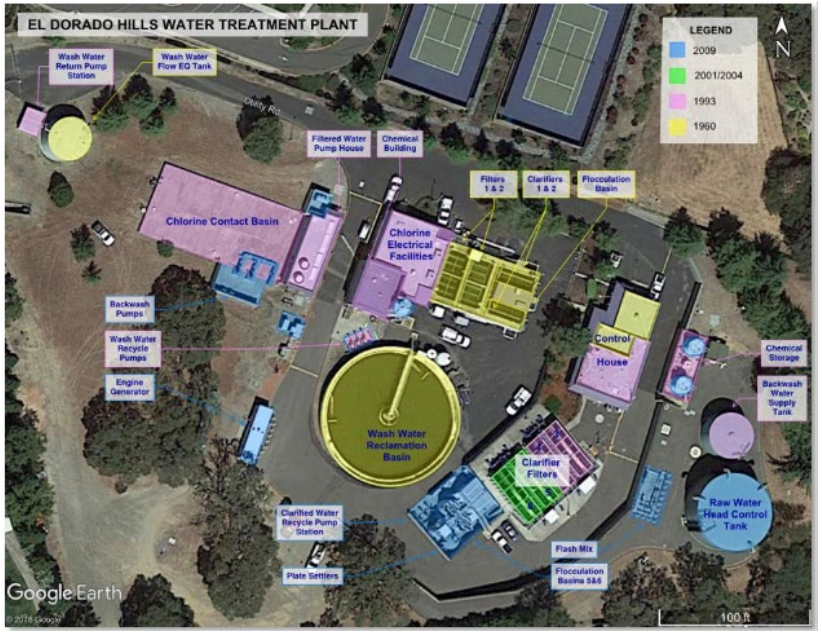
Silver Lake Dam Replacement
2024-2028: $50M

Sly Park Intertie Replacement
2024-2025: $30M
($10M grant)



Water Treatment Plant Improvements 2024-2028: $93M

- EDHWTP and Reservoir 1 WTP
- Phased replacement and upgrades



EDHWTP

Reservoir 1 WTP

Water Storage Recoating and Replacement 2024-2028: $30M

Service Line Replacement 2024-2028: $15M

- Replace >25,000 polyethylene services
- $3M annually

Waterline Replacement Projects 2024-2028: $9M

- Drop off Road
- $2-3M annually 2026 and beyond

Wastewater lift station upgrades 2024-2028: $9M

- Indian Creek lift station
- St. Andrews lift station
- Rancho Ponderosa lift station
- Communication upgrades and other improvements

Wastewater pipeline replacement 2024-2028: $20M

- Mother Lode force main
- Strolling Hills sewer line
- Collection system gravity pipelines
- Ponderosa Heights force main

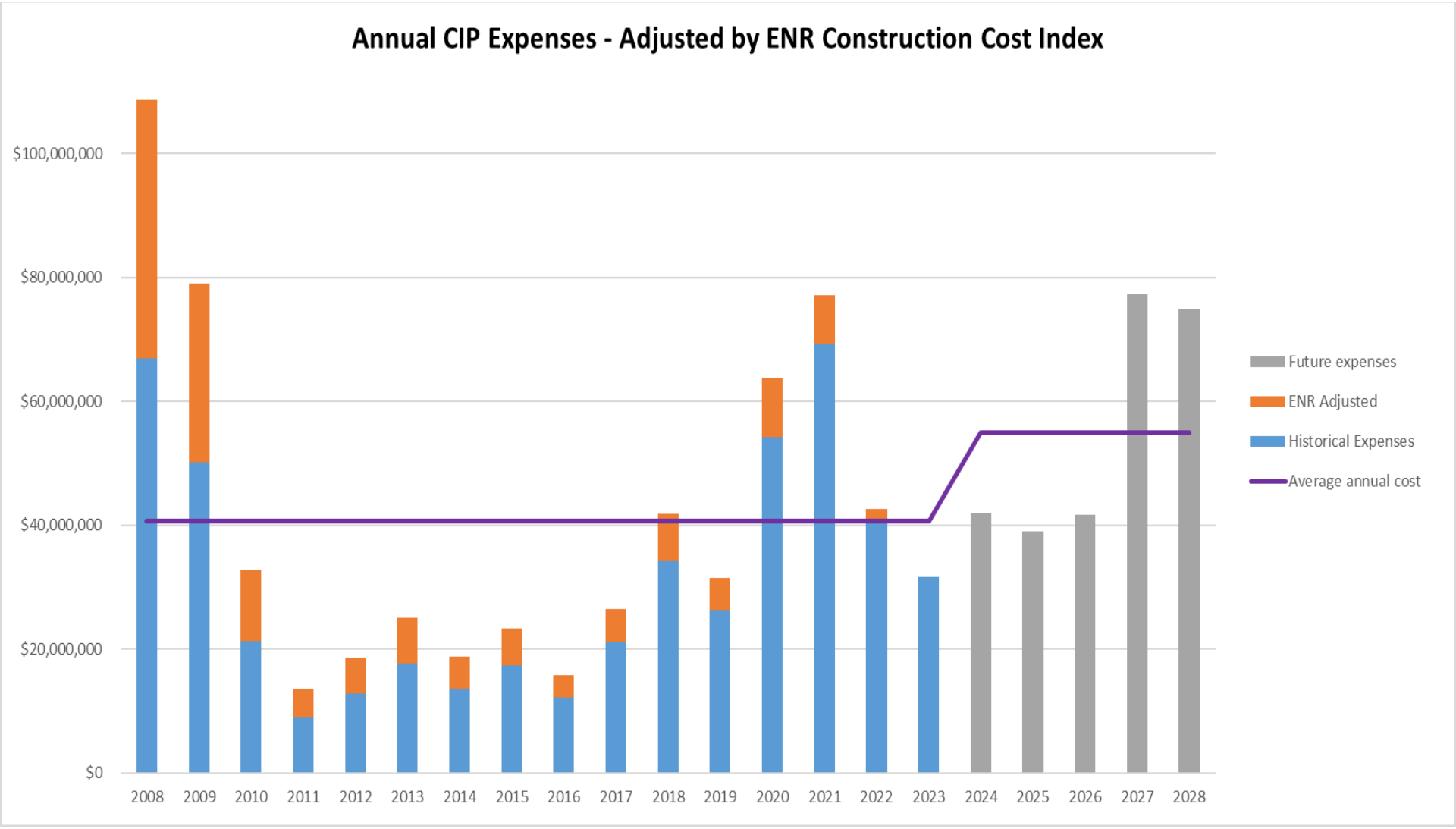
General District projects 2024-2028

- Hansen 7 software replacement $2.4M
- Vehicle replacement $6.5M
- IT Infrastructure/systems replacement $2M
- SCADA/Safety/Security improvements $3M

CIP Comparison

(in millions)	2022	2023	2024	2025	2026	2027	2028	Totals
2022-2026 CIP	55.5	43.4	46.5	42.5	50.4			**238.3**
2023-2027 CIP		48.6	53.3	47.4	26.4	32.6		**208.3**
2024-2028 CIP (Draft)			55.6	47.7	53.2	83.9	80.9	**321.4**

- Actual expenditures typically 70-90% of planned
- $275 million over the 5-year period
  - 100% bond funded projects, 70% other projects
- Matches COSA financial plan


Annual CIP Expenses - Adjusted by ENR Construction Cost Index
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
Future expenses
ENR Adjusted
Historical Expenses
Average annual cost

Financing large projects

- Projected 2024 bond issuance ($60M)
  - Sly Park Intertie
  - EDHWTP and Reservoir 1 WTP improvements
  - Water storage – Reservoir 1 / Reservoir 6

- Projected 2027 bond issuance ($120M)
  - EDHWTP and Reservoir 1 WTP improvements
  - Silver Lake Dam replacement

Financing the 2024-2028 CIP

- $275M actual expenditures over 5 years
  - Large projects funded by bond proceeds
  - Annual revenue for pay-as-you-go projects
  - Facility Capacity Charge (FCC) revenue/FCC reserves
- Grants
  - 2014-2019: 7 grants received - $12M
    - Folsom intake, waterline replacement, Outingdale intake, fuel reduction
  - Since 2020, 5 grants awarded - $15.5M
    - Sly Park Intertie, backup generators, Outingdale dam, fuel reduction
  - Pending grant applications – potential $41M
    - Silver Lake dam, flume replacement, floating cover reservoirs, recreation, fuel reduction

Next steps

- Further revisions based on Board/public input
- CIP incorporated into Cost of Service Analysis and financial planning
- October 23 Board meeting
  - CIP adoption
  - Cost of Service Analysis approval

Questions

EL DORADO IRRIGATION DISTRICT

SUBJECT: Cost of Service Analysis Workshop.

PREVIOUS BOARD ACTION

April 27, 2020 – Board adopted the results of the Cost of Service Rate Study Update and Resolution No. 2020-007, adopting the increases and changes to rates reflected in the 2020 Proposition 218 Notice.

November 14, 2022 – Board adopted the 2023-2027 Capital Improvement Plan (CIP), subject to available funding.

December 12, 2022 – Board adopted the 2023-2024 Operating Budget and 2023–2027 Financial Plan, subject to Board approved Cost of Service Study in 2023.

January 23, 2023 – Board received an overview of the substantive requirements and process of the Cost of Service Analysis.

February 27, 2023 – Board awarded a contract to NBS Government Finance Group (NBS) in the not-to-exceed amount of $115,750 to conduct a Cost of Service Analysis.

June 12, 2023 and August 14, 2023 – Board participated in a Cost of Service Rate Study workshop.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 3010 Budget
AR 3012 Budget Management and Five-Year Financial Plan
AR 3014 Reserves
BP 11010 Fees and Charges
AR 11010 Adoption of Rates, Fees, and Charges

SUMMARY OF ISSUE

The District is preparing a comprehensive updated cost of service analysis (COSA). This workshop includes an overview of the cost of service and rate design analyses. The cost of service analysis proportionately allocates the revenue requirements to the customer classes in compliance with industry standards and State law, whereas the rate design analysis considers what rate structure will best meet the District's need to collect rate revenue from each customer class.

BACKGROUND/DISCUSSION

Article XIII D of the California Constitution, otherwise known as Proposition 218, establishes both procedural and substantive requirements to which the District must adhere when considering whether to increase its water, wastewater, and recycled water rates (Cal. Const., art. XIII D, §6). To comply with these requirements, the District is currently conducting a COSA to develop proposed rates that meet but do not exceed, the costs required to provide water, wastewater, and recycled water service.

The first COSA workshop in June 2023 elicited Board and public discussion regarding policy objectives, rate structures, reserve and coverage ratio policies, and priorities when developing proposed updated cost-based and equitable water, wastewater, and recycled water rates. Incorporating feedback from that workshop, staff and our consultant, NBS, developed the draft financial plans presented during the August 14 meeting.

Draft Financial Plans

During the June 12 Cost of Service workshop, the Board discussed and provided direction that the cost of service study and financial plan should balance these three priorities: affordability, infrastructure reliability, and rate stability. The draft financial plan presented during the August 14 meeting identified the need for 12 percent annual revenue increases for drinking and recycled water throughout the next five years and a three percent revenue increase for wastewater. The revenue increases are necessary to meet operating expenses and bond coverage requirements, fund financial reserves, and pay the annual debt service on outstanding bonds. Ongoing analysis and further quality control and assurance identified inconsistencies in the financial plan presented in August. Appropriate corrections have been made, and the updated financial plan is included in today's presentation. Adjustments include a decrease of $3.5 million to the water rate revenue, an increase of roughly $5.7 million to debt service to the water utility, and an increase of approximately $19 million to debt service to the wastewater utility. To help offset these changes, staff increased the proposed debt issuances in 2024 and 2027 to $60 million and $120 million, respectively. Thereby decreasing the amount of rate-funded capital expenses (pay-go) used and consequently using more debt funding for projects. With guidance from the District's external auditors, water and recycled water tank recoating costs will be capitalized moving forward; therefore, staff removed these costs from the water and recycled water operating expenses, which are now reflected in the CIP.

Proposed Rate Simplification

During the June 12 Cost of Service workshop, the Board requested staff evaluate the current rate structure for simplification opportunities. Staff identified the following options to simplify the existing rate structure. Proposed modifications to water base charges include combining Single Family Residential and Agricultural Irrigation (with residence) and Small Farms rates and combining Multi-Family Residential and Commercial/Landscape and Recreational Turf rates. Proposed modifications to recycled water commodity charges include removing all tiers and assigning one median rate for all residential, commercial, and recreational turf customers.

Direct Assignment Allocation

The District's Cost-of-Service Guiding Principle 9 identifies agricultural irrigation customers who qualify for a Direct Assignment (DA) designation. The DA customer class consists of a unique set of customers with special characteristics and, because of this, needs special consideration in terms of allocating costs associated with the delivery and level of water service. The District used 3.9% of total fixed assets value in the water rate model to determine the final cost allocation for DA customers. This is an increase of about 2% from the prior cost of service study. The cost allocation analysis is attached (Attachment A).

Cost of Service and Rate Design Analysis

Today's presentation provides a detailed illustration of the cost of service and rate design analyses, including the methodology used to allocate costs and rate impacts to customers.

NBS team members will join staff to present the cost of service and rate design analyses for Board consideration and direction on the final rate design. In addition, based on prior direction from the Board, staff is providing a draft Proposition 218 Notice for Board review (Attachment B). Following

receipt of Board direction regarding the final rate design, staff will return to the Board on October 23 to seek acceptance of the cost of service study and Board direction to issue the Proposition 218 Notice and schedule a public hearing during the December 11 Board meeting to consider implementing the proposed 5-year rate structure. In November, staff will hold public workshops as directed by the Board and present the preliminary cost of service report to the Board during its November 14 meeting.

BOARD OPTIONS
None – Information only.

RECOMMENDATION
None – Information only.

ATTACHMENTS
Attachment A: Direct Assignment Allocation
Attachment B: Draft Proposition 218 Notice

Jamie Bandy
Finance Director

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

for
Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

APPENDIX _ – ALLOCATING COSTS TO DIRECT ASSIGNMENT (DA) CUSTOMERS

The District's Cost-of-Service Guiding Principle #9 identifies agricultural irrigation customers as qualifying as a Direct Assignment (DA) designation. The DA customer class consists of a unique set of customers with special characteristics and, because of this, need special consideration in terms of allocating cost associated with the delivery and level of water service.

The District's overall fixed assets include plant and equipment (i.e., infrastructure) such as water treatment facilities, pipes, pumps, and other transmission and distribution facilities used to provide water to District customers. The brief discussion below summarizes and documents the cost allocation process used to determine the percentage of the District's fixed assets allocated to DA customers. These percentages were used in the District's Cost of Service study to determine the DA revenue requirement to be collected through water rates.

Methodology for Allocating Fixed Assets

The District estimated the DA percentage of fixed assets by comparing the net present value (NPV) of the portion of fixed assets that supply service to agriculture irrigation customers to the NPV of all the District's fixed assets. There are three types of fixed assets:

1. Those used entirely for DA customers
2. Those used entirely for non-DA customers
3. Joint-use assets that provide service to both DA and non-DA customers.

Examples of fixed assets used entirely for DA customers primarily include ditch facilities still in service providing raw water.

Facilities used entirely for non-DA customers include assets associated with water treatment plants, covered storage tanks and reservoirs for safe drinking water compliance, infrastructure in El Dorado Hills that does not serve agricultural customers, and other specific infrastructure installed as part of residential or commercial developments.

The District separated joint-use fixed assets into two categories: (1) source water conveyance, which includes all fixed assets for the Project 184 canal system, and; (2) drinking water transmission and distribution system fixed assets. Sly Park Reservoir fixed assets are included in the potable water fixed assets list. The District allocated these joint-use fixed assets to DA and Non-DA customers based on average water deliveries to the DA customer class compared to total water deliveries.

For example, if the NPV of a pipe line which delivers water to both potable and DA customers is $1,000, and DA uses 5% of the capacity of the asset, then DA would be assigned a $50 NPV (i.e., 5% times $1,000).

To estimate the allocations for joint-use assets, the District compared DA consumption to total water deliveries. Using 2018-2022 water consumption, the average water volume delivered to DA customers through the potable water system was 3,101 acre-feet (AF), while the average total potable water delivery was 34,969 AF. Therefore, approximately 9% of total consumptive water diversions was delivered to DA customers (i.e., 3,101 AF divided by 34,969 AF = 9%). For

joint-use assets providing service to both DA and non-DA customers, DA customers were assigned 9% of the NPV of the assets.

TABLE 1	Total Water Delivery (AF)	DA consumption (AF)	Percent of Total Water Delivery
2022	34,808	2,881	8.3%
2021	37,903	3,368	8.9%
2020	36,159	3,309	9.2%
2019	31,906	2,734	8.6%
2018	34,069	3,211	9.4%
Average	**34,969**	**3,101**	**8.9% (~9%)**

To determine the percentage value to assign to the Project 184 conveyance system, the average DA consumption of 3,101 AF was assessed against the total water delivered through the Project 184 conveyance of 82,180 AF (including hydro generation), resulting in a 3.8% DA assignment to Project 184 fixed assets.

TABLE 2	Water Delivery (AF)
Hydro generation/Permit 21112	67,100
Pre-1914 consumptive	15,080
Total Deliveries	*82,180*
DA consumption	3,101
DA Allocation of Project 184	**3.8%**

Finally, to determine the percentage of total fixed assets assigned to DA customers for the purpose of estimating their revenue requirements, the total NPV of all DA associated fixed assets (both hydro and potable water) was compared to the total NPV of all fixed assets. Table 3 reflects the results of this analysis.

TABLE 3	Net Present Value	Percent of Total Net Present Value
DA Fixed Assets - Potable Water	$10,630,529	
DA Fixed Assets - Project 184	$5,892,289	
Total Water/Project 184 Fixed Assets	$428,802,694	**3.9%**

Therefore, the District used 3.9% of total fixed asset value in the water rate model to determine the final revenue requirement for DA customers.

EID PROPOSITION 218 NOTICE
Proposed Rate Increases 2024–2028

Attachment B

For additional information go to **www.eid.org/Prop218**

Effect of Rate Adjustments on Average Residential EID Bimonthly Bills

Bill Impacts	2024	%	2025	%	2026	%	2027	%	2028	%	Average
Water	$16.82	13.7%	$16.73	12.0%	$18.74	12.0%	$20.98	12.0%	$23.50	12.0%	12.3%
Wastewater	$2.80	2.5%	$3.40	3.0%	$3.51	3.0%	$3.61	3.0%	$3.72	3.0%	2.9%
Water and Wastewater	$19.61	8.4%	$20.13	7.9%	$22.24	8.1%	$24.60	8.3%	$27.22	8.5%	8.2%
Water, Wastewater & Recycled	$28.11	9.7%	$20.29	6.4%	$22.20	6.5%	$24.31	6.7%	$26.67	6.9%	7.2%

For the **AVERAGE WATER CUSTOMER**, it means an increase of $16.82 per bill in 2024 and additional increases of $16.73 in 2025, $18.74 in 2026, $20.98 in 2027 and $23.50 in 2028.

For the **AVERAGE WATER AND WASTEWATER CUSTOMER** it's an increase of $19.61 per bill in 2024 and additional increases of $20.13 in 2025, $22.24 in 2026, $24.60 in 2027, and $27.22 in 2028.

For the **AVERAGE WATER, WASTEWATER, AND RECYCLED CUSTOMER**, it's an increase of $28.11 per bill in 2024 and additional increases of $20.29 in 2025, $22.20 in 2026, $24.31 in 2027, and $26.67 in 2028.

For the **AVERAGE WASTEWATER (SEWER) CUSTOMER**, it means an increase of $2.80 per bill in 2024, $3.40 in 2025, and increases of $3.51 in 2026, $3.61 in 2027, and $3.72 in 2028.

If adopted, these are the maximum rate increases that could be implemented, effective on January 1 of each year beginning January 2024 through January 2028. During its annual budget planning, the Board of Directors could elect to implement rate increases less than those shown above during this five-year period.

Attention EID Customers or Owners of Affected Property:

We are writing to notify you of proposed new rates for water, wastewater, and recycled water services, as required by Article XIII D, Section 6, of the California Constitution (Proposition 218). The El Dorado Irrigation District (EID/District) Board of Directors will consider these rates during a public hearing as listed on the back of this mailer.

Reasons for the Rate Increases

EID is committed to providing safe, reliable, and high-quality water, wastewater, and recycled water services for our customers. To meet this commitment, the District develops regularly updated long-term financial plans that are designed to ensure there are adequate funds to make the necessary infrastructure investments to maintain safe and reliable service. This is done by striking a balance between funding infrastructure through current cash flow (pay-as-you-go) and the need to borrow funds for more costly projects.

As our water, sewer, and recycled water systems age, it is important to continue investing in replacement and upgrades of these assets in accordance with a long-term, balanced financing plan.

Based on the most recent Board-approved financial plan, it has been determined that rate increases are necessary for EID's water, wastewater, and recycled water service fees to enable the District to cover current and projected costs of operations and maintenance; fund capital infrastructure improvements vital for providing safe and reliable water and wastewater service; maintain the operational and financial stability of the utilities; and avoid operational deficits and depletion of reserves.

The proposed rates detailed in this notice are designed to bring in the revenue needed to cover operating expenses and meet debt service obligations for vital capital projects.

What are Debt Service Obligations?

Rates help pay for the District's debt service obligations, which we incur when we have to fund millions of dollars' worth of capital improvements to continue to provide high-quality water and wastewater services. Many of the improvements are needed to replace aging and deteriorated infrastructure.

We finance long-lived (50 to 100 years) projects much like homeowners who borrow money to finance their homes and then pay interest and principal on the loans. In 2024, EID plans a water bond issuance of approximately $60 million and another issuance in 2027 of $120 million to rebuild or replace vital infrastructure (see below for more details) to provide safe and reliable drinking water. We issue low-interest bonds to cover our capital costs and pay the principal and interest from revenues. But we are held to stricter financing standards than most home mortgages. EID has a legal obligation to ensure that our net revenues exceed our debt service costs by 25 percent each year.

What's Included in Operating Expenses?

The major components of operating expenses are labor, services/material costs, and regulatory fees.

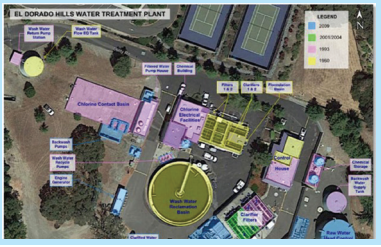
Labor: A variety of EID employees work every day to provide our customers with the best service possible, 24/7. Here are just a sampling of the highly qualified professionals who keep our customers in service. Operators run the water and wastewater treatment plants and water delivery and wastewater collection systems. Construction and maintenance crews replace and repair pipes and other infrastructure. Engineers design and oversee construction projects. Environmental analysts keep the District in compliance with a multitude of state and federal regulations. Information technology specialists construct and manage sophisticated electronic systems. Office staff answer your billing and service-related questions.

Non-labor expenses include (among others) water charges, regulatory fees, and the costs of chemicals, energy to run all facilities, and fuel for emergency generators.

Needed Infrastructure Reinvestment

WATER TREATMENT PLANT MODERNIZATION: $93 MILLION

Constructed in the early 1960s, the El Dorado Hills Water Treatment Plant serves the El Dorado Hills Community. The plant treats water from Folsom Reservoir, which amounts to about a third of EID's total water supply. The Reservoir 1 Water Treatment Plant in Pollock Pines is used to serve a significant portion of EID's customer base of more than 125,000. Both plants are in need of significant modernization in order to continue to serve our customers. *Continued, page 3*



BASE CHARGES

Base Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Water - Bi-Monthly Base Charges						
Single Family Residential						
5/8" and 3/4" meters						
(Includes Ag. Irrig. w/ Resid. & Small Farms)	**$69.93**	**$77.88**	**$87.23**	**$97.69**	**$109.42**	**$122.55**
1" Residential with Private Fire Service	**$69.93**	**$77.88**	**$87.23**	**$97.69**	**$109.42**	**$122.55**
1"	**$103.82**	**$116.74**	**$130.74**	**$146.43**	**$164.00**	**$183.68**
1 1/2"	**$181.32**	**$205.54**	**$230.21**	**$257.83**	**$288.77**	**$323.43**
1 1/2"T	**$215.23**	**$244.40**	**$273.73**	**$306.57**	**$343.36**	**$384.57**
2"	**$278.20**	**$316.56**	**$354.54**	**$397.09**	**$444.74**	**$498.11**
2"T	**$278.20**	**$316.56**	**$354.54**	**$397.09**	**$444.74**	**$498.11**
3"	**$561.63**	**$616.29**	**$690.24**	**$773.07**	**$865.84**	**$969.74**
3"T	**$588.15**	**$671.79**	**$752.41**	**$842.70**	**$943.82**	**$1,057.08**
4"	**$798.63**	**$949.32**	**$1,063.24**	**$1,190.83**	**$1,333.73**	**$1,493.77**
Single Family Dual Plumbed Residential[1]	**$52.66**	**$46.72**	**$52.32**	**$58.60**	**$65.64**	**$73.51**
Multi-Family, Commercial/Landscape & Rec Turf						
5/8" and 3/4" meters	$75.25	$81.15	$90.89	$101.80	$114.01	$127.70
1"	$112.88	$122.30	$136.97	$153.41	$171.82	$192.44
1 1/2"	$198.89	$216.34	$242.30	$271.38	$303.95	$340.42
1 1/2"T	$236.53	$257.49	$288.39	$322.99	$361.75	$405.16
2"	$306.40	$333.90	$373.97	$418.84	$469.10	$525.40
2"T	$306.40	$333.90	$373.97	$418.84	$469.10	$525.40
3"	$596.68	$651.30	$729.46	$816.99	$915.03	$1,024.83
3"T	$650.43	$710.08	$795.29	$890.72	$997.61	$1,117.32
4"	$919.21	$1,003.97	$1,124.44	$1,259.38	$1,410.50	$1,579.76
4"T	$1,150.37	$1,256.71	$1,407.52	$1,576.42	$1,765.59	$1,977.46
6"	$1,811.55	$1,979.68	$2,217.24	$2,483.31	$2,781.31	$3,115.07
6"T	$2,531.90	$2,767.30	$3,099.38	$3,471.31	$3,887.86	$4,354.41
8"T	$4,321.95	$4,724.61	$5,291.56	$5,926.55	$6,637.74	$7,434.27
10"T	$6,844.89	$7,469.54	$8,365.88	$9,369.79	$10,494.16	$11,753.46
12"T	$8,562.02	$9,820.66	$10,999.14	$12,319.03	$13,797.32	$15,452.99
Agricultural Irrigation (with residence) and Small Farms						
5/8" and 3/4" meters[2]	$69.93	$77.88	$87.23	$97.69	$109.42	$122.55
1"	$77.13	$128.84	$144.30	$161.61	$181.01	$202.73
1 1/2"	$97.47	$176.80	$198.01	$221.77	$248.39	$278.19
1 1/2"T	$106.37	$197.78	$221.51	$248.09	$277.86	$311.21
2"	$122.90	$236.75	$265.16	$296.97	$332.61	$372.52
2"T	$122.90	$236.75	$265.16	$296.97	$332.61	$372.52
3"	$177.63	$398.61	$446.44	$500.01	$560.01	$627.22
3"T	$204.27	$428.58	$480.01	$537.61	$602.13	$674.38
4"	$267.86	$578.45	$647.87	$725.61	$812.69	$910.21
4"T	$322.53	$707.34	$792.23	$887.29	$993.77	$1,113.02
6"	$404.21	$1,076.03	$1,205.15	$1,349.77	$1,511.74	$1,693.15
6"T	$649.30	$1,477.69	$1,655.01	$1,853.61	$2,076.04	$2,325.17
8"T	$1,072.70	$2,475.84	$2,772.94	$3,105.69	$3,478.37	$3,895.77
10"T	$1,698.90	$3,875.64	$4,340.72	$4,861.60	$5,445.00	$6,098.40
12"T	$2,175.08	$5,074.62	$5,683.57	$6,365.60	$7,129.47	$7,985.01
Agricultural Irrigation (without residence) and Raw Metered						
5/8" and 3/4" meters	$19.02	$35.57	$39.83	$44.61	$49.97	$55.96
1"	$25.67	$56.55	$63.33	$70.93	$79.45	$88.98
1 1/2"	$48.28	$104.51	$117.05	$131.09	$146.82	$164.44
1 1/2"T	$57.16	$125.49	$140.55	$157.41	$176.30	$197.46
2"	$73.69	$164.46	$184.19	$206.29	$231.05	$258.77
2"T	$73.69	$164.46	$184.19	$206.29	$231.05	$258.77
3"	$111.65	$326.32	$365.48	$409.33	$458.45	$513.47
3"T	$155.07	$356.29	$399.05	$446.93	$500.56	$560.63
4"	$218.65	$506.16	$566.90	$634.93	$711.12	$796.46
4"T	$273.34	$635.05	$711.26	$796.61	$892.21	$999.27
6"	$429.71	$1,003.74	$1,124.19	$1,259.09	$1,410.18	$1,579.40
6"T	$600.10	$1,405.40	$1,574.04	$1,762.93	$1,974.48	$2,211.42
8"T	$1,023.50	$2,403.55	$2,691.97	$3,015.01	$3,376.81	$3,782.02
10"T	$1,620.96	$3,803.35	$4,259.75	$4,770.92	$5,343.43	$5,984.65
12"T	$2,125.87	$5,002.33	$5,602.61	$6,274.92	$7,027.91	$7,871.26
Raw Water Rates						
Raw Water Irrigation[3]						
Raw Water Year Round - 1/2" Flow	$143.96	$350.17	$392.19	$439.25	$491.96	$550.99
Raw Water Year Round - 1" Flow	$287.91	$700.33	$784.37	$878.50	$983.92	$1,101.99
Raw Water Year Round - 2" Flow	$575.82	$1,400.67	$1,568.75	$1,757.00	$1,967.84	$2,203.98
Raw Water Year Round - 4" Flow	$1,151.64	$2,801.33	$3,137.49	$3,513.99	$3,935.67	$4,407.95
Raw Water Yr Round - >4" Flow (per inch of flow)	$287.91	$700.33	$784.37	$878.50	$983.92	$1,101.99

1. This is the Single Family base charge less dual-plumbed recycled water bimonthly base charge $29.23.
2. This is the same as SFR base charge and includes customer costs; larger meters include both SFR base charge and the additional capacity costs exceed 3/4" meter capacty costs.
3. Assumes a flat rate for unmetered consumption. If metered, the Ag Irrigation/Raw metered commodity rates are used. For raw water base charges see Ag Irrigation with Residence & Small Farm.

LEGEND (applies to all charts)

- 1 cubic foot (cf) = 7.48 gallons
- 1 miners inch = 11.22 gallons per minute (gpm)
- 1 miners inch day = 16,156.80 gallons or 2,160 cubic feet
- Services outside of the District are billed at 1.5 times the adopted rate
- T = turbine meter

ALL SERVICES ARE BILLED BIMONTHLY EXCEPT AS NOTED

BASE CHARGES

Base Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Wastewater Base Charges (Bi-Monthly)						
Residential Flat Rate District Average[1]	$135.32	$141.75	$146.00	$150.38	$154.89	$159.54
Single Family Residential	$69.58	$66.34	$68.33	$70.38	$72.49	$74.66
Multi-Family Residential (flat rate per unit)	$31.31	$39.11	$40.28	$41.49	$42.73	$44.02
Commercial (all categories)	*$70.46*	*$138.27*	*$142.42*	*$146.69*	*$151.09*	*$155.63*
Commercial without water service (flat rate per unit) [2]	*$127.13*	*$198.33*	*$204.27*	*$210.40*	*$216.72*	*$223.22*
Schools, per student and staff (billed annually)	$13.09	$19.04	$19.61	$20.19	$20.80	$21.42
Alternative Commercial Fixed Charges						
Commercial - Low	-	$65.84	$67.81	$69.85	$71.94	$74.10
Commercial - Medium	-	$136.26	$140.35	$144.56	$148.90	$153.37
Commercial - Medium/High	-	$216.79	$223.30	$229.99	$236.89	$244.00
Commercial without water service (flat rate per unit)[3]	-	$314.51	$323.95	$333.67	$343.68	$353.99
Recycled Water Base Charges (Bi-Monthly)						
Single Family Dual Plumbed Residential[1]	$17.37	$31.16	$32.10	$33.06	$34.05	$35.07
Commercial Landscape/Recreational Turf						
5/8" and 3/4" meters	$38.70	$42.18	$43.45	$44.75	$46.09	$47.47
1"	$56.74	$63.71	$65.62	$67.59	$69.61	$71.70
1 1/2"	$98.02	$112.91	$116.29	$119.78	$123.38	$127.08
1 1/2"T	$116.07	$134.43	$138.47	$142.62	$146.90	$151.30
2"	$149.61	$174.41	$179.64	$185.03	$190.58	$196.30
2"T	$149.61	$174.41	$179.64	$185.03	$190.58	$196.30
3"	$288.91	$340.46	$350.67	$361.19	$372.03	$383.19
3"T	$314.70	$371.21	$382.35	$393.82	$405.63	$417.80
4"	$443.68	$524.96	$540.71	$556.93	$573.64	$590.85
4"T	$554.59	$657.19	$676.91	$697.21	$718.13	$739.67
6"	$871.88	$1,035.42	$1,066.48	$1,098.48	$1,131.43	$1,165.38
6"T	$1,217.55	$1,447.48	$1,490.90	$1,535.63	$1,581.70	$1,629.15
8"T	$2,076.52	$2,471.47	$2,545.61	$2,621.98	$2,700.64	$2,781.66
10"T	$3,288.72	$3,907.52	$4,024.75	$4,145.49	$4,269.85	$4,397.95
12"T	$4,177.99	$5,137.54	$5,291.67	$5,450.42	$5,613.93	$5,782.35

1. This rate includes the single-family bi-monthly fixed charge plus an assumed consumption of 1,600 cf charged at the single-family commodity rate.
2. The proposed 2024 rate includes the commercial - low bi-monthly fixed charge plus an assumed average flow of 1,600 cf times the commercial - low commodity rate.
3. Includes the adjusted comm. - low bi-mo. fixed charge plus the average flow for comm. - low customers of 37,800 cf times the adjusted comm. - low commodity rate.

Base Charges—Base charges, or fixed charges, help pay for the costs associated with operating and maintaining EID's water treatment and delivery, wastewater, and recycled water systems. These charges are determined by meter size, not by the amount of water delivered.

Commodity Charges—Commodity charges cover costs that vary based upon the amount of water delivered. These rates reflect a tiered rate structure based on bimonthly usage. Charges shown are per cubic foot (cf), or 7.48 gallons.

Needed Infrastructure Reinvestment, *continued from page 1*

WATER LINE REPLACEMENTS: $24 MILLION

EID has dedicated funding to ensure the sustainability and reliability of our water supply through a targeted Water Line and Service Line Replacement initiative. Our water supply system is similar to the human body's circulatory system, with water pipes acting as arteries that carry life-sustaining water from treatment plants to our homes and businesses. EID's 220-square-mile service area contains over 1,200 miles of water pipes, many of which are more than 50 years old.

These pipes can and do fail over time, and when that occurs our customers experience an interruption of service. Increases in the cost of materials and other operational expenses have significantly affected the execution of these important initiatives. The rate revenue raised by these proposed adjustments will allow us to continue investing in water line and service line replacement.

WATER STORAGE TANKS REPLACEMENT PROGRAM: $30 MILLION

EID operates and maintains over 50 storage reservoirs and tanks in the drinking water, wastewater, and recycled water systems. Storage reservoirs and tanks are critical to the reliable operation of a water system and provide backup storage for fire flow, planned and unplanned outages, and other emergencies.

COMMODITY CHARGES

Commodity Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Water						
Single Family Residential						
0 - 1,800 cf	**$0.019912**	**$0.023293**	**$0.026089**	**$0.029219**	**$0.032726**	**$0.036653**
1801 - 4,500 cf	**$0.024033**	**$0.027998**	**$0.031358**	**$0.035121**	**$0.039336**	**$0.044056**
Above 4,500 cf	**$0.028194**	**$0.034553**	**$0.038699**	**$0.043343**	**$0.048544**	**$0.054369**
Multi-Family, Commercial/Landscape, Rec Turf						
All usage	**$0.023294**	**$0.027526**	**$0.030830**	**$0.034529**	**$0.038673**	**$0.043313**
Agricultural Irrigation (with residence) and Small Farms						
0 - 4,500 cf (*Single Family Rates Apply*)	*(See Single-Family Rates)*					
Above 4,500 cf	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**
Agricultural Irrigation (without residence) and Raw Metered						
All usage	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**
Raw Water Rates						
Metered Landscape Irrigation/ Seasonal Continuous Flow						
All usage	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**

Commodity Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Wastewater Commodity Rates ($/CF)						
Single Family Residential - All Usage	$0.041091	$0.047133	$0.048547	$0.050003	$0.051503	$0.053048
Multi-Family Residential - All usage	$0.032315	$0.047133	$0.048547	$0.050003	$0.051503	$0.053048
Commercial/Industrial						
Commercial - Low	$0.049278	$0.084277	$0.086805	$0.089409	$0.092092	$0.094854
Commercial - Medium/Low	$0.072570	$0.087958	$0.090597	$0.093314	$0.096114	$0.098997
Commercial - Medium	$0.106231	$0.181471	$0.186915	$0.192522	$0.198298	$0.204247
Commercial - Medium/High	$0.167191	$0.177770	$0.183104	$0.188597	$0.194255	$0.200082
Commercial - High	$0.364214	$0.352735	$0.363317	$0.374217	$0.385443	$0.397006
Alternative Commercial Commodity Rates						
Commercial - Low	*N.A.*	$0.065795	$0.067769	$0.069802	$0.071897	$0.074053
Commercial - Medium	*N.A.*	$0.085355	$0.087916	$0.090553	$0.093270	$0.096068
Commercial - Medium/High	*N.A.*	$0.168254	$0.173301	$0.178500	$0.183855	$0.189371
Recycled Water Commodity Rates ($/CF)						
Dual Plumbed Residential						
0 - 3,000 cf *(50% of Potable Tier 1)*	$0.009956	***Replaced by Uniform Volumetric Rate***				
3,001 - 4,500 cf *(70% of Potable Tier 2)*	$0.016820					
Above 4,500 cf *(90% of Potable Tier 3)*	$0.025375					
Commercial Landscape						
All Usage	$0.007826					
Recreational Turf						
All Usage	$0.008346					
Recycled Uniform Rate	***N.A.***	**$0.011684**	**$0.012035**	**$0.012396**	**$0.012768**	**$0.013151**

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Needed Infrastructure Reinvestment, *continued from* page 3

SILVER LAKE DAM REPLACEMENT: $50 MILLION

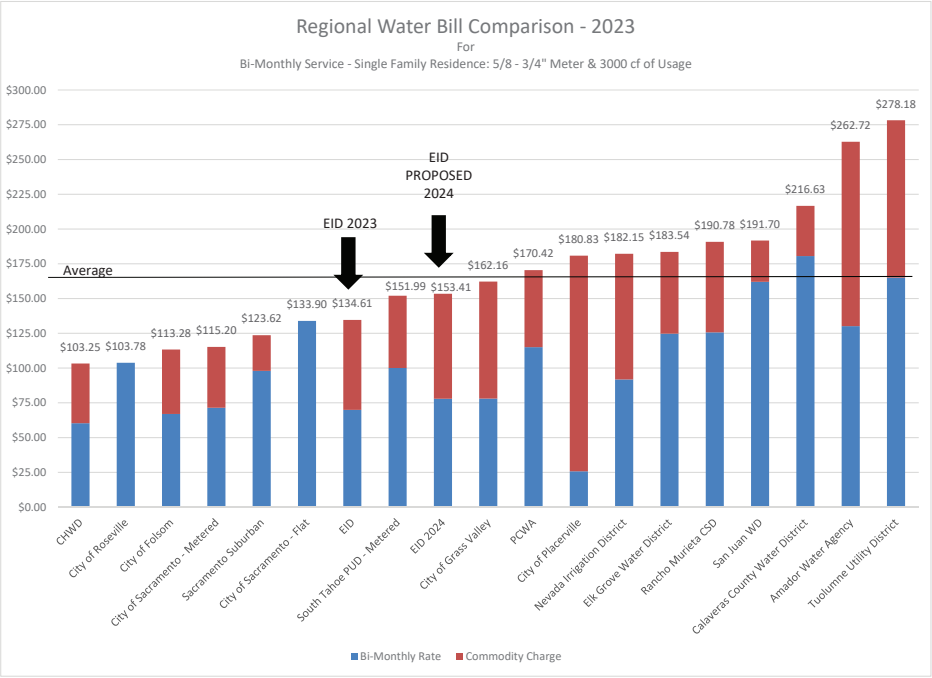
Silver Lake is located just off Highway 88 at an elevation of about 7,250 feet in Amador County and is part of EID's federally licensed Project 184 hydroelectric project. The Silver Lake Dam must be replaced to address:

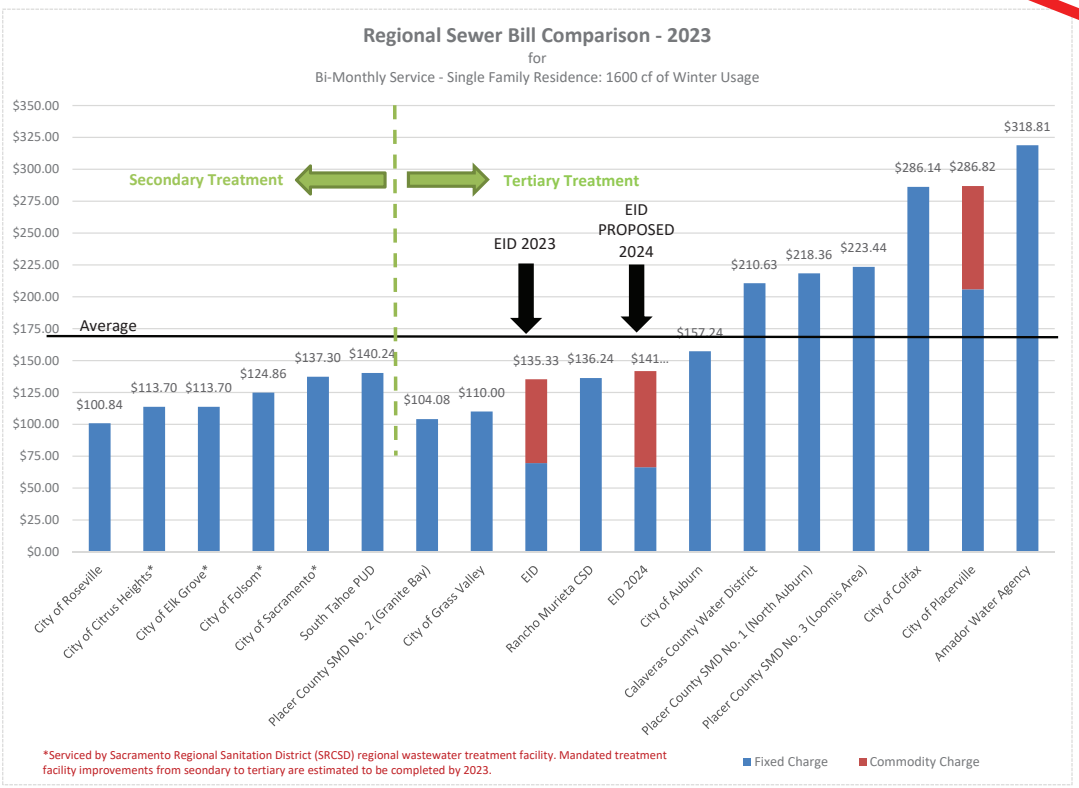
- Deterioration of the dam's aged upstream concrete lining resulting in multiple instances of heavy leakage requiring unscheduled drawdowns.
- Seepage-driven internal erosion, voids, and loss of earth fill integrity at the center of the embankment due to degradation of the 140-year-old timber cribbing. In the spring of 2015, EID staff discovered and repaired a small sinkhole in the dam.
- Insufficient capacity of the spillway to pass the Probable Maximum Flood without overtopping, aggravated by sagging of the embankment crest and parapet wall.
- Aged concrete spillway structure, potentially susceptible to damage during earthquake loading.

Repairing this facility is an important condition for long-term safety as well as maintaining the operation of the reservoir.

How do EID rates compare with other water and sewer utilities?

The following charts show how EID rates compare with other utilities in the region for typical residential water use and residential wastewater (sewer) services. The calculations in the charts include the base charge plus the commodity charge for the water used. **PLEASE NOTE: All amounts are for bimonthly bills.**





A Note about Wastewater Treatment

Why are sewer bills sometimes perceived as high? Simply put, the collection, treatment, and safe management of wastewater is an essential but complex biological process that is expensive.

Modern technology ensures that contaminants in treated wastewater are detected at levels as minute as parts per billion (equivalent to half a teaspoon in an Olympic-sized pool). As a result, standards for wastewater discharge keep becoming stricter, leading to pricey upgrades at treatment facilities.

In regions like the Sierra foothills, the expenses might feel steeper. While cities such as Sacramento and San Francisco can release into large rivers or oceans and benefit from dilution credits, reducing their regulatory expenses, the foothills don't have this advantage.

EID has adhered to high "tertiary" treatment standards for more than 25 years. Additionally, in places like El Dorado County, fewer residents share these costs, making individual bills higher.

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

ATTENTION
This notice contains important information about proposed rate increases for water, wastewater, and recycled water services.
Please Read

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Notice of Open Houses, Public Workshops, and Public Hearing

On November XX, 2023, and November XX 2023, EID will hold two open houses/ public workshops to describe needed infrastructure projects, their funding requirements, and listen to customer feedback on the proposed rate adjustments.

Each event will begin at 5:30 P.M.

- **November XX, 2023**
  Cameron Park Community Services Dist.
  2502 Country Club Drive
  Cameron Park, CA 95682
- **November XX, 2023**
  El Dorado Irrigation District HQ
  2890 Mosquito Road
  Placerville, CA 95667

On December 11, 2023, at 9:00 A.M. at EID headquarters, the Board will hold a public hearing to consider adopting the rates.

How to protest the proposed new rates

Under Proposition 218, the owner of record for a parcel(s) that is subject to the proposed rate increases can submit a written protest against the proposed rate increases received by the District at or before the time set for the public hearing on December 11, 2023, at 9:00 A.M.

If a majority of affected property owners submit written protests, the proposed rate increases will not go into effect and the reconstruction work on the infrastructure will be impacted.

The written protest must identify the parcel(s) in which the party signing the protest has an interest. The best means of identifying the parcel(s) is by the Assessor's Parcel Number (APN). If the party signing the protest is not shown on the last equalized assessment roll of El Dorado County as the owner of the parcel(s), the protest must contain or be accompanied by written evidence that such party is the owner of the parcel(s), unless the protest is by a tenant who pays the utility bills.

In rental situations where the tenant pays the utility bills, the property owner is responsible for supplying the tenant with this notice. Tenants who pay the utility bills can submit a written protest. One written protest per parcel will be counted.

Please mail or hand-deliver written protests (specifiying which rate increases are being protested) to: Clerk to the Board, El Dorado Irrigation District, 2890 Mosquito Road, Placerville, CA 95667.

Emailed, faxed, or electronic protests will not be accepted.

Summary of

Water and Sewer Revenue Study

Overview of Cost of Service Analysis and Draft Rate Design Results

October 10, 2023

Previous Board Action

- April 27, 2020 – Board adopted the results of the 2020 Cost of Services Analysis and approved rate increases as set forth in the 2020 Proposition 218 Notice.
- November 14, 2022 – Board adopted the 2023-2027 Capital Improvement Plan (CIP), subject to available funding.
- December 12, 2022 – Board adopted the 2023-2024 Operating Budget and 2023-2027 Financial Plan, subject to Board approved Cost of Service Study in 2023.
- January 23, 2023 – Board received an overview of the substantive requirements and process of the Cost of Service Analysis.
- February 27, 2023 – Board awarded a contract to NBS Government Finance Group in the not-to-exceed amount of $115,750 to conduct a Cost of Service Analysis.
- June 12 and August14, 2023 – Board participated in Cost of Service Rate Study workshop.

Summary of Issue

- The District is preparing a comprehensive updated Cost of Service Analysis (COSA). This workshop includes an overview of the cost of service and rate design analyses.

Background Discussion

- COSA is process of developing rates that meet but do not exceed the costs required to provide services.
- Proposition 218 (Prop. 218) establishes requirements when considering the increase of water, wastewater and recycled water rates
- The cost of service analysis proportionately allocates the revenue requirements to the customer classes in compliance with industry standards and State law, whereas the rate design analysis considers what rate structure will best meet the District's need to collect rate revenue from each customer class.

Rate Study Terms

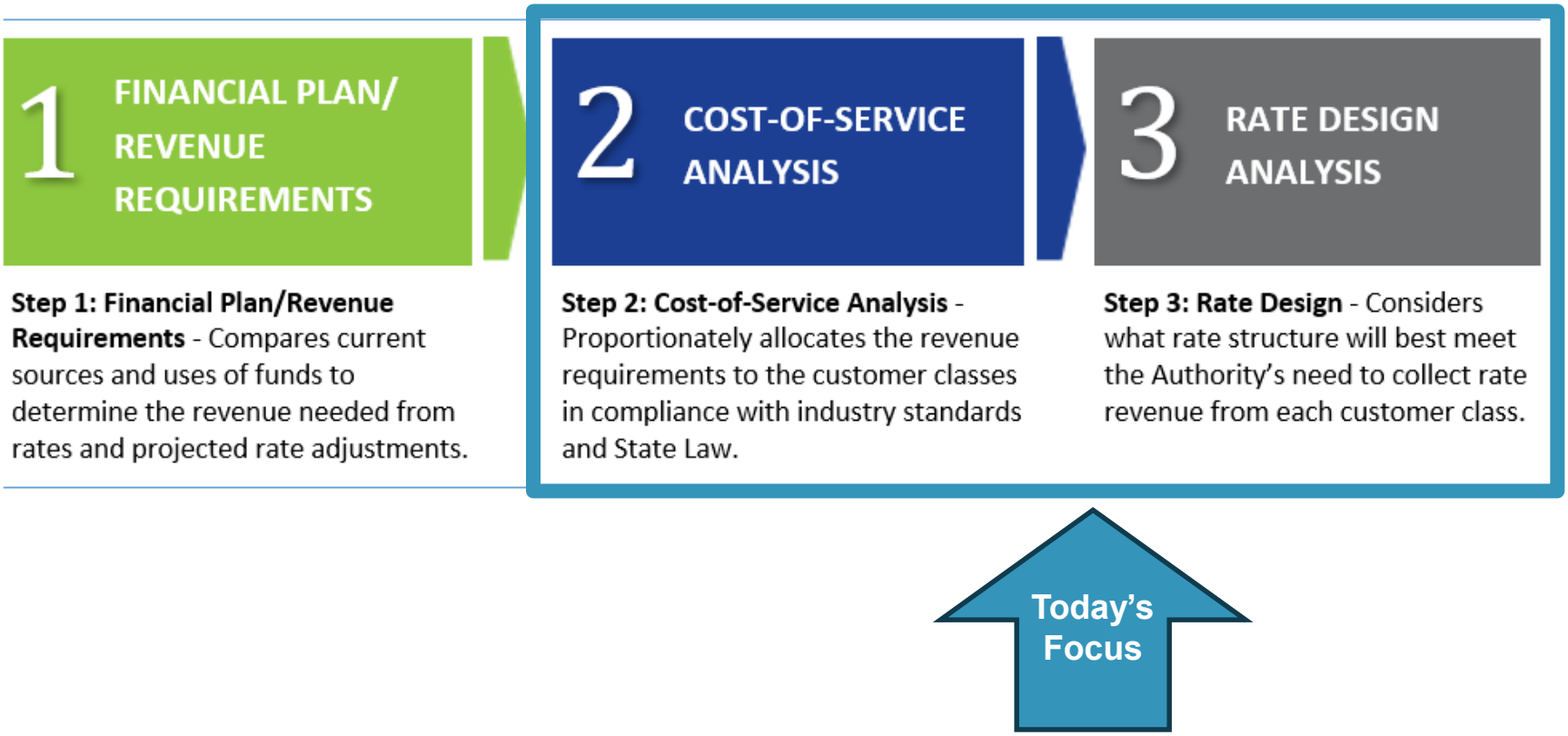
- **Variable (or Commodity) Costs** – Costs that tend to change with the amount of water used or sewer effluent generated.
- **Fixed (or Capacity) Costs** – Costs that generally do not change with the amount of water used or sewer effluent generated.
- **cf** – cubic feet (= 7.48 gallons). The unit EID uses to charge for water and sewer rates.
- **ccf** – 100 cubic feet (= 748 gallons). The measurement for annual water consumption.
- **Financial Plan** – Compares projected revenues with project expenses and determines the Net Revenue Requirements and % Annual Rate Increases needed.
- **Capital Projects (or CIP)** – Large infrastructure projects (pipelines, tanks, pumps, etc.)
- **Rate Revenue** – The amount of money EID receives from water and sewer rates.
- **Water Rate/Volumetric rate** – The amount charged per cf of water use.
- **Rate Structure** – How rates and charges are collected from various customer classes.
- **Cost of Service** – The cost to provide water/sewer service to each customer class based on the demands they place on the utility.
- **Customer Class** – How customers are grouped based on similar user characteristics (e.g., Single Family, Multifamily, Commercial/Industrial, Small Farms, and Irrigation, etc.)
- **Meter size** – Meters measure water usage at the property; the size is determined by its aperture and capacity to provide water flow. Most EID customers have 3/4” meters.
- **Fixed charge** – The bi-monthly base charged by meter size; does not vary by water use.
- **Uniform rate structure** – Charges the same amount per unit of water used, regardless of how much water is used.
- **Tiered rate structure** – Charges more unit of water as consumption increases; reflects higher costs allocated to customers with the greatest demands on the system.

Background and Overview

Review of Rate Study Approach

NBS follows basic industry standards but customizes each component to meet the District's unique characteristics.

Components of a Comprehensive Rate Study



Water Utility

Financial Plan

August vs. October Water Financial Plans

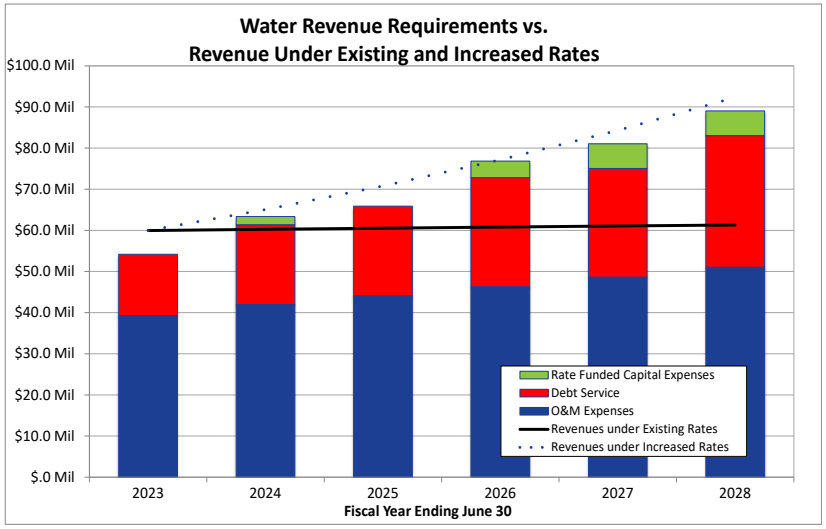
Key Changes in Financial Plans:

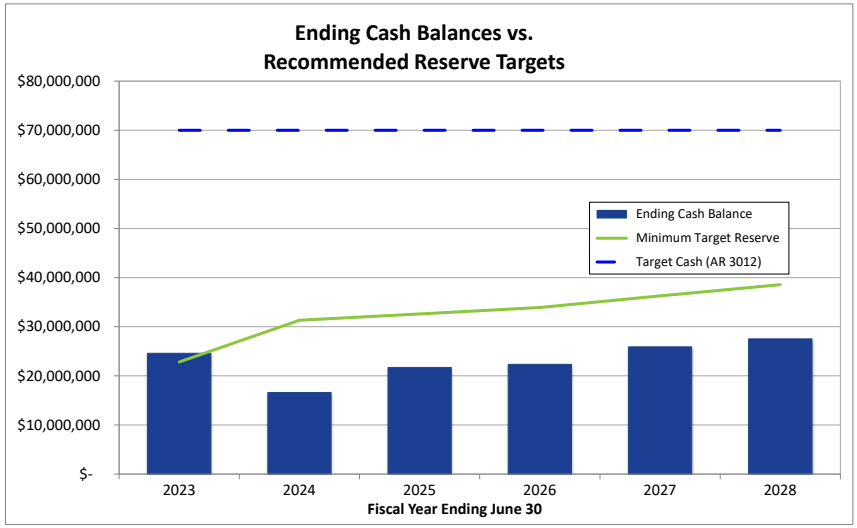
- **Sources of Funds (Revenues) – Lower by $4.3 M**
  - *Primarily due to double-counting $3.5 M Hydro Revenue in "Rate Revenue"*
  - *Some differences in "Adopted" vs. "Final" Budget*
- **Operating Costs – Lower due to Moving $9.4 M of Tank Costs from Operating to Reserve-Funded CIP**
- **Debt Service for Existing Revenue Bonds – Higher by $24.4 M**
  - *More accurate allocation of District Debt Service to the Water Utility*
- **Debt Service for New Revenue Bonds – Lower by $6 M**
  - *Although New Rev. Bonds increased from $50 M & $70 M to $60 M & $120 M*
  - *Debt Service is now Interest Only for first 3-4 years*
- **Lower Rate-Funded CIP from $27 M to $18 M**
- **Net Results: 2024-2028 Net Revenue Requirements are slightly lower**
  - *About $0.5 M/year lower on average*

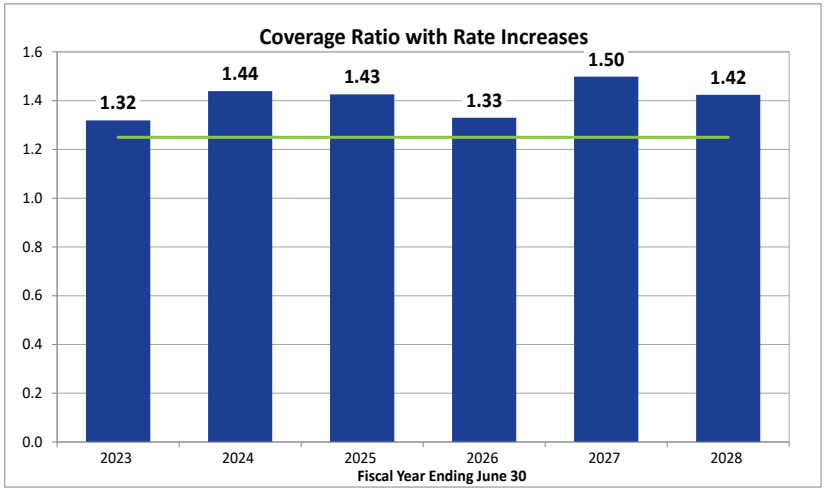
October (Updated) Water Financial Plan

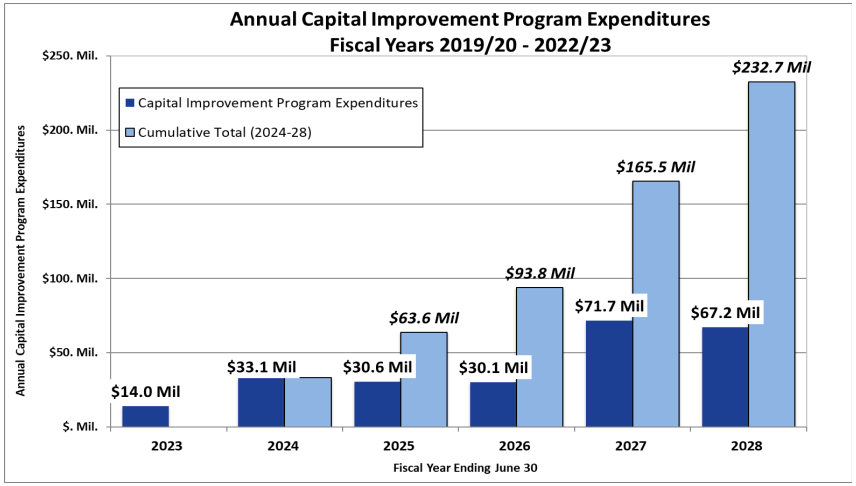
Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget 2023	5-Year Rate Adoption Period 2024	2025	2026	2027	2028
Sources of Water Funds						
Rate Revenue Under Prevailing Rates	$ 40,021,878	$ 40,172,760	$ 40,324,212	$ 40,441,152	$ 40,558,431	$ 40,676,051
Property Tax Revenues	11,700,000	11,744,109	11,788,384	11,822,571	11,856,856	11,891,241
Hydroelectric Revenues	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Surcharges & Other Income	2,088,496	2,096,370	2,104,273	2,110,375	2,116,495	2,122,633
Non-Rate Revenues	1,650,000	1,732,500	1,819,125	1,910,081	2,005,585	2,105,865
Interest Earnings	1,000,000	1,003,770	1,007,554	1,010,476	1,013,407	1,016,345
Total Sources of Funds	**$ 59,960,374**	**$ 60,249,509**	**$ 60,543,548**	**$ 60,794,655**	**$ 61,050,775**	**$ 61,312,135**
Uses of Water Funds						
Operating Expenses	$ 39,292,678	$ 42,007,312	$ 44,107,677	$ 46,313,186	$ 48,628,496	$ 51,060,520
Debt Service	14,891,478	19,358,643	19,383,023	24,111,156	24,022,654	24,113,063
New Debt Service	-	-	2,400,000	2,400,000	2,400,000	7,848,688
Rate-Funded Capital Expenses	-	2,000,000	-	4,000,000	6,000,000	6,000,000
Total Use of Funds	**$ 54,184,156**	**$ 63,365,955**	**$ 65,890,700**	**$ 76,824,342**	**$ 81,051,150**	**$ 89,022,272**
Surplus (Deficiency) before Rate Increase	**$ 5,776,218**	**$ (3,116,446)**	**$ (5,347,152)**	**$ (16,029,687)**	**$ (20,000,376)**	**$ (27,710,137)**
Additional Revenue from Rate Increases	-	4,820,731	10,258,479	16,375,755	23,261,046	31,009,049
Surplus (Deficiency) after Rate Increase	**$ 5,776,218**	**$ 1,704,285**	**$ 4,911,327**	**$ 346,068**	**$ 3,260,670**	**$ 3,298,912**
Projected Annual Revenue Increase	***0.0%***	***12.0%***	***12.0%***	***12.0%***	***12.0%***	***12.0%***
Cumulative Revenue Increases	*0.00%*	*12.00%*	*25.44%*	*40.49%*	*57.35%*	*76.23%*
Net Revenue Requirement1	**$ 50,445,660**	**$ 59,537,085**	**$ 61,967,302**	**$ 72,803,886**	**$ 76,929,069**	**$ 84,793,774**

Overview – Financial Plan









Cost of Service Analysis (COSA) and Rate Design

Overview - COSA

Water Costs Are Allocated to Customers based on:

1. Commodity Costs (based on annual consumption) **(Variable)**
2. System Capacity Costs (based on system peaking factors) **(Fixed)**
3. Customer Costs (based on number of accounts) **(Fixed)**

COSA – Water (Potable System)

Allocation %'s for Consumption, Peak Demand, and Accounts/Meters

Summary of Cost Allocation Factors			
Customer Class[1]	*Commodity* % of System Water Use	*Capacity* % of Peak Demand	*Customer* % of Accounts/ Meters
Single Family Residential	75.8%	61.7%	92.2%
Ag. Irrigation - w/ residence	7.7%	4.9%	2.4%
Small Farm	9.5%	6.1%	3.5%
Multi Family Residential	0.5%	15.8%	0.4%
Comm. & Ind. (& potable landscape irrig	5.4%	5.5%	0.5%
Recreational Turf	1.2%	5.9%	1.0%
Potable Water System	100.0%	100.0%	100.0%

COSA – Water (Potable System)

Net Revenue Requirements by Customer Class

Classification Components	Adjusted Net Rev. Reqts. *(Includes Ag w/ Resid., SF/DI Accts.)*	Customer Classes					
		Single Family Residential	Multi Family Residential	Comm. & Ind. (& potable landscape irrig.)	Agricultural Irrigation - w/ residence	Recreational Turf	Small Farm
Commodity (COM)	**$ 21,547,396**	$ 16,327,574	$ 1,652,171	$ 2,044,443	$ 99,888	$ 1,169,439	$ 253,882
Capacity (CAP)	**$ 15,054,936**	$ 9,295,182	$ 740,219	$ 920,767	$ 2,375,577	$ 827,719	$ 895,473
Customer Related (CA)	**$ 5,741,047**	$ 5,291,972	$ 138,817	$ 201,916	$ 22,554	$ 28,462	$ 57,326
Public Fire Protection (FP)	**$ 1,127,132**	$ 985,369	$ 51,696	$ 75,194	$ 4,200	$ -	$ 10,674
Net Revenue Requirement	**$ 43,470,512**	**$ 31,900,096**	**$ 2,582,903**	**$ 3,242,320**	**$ 2,502,219**	**$ 2,025,619**	**$ 1,217,355**
% of Total Potable Rev. Requirements:		*73.4%*	*5.9%*	*7.5%*	*5.8%*	*4.7%*	*2.8%*

Fixed Charges

- Include Capacity, Customer, and Fire Protection costs
- Capacity costs increase by meter size
- Customer costs are the same for all meters

Rate Design Analysis - Water

Calculation of Single Family Tiered Volumetric Rates

SFR Tiers		Total SFR COM Costs by Tier	CCF/Year by Tier		SFR Tier Rates	
			CCF Option 1	%	$/CCF	$/cf
Tier 1	(0 - 1,800 cf)	$ 6,457,977	2,772,453 ccf	46.7%	$2.329	**$0.02329**
Tier 2	(> 1,800 cf < 4,501 cf)	$ 4,470,747	1,596,793 ccf	26.9%	$2.800	**$0.02800**
Tier 3	(> 4,500 cf)	$ 5,398,312	1,562,349 ccf	26.3%	$3.455	**$0.03455**
Total		**$ 16,327,036**	5,931,596 ccf	100.0%		

Key Factors in Calculating Tiered Rates:

- **Costs are SFR Volumetric Cost Allocations ($16.3 M)**
- **Tier costs are based on differences in the costs of water** (*primarily water purchases and power costs*)
- **Tier consumption levels are from EID system's metered records and reflect highest costs** *(Tier 3/summer)*, **moderate costs** *(Tier 2/fall/spring)* **and lowest costs** *(Tier 1/winter)*

Rate Design Analysis - Water

Calculation of Ag/Raw Water Volumetric Rates

Customer Class/Tier		Water Consumption (ccf/yr.)[a]	Commodity Rates[b]		Total Rate Revenue
Ag. Irrig./Small Farms - Irrig./Raw Water (DA)			*($/ccf)*	*($/cf)*	
Ag. Irrig. - (w/ & w/o residence) & Small Farms	*Uniform Ag/Irrig. Rate*	*1,628,438*	*$0.5404*	***$0.0054***	*$879,959*

a. Assumes potable system use is 4,500 cf/mo. for the residential portion of consumption. The remaining consumption is assumed to be ag/raw water system.

b. These are Agricultural rates based only on direct assignment costs and only charged after 4,500 cf/mo. consumption.

Key Factors in Calculating Ag/Raw Water Rates:

- Up to 4,500 cf is assumed to be residential
- Over 4,500 cf is assumed to be Ag/Raw Water

Proposed Rates - Water Base Charges

Base Charges for Single Family Residential Customers*

Base Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Water - Bi-Monthly Base Charges						
Single Family Residential						
5/8" and 3/4" meters						
(Includes Ag. Irrig. w/ Resid. & Small Farms)	**$69.93**	**$77.88**	**$87.23**	**$97.69**	**$109.42**	**$122.55**
1" Residential with Private Fire Service	**$69.93**	**$77.88**	**$87.23**	**$97.69**	**$109.42**	**$122.55**
1"	**$103.82**	**$116.74**	**$130.74**	**$146.43**	**$164.00**	**$183.68**
1 1/2"	**$181.32**	**$205.54**	**$230.21**	**$257.83**	**$288.77**	**$323.43**
1 1/2"T	**$215.23**	**$244.40**	**$273.73**	**$306.57**	**$343.36**	**$384.57**
2"	**$278.20**	**$316.56**	**$354.54**	**$397.09**	**$444.74**	**$498.11**
2"T	**$278.20**	**$316.56**	**$354.54**	**$397.09**	**$444.74**	**$498.11**
3"	**$561.63**	**$616.29**	**$690.24**	**$773.07**	**$865.84**	**$969.74**
3"T	**$588.15**	**$671.79**	**$752.41**	**$842.70**	**$943.82**	**$1,057.08**
4"	**$798.63**	**$949.32**	**$1,063.24**	**$1,190.83**	**$1,333.73**	**$1,493.77**
Single Family Dual Plumbed Residential[1]	**$52.66**	**$46.72**	**$52.32**	**$58.60**	**$65.64**	**$73.51**

1. This is the Single Family base charge less dual-plumbed recycled water bi-monthly base charge of $31.16

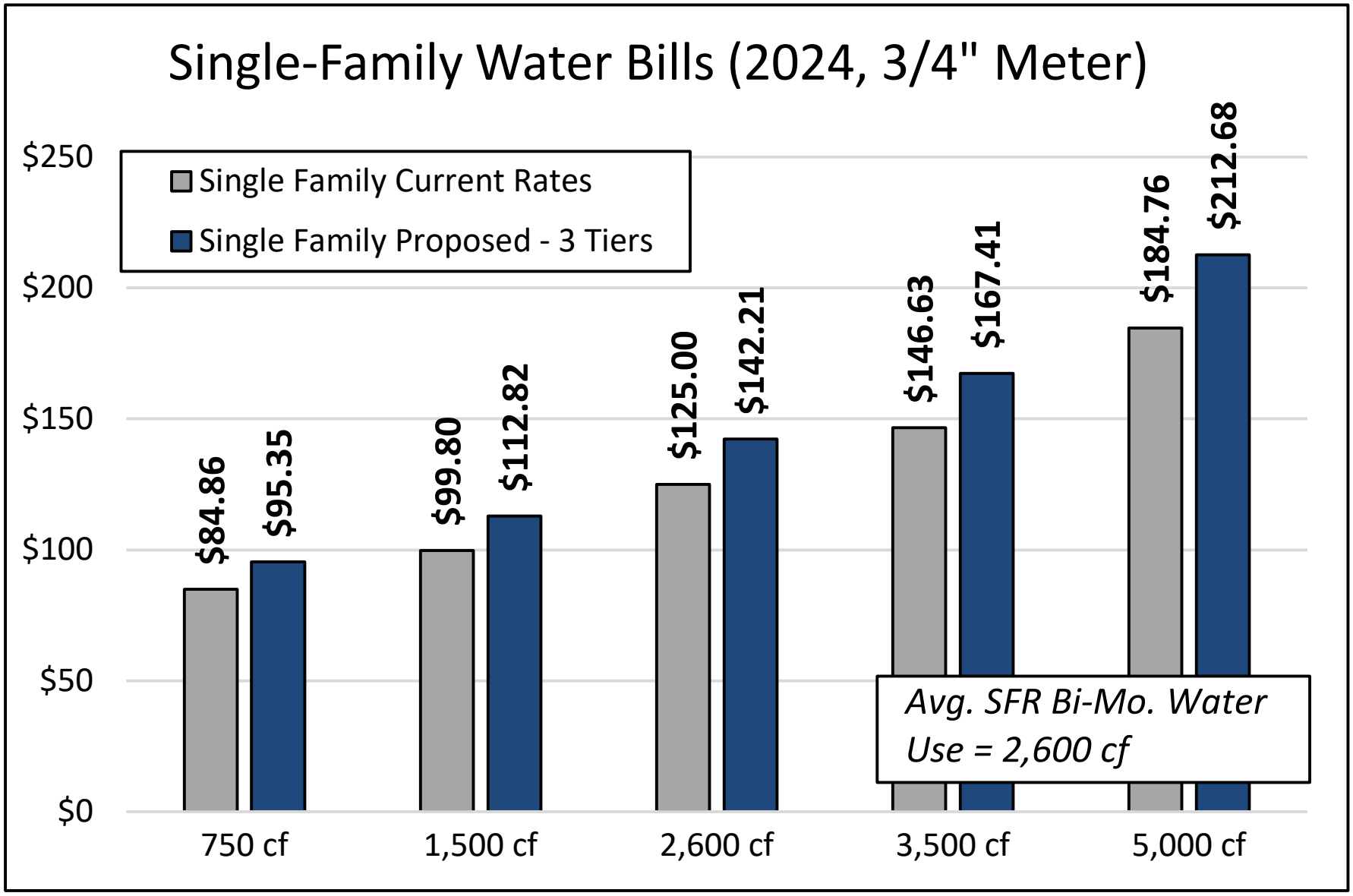
* *5/8 & 3/4" meter Base Charges also apply to Ag Irrigation w/ residence and Small Farms but meters in this class larger than 3/4" are included in the "Agricultural Irrigation with residence and Small Farms" base charges.*

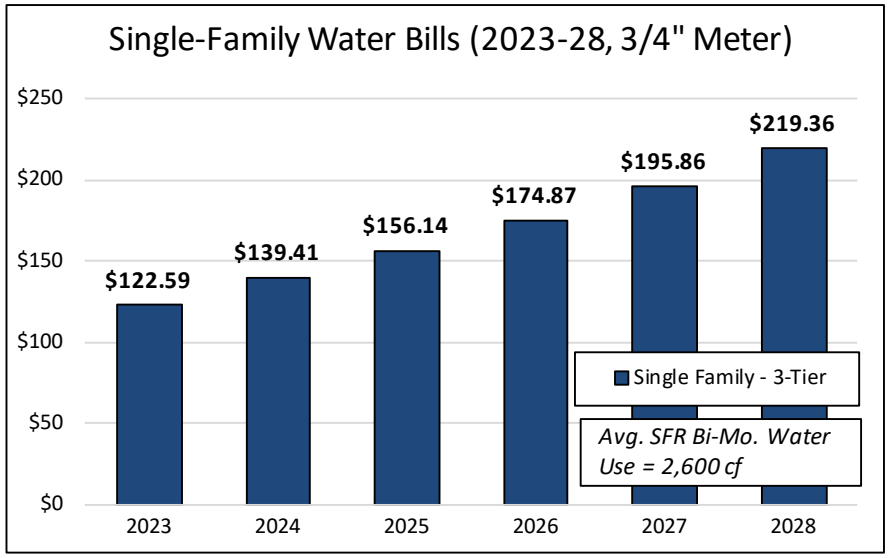
Proposed Rates - Water Commodity Charges

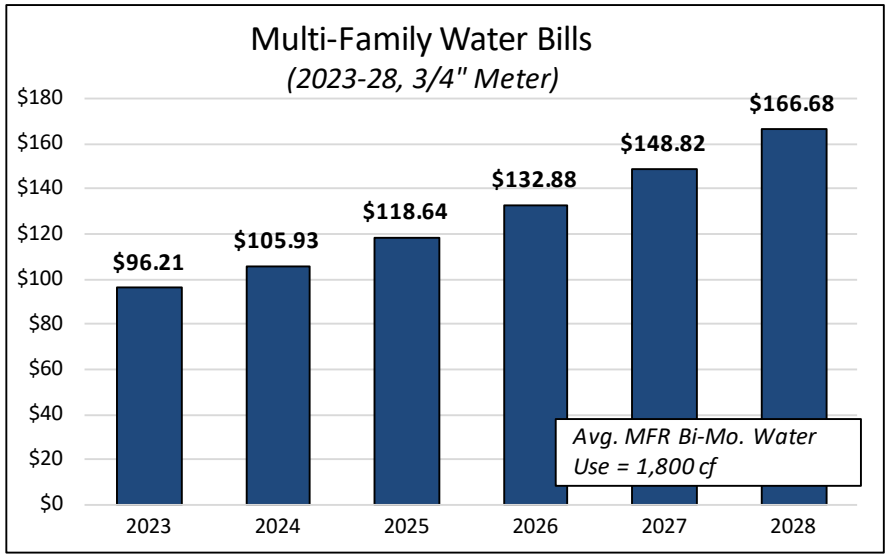
Commodity Charges for Potable and Raw Water Customers

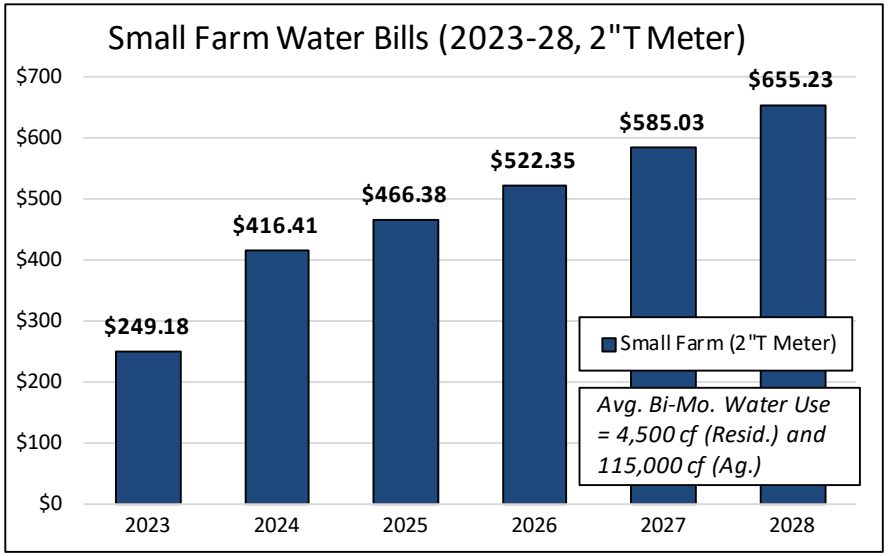
Commodity Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Water						
Single Family Residential						
0 - 1,800 cf	**$0.019912**	**$0.023293**	**$0.026089**	**$0.029219**	**$0.032726**	**$0.036653**
1801 - 4,500 cf	**$0.024033**	**$0.027998**	**$0.031358**	**$0.035121**	**$0.039336**	**$0.044056**
Above 4,500 cf	**$0.028194**	**$0.034553**	**$0.038699**	**$0.043343**	**$0.048544**	**$0.054369**
Multi-Family, Commercial/Landscape, Rec Turf						
All usage	**$0.023294**	**$0.027526**	**$0.030830**	**$0.034529**	**$0.038673**	**$0.043313**
Agricultural Irrigation (with residence) and Small Farms						
0 - 4,500 cf (*Single Family Rates Apply*)	*(See Single-Family Rates)*					
Above 4,500 cf	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**
Agricultural Irrigation (without residence) and Raw Metered						
All usage	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**
Raw Water Rates						
Metered Landscape Irrigation/ Seasonal Continuous Flow						
All usage	**$0.002222**	**$0.005404**	**$0.006052**	**$0.006778**	**$0.007592**	**$0.008503**

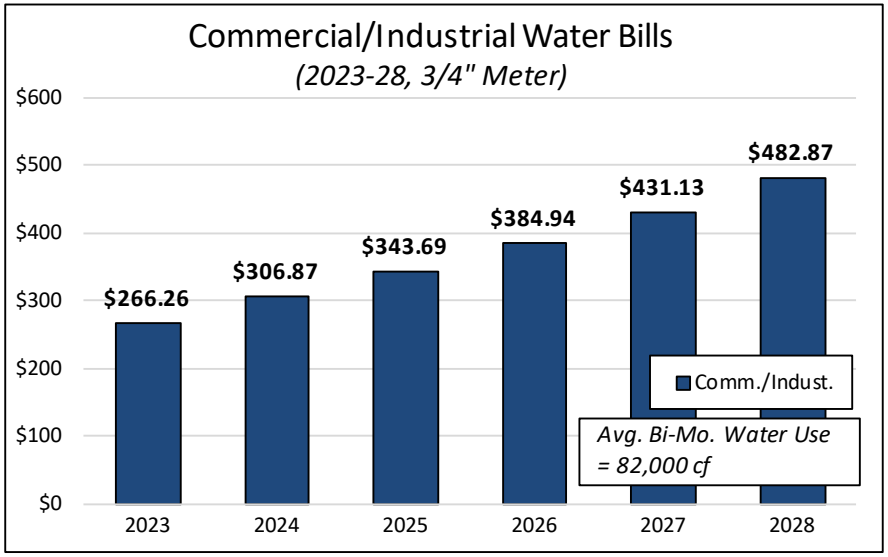
Bill Comparisons – Water Customers


Single-Family Water Bills (2024, 3/4" Meter)
$250
$200
$150
$100
$50
$0
Single Family Current Rates
Single Family Proposed - 3 Tiers
$84.86
$95.35
$99.80
$112.82
$125.00
$142.21
$146.63
$167.41
$184.76
$212.68
Avg. SFR Bi-Mo. Water Use = 2,600 cf
750 cf
1,500 cf
2,600 cf
3,500 cf
5,000 cf









Small Farms *bills increases is due to a much larger allocation of system assets to the Non-Potable/Raw Water system than in 2012 rate study (3.9% vs about 2%).*

Summary of Bill Impacts for Average Water Customers by Year (and $ and % Change by Year)

Water - Customer Bills by Year	2023	2024	2025	2026	2027	2028
Single Family - 3-Tier	$122.59	$139.41	$156.14	$174.87	$195.86	$219.36
Multi-Family Resid. (2 Units)	$96.21	$105.93	$118.64	$132.88	$148.82	$166.68
Commercial-Industrial	$266.26	$306.87	$343.69	$384.94	$431.13	$482.87
Small Farm (2"T Meter)	$249.18	$416.41	$466.38	$522.35	$585.03	$655.23

Water - $ Change in Bills by Year	2023	2024	2025	2026	2027	2028
Single Family - 3-Tier		$16.81	$16.73	$18.74	$20.98	$23.50
Multi-Family Resid. (2 Units)		$9.71	$12.71	$14.24	$15.95	$17.86
Commercial-Industrial		$40.61	$36.82	$41.24	$46.19	$51.74
Small Farm (2"T Meter)		$167.23	$49.97	$55.97	$62.68	$70.20

Water - % Change in Bills by Year	2023	2024	2025	2026	2027	2028
Single Family - 3-Tier		13.7%	12.0%	12.0%	12.0%	12.0%
Multi-Family Resid. (2 Units)		10.1%	12.0%	12.0%	12.0%	12.0%
Commercial-Industrial		15.3%	12.0%	12.0%	12.0%	12.0%
Small Farm (2"T Meter)		67.1%	12.0%	12.0%	12.0%	12.0%

Sewer Utility

August vs. October Sewer Financial Plans

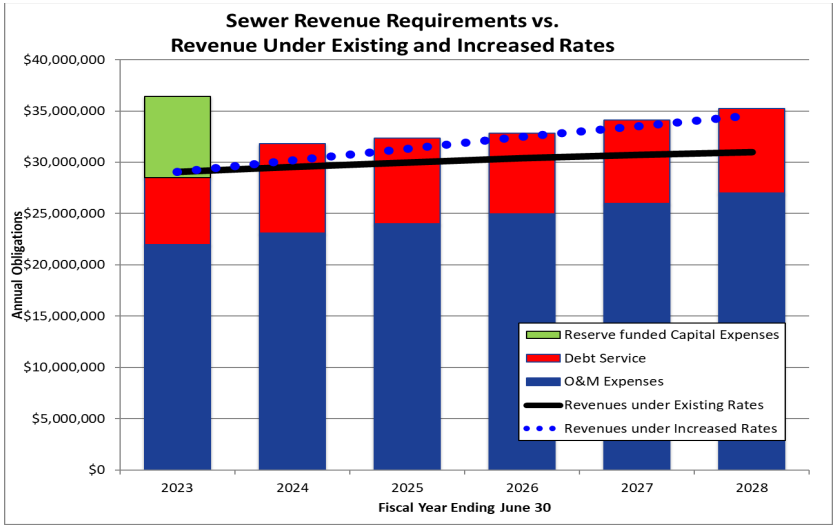
Key Changes in Financial Plans:

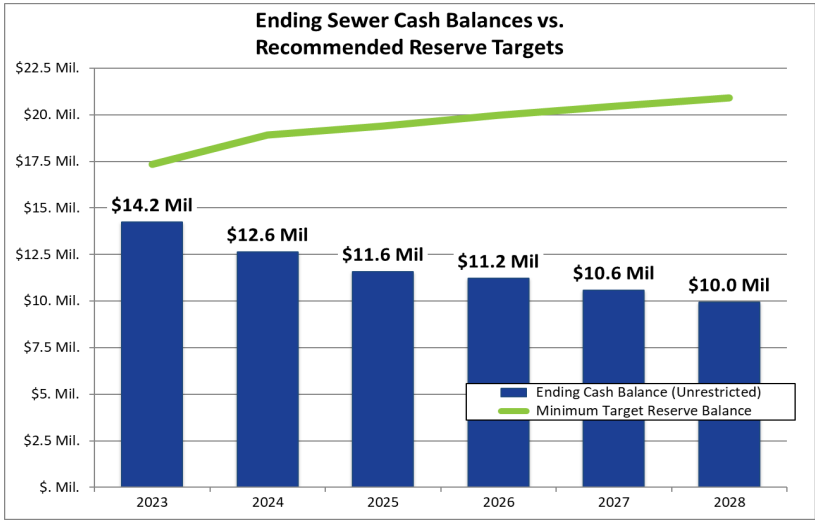
- **Sources of Funds (Revenues) – No Changes**
- **Operating Costs – No Changes**
- **Existing Debt Service (2024-2028) – Higher by $19 M**
  - *More accurate allocation of District Debt Service to the Wastewater Utility*
- **Lower Rate-Funded CIP from $16 M to $0 M**
  - *This funding was shifted to FCC Reserves*
- **Net Results: 2024-2028 Net Revenue Requirements are slightly higher**
  - *About $0.9 M/year higher on average*

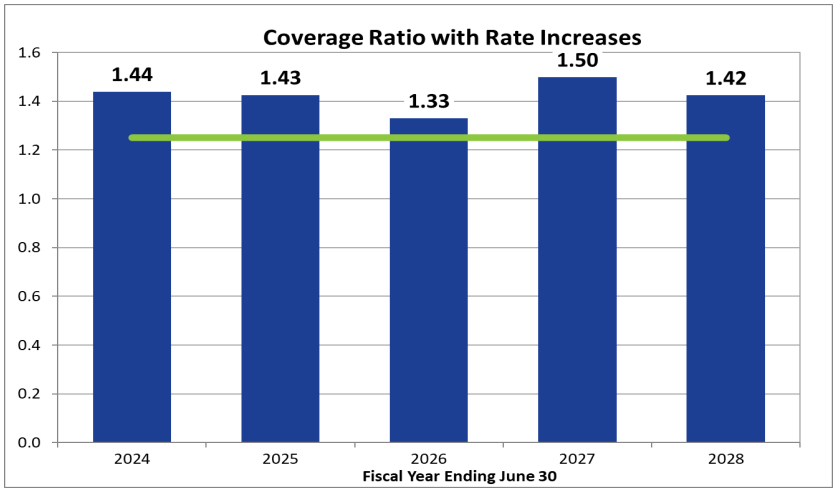
October (Updated) Sewer Financial Plan

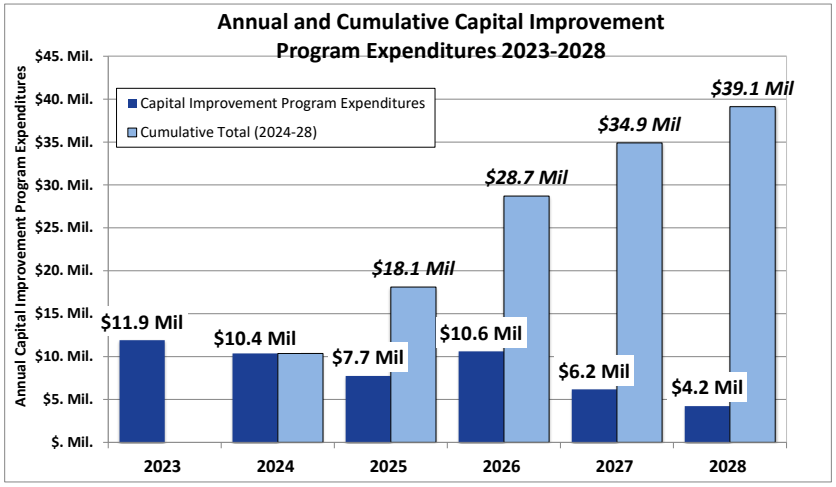
Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected				
	2023	2024	2025	2026	2027	2028
Sources of Sewer Funds						
Rate Revenue Under Current Rates	$ 21,936,079	$ 22,050,147	$ 22,164,808	$ 22,280,065	$ 22,369,185	$ 22,458,662
Recycled Water Sales	2,900,000	3,161,000	3,445,490	3,755,584	3,943,363	4,140,531
1% property tax revenues	3,900,000	3,978,000	3,998,686	4,019,479	4,035,557	4,051,699
Non-Rate Revenues	345,528	350,092	351,913	353,743	355,158	356,578
Total Sources of Funds	**$ 29,081,607**	**$ 29,539,239**	**$ 29,960,896**	**$ 30,408,870**	**$ 30,703,262**	**$ 31,007,470**
Uses of Sewer Funds						
Operating Expenses	$ 21,992,573	$ 23,092,202	$ 24,015,890	$ 24,976,526	$ 25,975,587	$ 27,014,610
Debt Service	6,520,625	8,703,891	8,353,253	7,866,501	8,164,455	8,208,558
Rate-Funded Capital Expenses	-	-	-	-	-	-
Total Use of Funds	**$ 28,513,198**	**$ 31,796,093**	**$ 32,369,143**	**$ 32,843,026**	**$ 34,140,041**	**$ 35,223,168**
Surplus (Deficiency) before Rate Increase	**$ 568,409**	**$ (2,256,854)**	**$ (2,408,247)**	**$ (2,434,156)**	**$ (3,436,779)**	**$ (4,215,698)**
Additional Revenue from Rate Increases	-	661,504	1,349,837	2,065,964	2,807,530	3,577,083
Surplus (Deficiency) after Rate Increase	**$ 568,409**	**$ (1,595,350)**	**$ (1,058,411)**	**$ (368,193)**	**$ (629,249)**	**$ (638,615)**
Projected Annual Revenue Increase	***0.00%***	***3.00%***	***3.00%***	***3.00%***	***3.00%***	***3.00%***
Cumulative Revenue Increases	*0.00%*	*3.00%*	*6.09%*	*9.27%*	*12.55%*	*15.93%*
Net Revenue Requirement1	**$ 28,167,670**	**$ 31,446,001**	**$ 32,017,230**	**$ 32,489,284**	**$ 33,784,883**	**$ 34,866,590**

Overview – Financial Plan









Overview – Sewer COSA

Sewer Costs are Assigned to Customers based on:

1. Flow-Related Costs - allocated by effluent generation **(Variable)**
2. Effluent Strength-Related Costs **(Fixed)**
   - Biochemical Oxygen Demand (BOD) - allocated by the pounds of BOD
   - Total Suspended Solids (TSS) - allocated by the pounds of TSS
3. Customer Costs - allocated by number of accounts or meters **(Fixed)**

COSA – Sewer

Sewer Cost Allocation Factors

Summary of Sewer Cost Allocation Percentages				
Customer Class	% of Total Flow	% of Total BOD	% of Total TSS	% of Accounts/ Meters
Residential Customers				
Single Family Residential	**69.9%**	**63.3%**	**66.8%**	**94.9%**
Multi Family Residential	**12.1%**	**10.9%**	**11.5%**	**1.5%**
Commercial-Industrial				
Commercial - Low	**5.9%**	**3.3%**	**3.1%**	**2.1%**
Commercial - Medium/Low	**5.5%**	**5.7%**	**5.1%**	**0.8%**
Commercial - Medium	**0.4%**	**0.6%**	**0.8%**	**0.1%**
Commercial - Medium/High	**4.3%**	**15.1%**	**11.6%**	**0.5%**
Commercial - High	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Schools				
Schools	**1.9%**	**1.2%**	**1.0%**	**0.1%**
Annual Totals:	**100.0%**	**100.0%**	**100.0%**	**100.0%**

COSA – Sewer

Net Revenue Requirements by Customer Class

Customer Class	Cost Classification Components				Cost-of-Service Net Revenue Reqts.	% of COS Net Revenue Reqts.
	Volume	BOD	TSS	Customer		
Net Revenue Requirements [1]	***$ 11,355,826***	***$ 4,234,790***	***$ 4,234,790***	***$ 2,886,245***	***$ 22,711,651***	--
% of Total	*50.0%*	*18.6%*	*18.6%*	*12.7%*	*100.0%*	--
Residential Customers						
Single Family Residential	$ 7,936,868	$ 2,678,681	$ 2,827,416	$ 2,738,643	$ 16,181,608	*71.2%*
Multi Family Residential	1,372,322	$ 463,157	488,874	$ 43,209	2,367,561	*10.4%*
Subtotal - Residential Customers	$ 9,309,190	$ 3,141,837	$ 3,316,290	$ 2,781,852	$ 18,549,169	*81.7%*
Commercial-Industrial						
Commercial - Low	$ 667,647	$ 137,756	$ 131,903	$ 60,953	$ 998,259	*4.4%*
Commercial - Medium/Low	$ 625,931	$ 241,693	$ 217,138	$ 22,814	1,107,577	*4.9%*
Commercial - Medium	$ 42,649	$ 24,703	$ 35,495	$ 3,802	106,650	*0.5%*
Commercial - Medium/High	$ 489,559	$ 639,978	$ 492,736	$ 13,827	1,636,101	*7.2%*
Commercial - High	$ -	$ -	$ -	-	-	*0.0%*
Subtotal - Commercial-Industrial Customers	$ 1,825,786	$ 1,044,130	$ 877,273	$ 101,397	$ 3,848,587	*16.9%*
Schools						
Schools (100% Fixed)	$ 220,850	$ 48,823	$ 41,227	$ 2,996	313,896	*1.4%*
Total:	**$ 11,355,826**	**$ 4,234,790**	**$ 4,234,790**	**$ 2,886,245**	**$ 22,711,651**	**100.0%**

1. Rev. Reqt. for each customer class is determined by multiplying the Rev. Reqt. from each cost classification by the allocation factors for each customer class.

Rate Design Analysis – Sewer

- **Volumetric rates** are based on the amount of wastewater effluent contributed to the District's collection system by each customer class.
- **Fixed charges** reflect strength and quantity of effluent.

Commercial Classes	Current Rate Design		Alternative Rate Design	
	Bi-mo. Fixed Charge Per Dwell. Unit or Acct.	Volumetric Rates ($/CF)	Bi-mo. Fixed Charge Per Dwell. Unit or Acct.	Volumetric Rates ($/CF)
Commercial - Low	$ 166.86	$ 0.03907	$ 65.84	$ 0.06580
Commercial - Medium/Low	$ 475.75	$ 0.04823		
Commercial - Medium	$ 278.92	$ 0.06711	$ 136.26	$ 0.08536
Commercial - Medium/High	$ 1,145.78	$ 0.09221	$ 216.79	$ 0.16825
Commercial - High	$ -	$ -		

These rates are intended to (1) reduce Commercial Classes to just 3 Classes (Low, Medium, and Medium/High), (2) to adjust the Bi-monthly fixed charges to (a) the SFR charge for Low, (b) twice the SFR charge for Medium, and (c) three times the SFR charge for Medium/High), and (3) adjust the commodity rates based on the adjusted fixed charges to collect the target revenue reqts.

COSA – Recycled Water

Recycled Water Cost Allocation Factors

Summary of Recycled Water Cost Allocation Percentages			
Customer Class	**% Allocaton Flow/Consumption**	**% Allocaton/ Peaking Factor**	**% of Accounts/ Meters**
Recycled Water Customers			
Commercial Landscape	**25.7%**	**21.7%**	**3.2%**
Recreational Turf	**13.3%**	**16.8%**	**0.2%**
Residential - Dual Plumbed	**61.1%**	**61.4%**	**96.6%**
Totals:	**100.0%**	**100.0%**	**100.0%**

COSA – Recycled Water

Net Revenue Requirements by Customer Class

Recycled Customer Class	Recycled Cost Classification Components				Cost-of-Service Net Revenue Reqts.	% of COS Net Revenue Reqts.
	(COM)	(CAP)	(FP)	(CA)		
Net Revenue Requirements [1]	***$ 1,942,881***	***$ 647,627***	***$ -***	***$ 647,627***	***$ 3,238,135***	--
% of Total	*60.0%*	*20.0%*	*0.0%*	*20.0%*	*100.0%*	
Commercial Landscape	$ 498,359	$ 140,762	$ -	$ 20,574	$ 659,695	*20.4%*
Recreational Turf	$ 257,946	$ 109,024	$ -	$ 1,372	368,342	*11.4%*
Residential - Dual Plumbed	$ 1,186,576	$ 397,841	$ -	$ 625,681	2,210,098	*68.3%*
Total:	**$ 1,942,881**	**$ 647,627**	**$ -**	**$ 647,627**	**$ 3,238,135**	**100%**

1. Revenue requirement by customer class is calculated by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.

Rate Design – Recycled Water

Calculation of Recycled Basic Charge and Volumetric Rate

Recycled Water Customer Class	Number of Customers	Dual-Plumbed Basic Charge *($/bi-mo.)*	Rate Revenue
Total Dual-Plumbed - Basic Charges	5,474	**$31.16**	$ 1,023,522

Rec Turf/Comm. Landscape/Dual Plumbed Customers	Target Volumetric	Water Consumption	Commodity Rates *($/ccf)*	Commodity Rates *($/cf)*
Rec Turf				
40% of Fixed Charge Revenue[a]	$44,158			
Commodity Charge Revenue	$257,946			
Recovered in Volumetric Rate	$302,105	233,112		
Commercial Landscape				
40% of Fixed Charge Revenue[a]	$64,535			
Commodity Charge Revenue	$498,359			
Recovered in Volumetric Rate	$562,893	450,378		
Dual-Plumbed Residential				
Commodity Charge Revenue	$1,186,576			
Recovered in Volumetric Rate	$1,186,576	1,072,336		
Totals	$2,051,574	1,755,826	**$1.168**	**$0.01168**

Proposed Rates- Sewer Base Charges

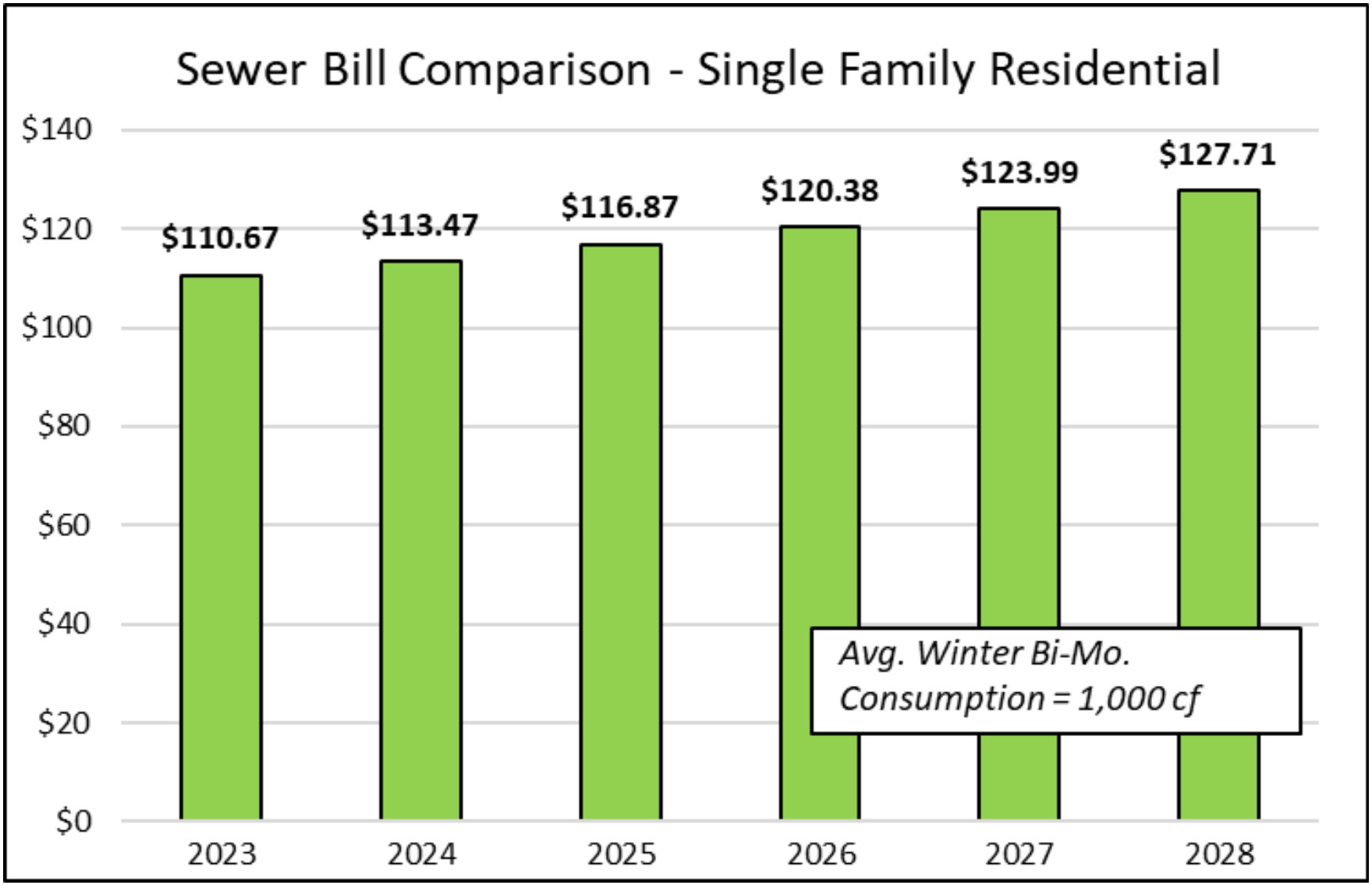
Base Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Wastewater Base Charges (Bi-Monthly)						
Residential Flat Rate District Average[1]	$135.32	$141.75	$146.00	$150.38	$154.89	$159.54
Single Family Residential	$69.58	$66.34	$68.33	$70.38	$72.49	$74.66
Multi-Family Residential (flat rate per unit)	$31.31	$39.11	$40.28	$41.49	$42.73	$44.02
Commercial (all categories)	*$70.46*	*$138.27*	*$142.42*	*$146.69*	*$151.09*	*$155.63*
Commercial without water service (flat rate per unit)[2]	*$127.13*	*$198.33*	*$204.27*	*$210.40*	*$216.72*	*$223.22*
Schools, per student and staff (billed annually)	$13.09	$19.04	$19.61	$20.19	$20.80	$21.42
Alternative Commercial Fixed Charges						
Commercial - Low	-	$65.84	$67.81	$69.85	$71.94	$74.10
Commercial - Medium	-	$136.26	$140.35	$144.56	$148.90	$153.37
Commercial - Medium/High	-	$216.79	$223.30	$229.99	$236.89	$244.00
Commercial without water service (flat rate per unit)[3]	-	$314.51	$323.95	$333.67	$343.68	$353.99
Recycled Water Base Charges (Bi-Monthly)						
Single Family Dual Plumbed Residential[1]	$17.37	$31.16	$32.10	$33.06	$34.05	$35.07
Commercial Landscape/Recreational Turf						
5/8" and 3/4" meters	$38.70	$42.18	$43.45	$44.75	$46.09	$47.47
1"	$56.74	$63.71	$65.62	$67.59	$69.61	$71.70
1 1/2"	$98.02	$112.91	$116.29	$119.78	$123.38	$127.08
1 1/2"T	$116.07	$134.43	$138.47	$142.62	$146.90	$151.30
2"	$149.61	$174.41	$179.64	$185.03	$190.58	$196.30
2"T	$149.61	$174.41	$179.64	$185.03	$190.58	$196.30
3"	$288.91	$340.46	$350.67	$361.19	$372.03	$383.19
3"T	$314.70	$371.21	$382.35	$393.82	$405.63	$417.80
4"	$443.68	$524.96	$540.71	$556.93	$573.64	$590.85
4"T	$554.59	$657.19	$676.91	$697.21	$718.13	$739.67
6"	$871.88	$1,035.42	$1,066.48	$1,098.48	$1,131.43	$1,165.38
6"T	$1,217.55	$1,447.48	$1,490.90	$1,535.63	$1,581.70	$1,629.15
8"T	$2,076.52	$2,471.47	$2,545.61	$2,621.98	$2,700.64	$2,781.66
10"T	$3,288.72	$3,907.52	$4,024.75	$4,145.49	$4,269.85	$4,397.95
12"T	$4,177.99	$5,137.54	$5,291.67	$5,450.42	$5,613.93	$5,782.35

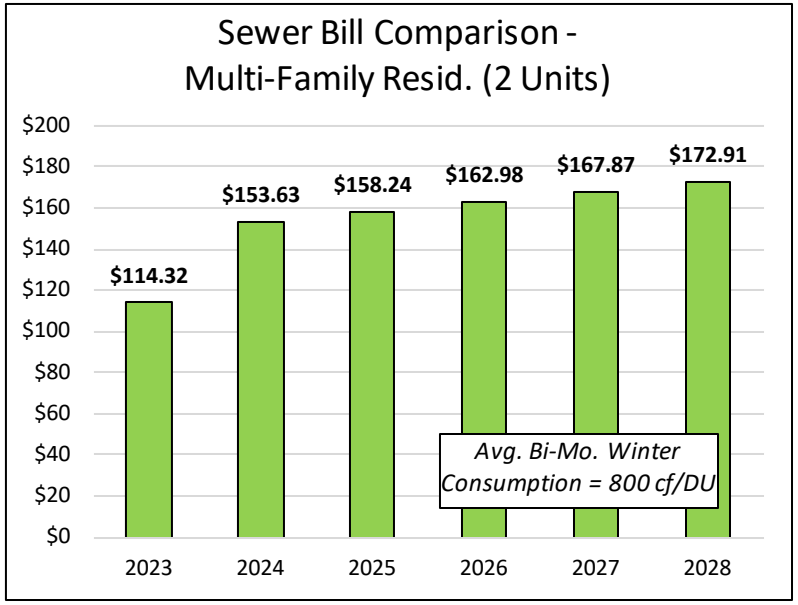
1. This rate includes the single-family bi-monthly fixed charge plus an assumed consumption of 1,600 cf charged at the single-family commodity rate.
2. The proposed 2024 rate includes the commercial - low bi-monthly fixed charge plus an assumed average flow of 1,600 cf times the commercial - low commodity rate.
3. Includes the adjusted comm. - low bi-mo. fixed charge plus the average flow for comm. - low customers of 37,800 cf times the adjusted comm. - low commodity rate.

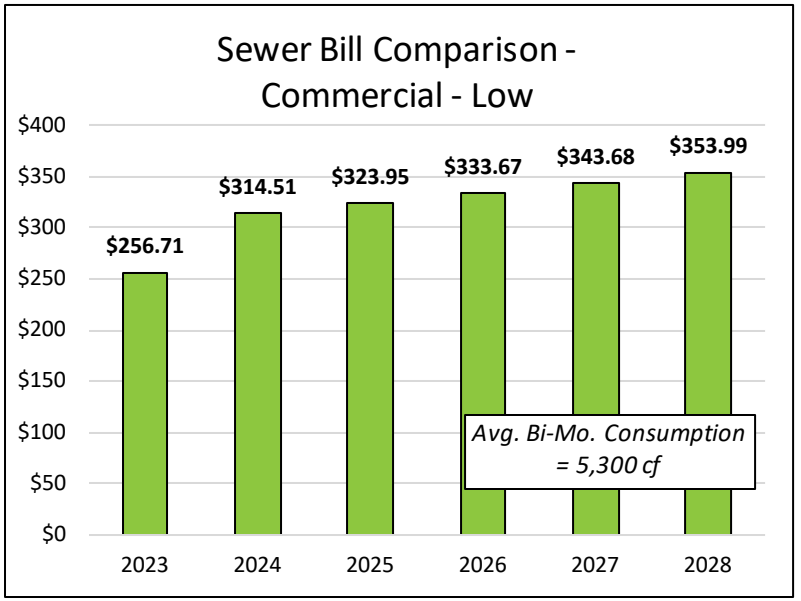
Proposed Rates- Sewer Commodity Charges

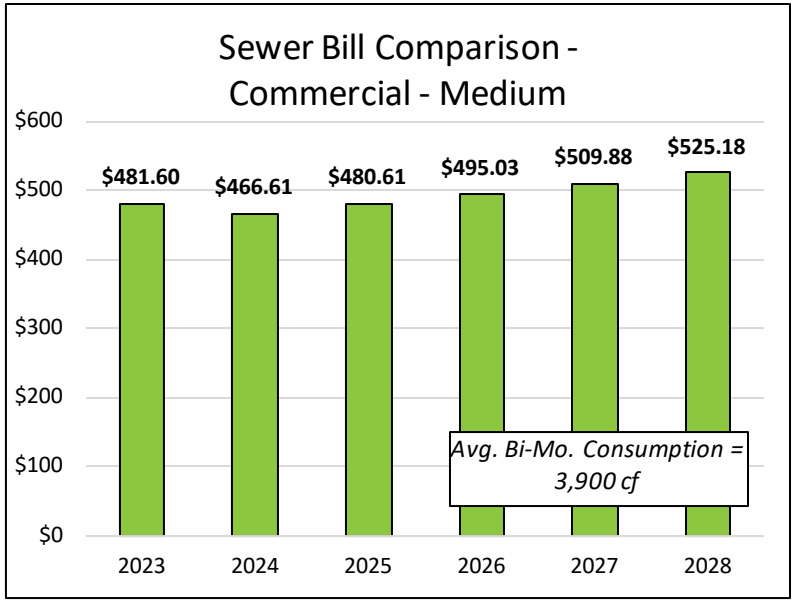
Commodity Charges	Current Rates	Proposed Rates				
		2024	2025	2026	2027	2028
Wastewater Commodity Rates ($/CF)						
Single Family Residential - All Usage	$0.041091	$0.047133	$0.048547	$0.050003	$0.051503	$0.053048
Multi-Family Residential - All usage	$0.032315	$0.047133	$0.048547	$0.050003	$0.051503	$0.053048
Commercial/Industrial						
Commercial - Low	$0.049278	$0.084277	$0.086805	$0.089409	$0.092092	$0.094854
Commercial - Medium/Low	$0.072570	$0.087958	$0.090597	$0.093314	$0.096114	$0.098997
Commercial - Medium	$0.106231	$0.181471	$0.186915	$0.192522	$0.198298	$0.204247
Commercial - Medium/High	$0.167191	$0.177770	$0.183104	$0.188597	$0.194255	$0.200082
Commercial - High	$0.364214	$0.352735	$0.363317	$0.374217	$0.385443	$0.397006
Alternative Commercial Commodity Rates						
Commercial - Low	*N.A.*	$0.065795	$0.067769	$0.069802	$0.071897	$0.074053
Commercial - Medium	*N.A.*	$0.085355	$0.087916	$0.090553	$0.093270	$0.096068
Commercial - Medium/High	*N.A.*	$0.168254	$0.173301	$0.178500	$0.183855	$0.189371
Recycled Water Commodity Rates ($/CF)						
Dual Plumbed Residential						
0 - 3,000 cf *(50% of Potable Tier 1)*	$0.009956	***Replaced by Uniform Volumetric Rate***				
3,001 - 4,500 cf *(70% of Potable Tier 2)*	$0.016820					
Above 4,500 cf *(90% of Potable Tier 3)*	$0.025375					
Commercial Landscape						
All Usage	$0.007826					
Recreational Turf						
All Usage	$0.008346					
Recycled Uniform Rate	***N.A.***	**$0.011684**	**$0.012035**	**$0.012396**	**$0.012768**	**$0.013151**

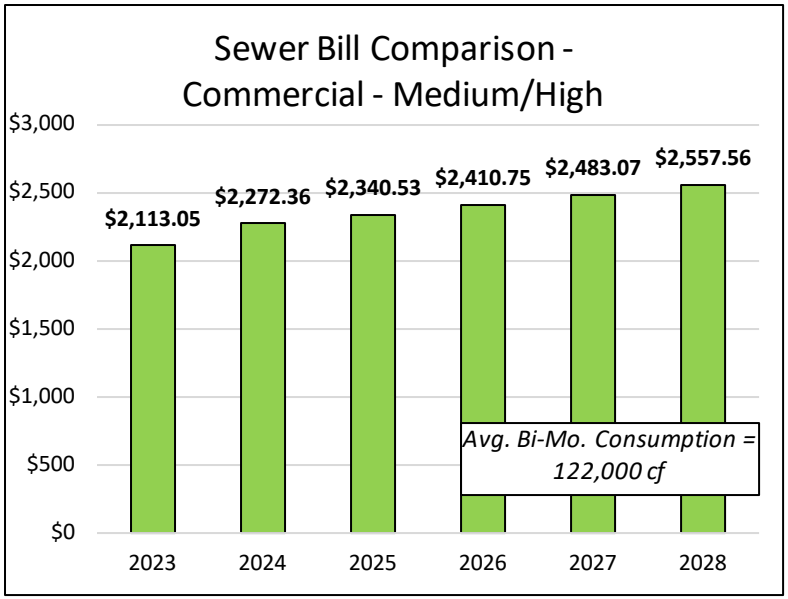
Bill Comparisons – Sewer Customers

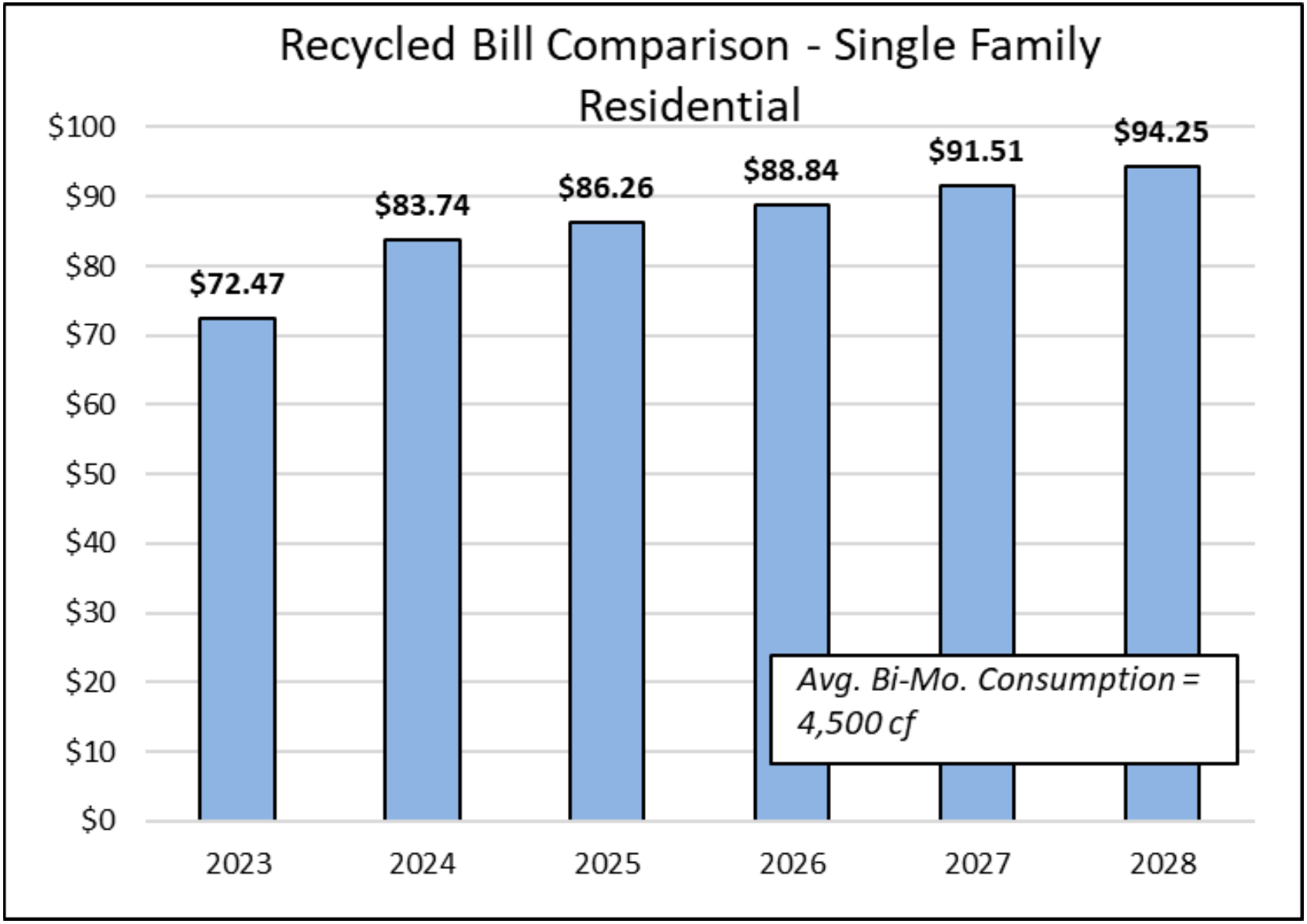

Sewer Bill Comparison - Single Family Residential
$140
$120
$100
$80
$60
$40
$20
$0
$110.67
$113.47
$116.87
$120.38
$123.99
$127.71
2023
2024
2025
2026
2027
2028
Avg. Winter Bi-Mo.
Consumption = 1,000 cf


Sewer Bill Comparison -
Multi-Family Resid. (2 Units)
$200
$180
$160
$140
$120
$100
$80
$60
$40
$20
$0
$114.32
$153.63
$158.24
$162.98
$167.87
$172.91
2023
2024
2025
2026
2027
2028
Avg. Bi-Mo. Winter Consumption = 800 cf/DU


Sewer Bill Comparison -
Commercial - Low
$400
$350
$300
$250
$200
$150
$100
$50
$0
$256.71
$314.51
$323.95
$333.67
$343.68
$353.99
2023
2024
2025
2026
2027
2028
Avg. Bi-Mo. Consumption = 5,300 cf


Sewer Bill Comparison -
Commercial - Medium
$600
$500
$400
$300
$200
$100
$0
$481.60
$466.61
$480.61
$495.03
$509.88
$525.18
2023
2024
2025
2026
2027
2028
Avg. Bi-Mo. Consumption = 3,900 cf


Sewer Bill Comparison -
Commercial - Medium/High
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$2,113.05
$2,272.36
$2,340.53
$2,410.75
$2,483.07
$2,557.56
2023
2024
2025
2026
2027
2028
Avg. Bi-Mo. Consumption = 122,000 cf


Recycled Bill Comparison - Single Family Residential
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
$72.47
$83.74
$86.26
$88.84
$91.51
$94.25
2023
2024
2025
2026
2027
2028
Avg. Bi-Mo. Consumption = 4,500 cf

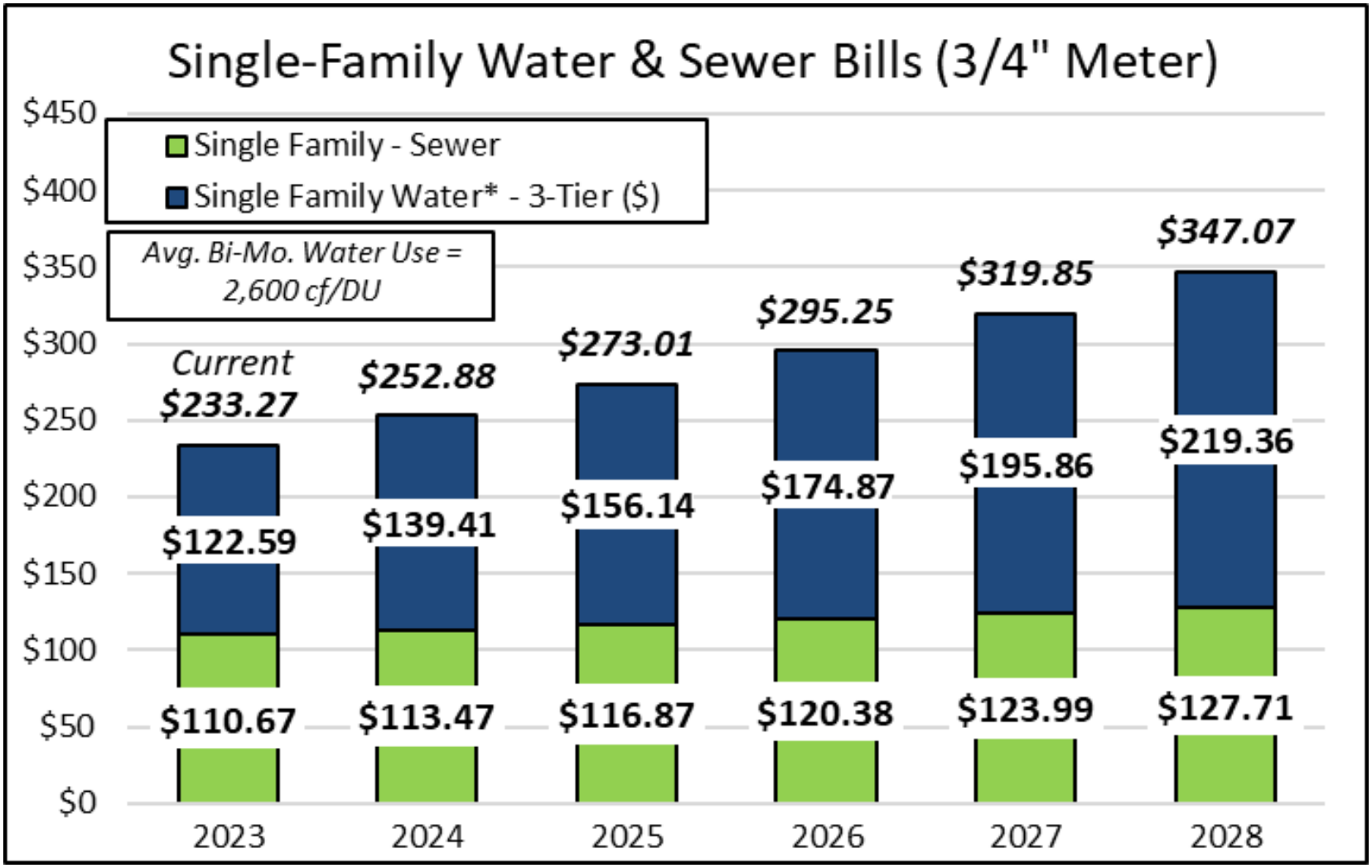
Summary of Bill Impacts for Average Sewer Customers by Year (and $ and % Change by Year)

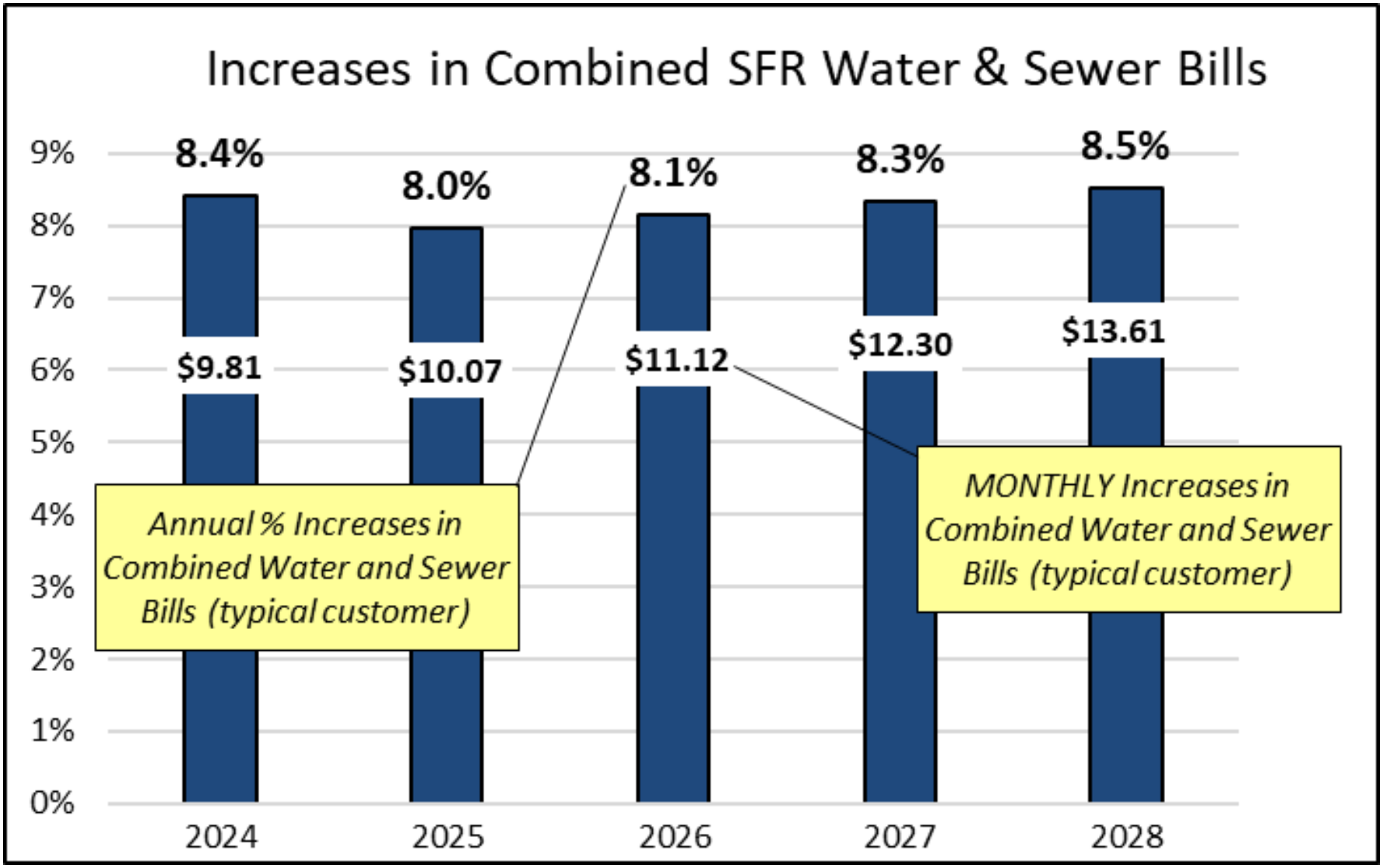
Sewer - Customer Bills by Year	2023	2024	2025	2026	2027	2028
Single Family Residential	$110.67	$113.47	$116.87	$120.38	$123.99	$127.71
Multi-Family Residential (2 Units)	$114.32	$153.63	$158.24	$162.98	$167.87	$172.91
Commercial - Low	$256.71	$314.51	$323.95	$333.67	$343.68	$353.99
Commercial - Medium	$481.60	$466.61	$480.61	$495.03	$509.88	$525.18
Commercial - Medium/High	$2,113.05	$2,272.36	$2,340.53	$2,410.75	$2,483.07	$2,557.56
Recycled - Dual-Plumbed	*$72.47*	*$83.74*	*$86.26*	*$88.84*	*$91.51*	*$94.25*

Sewer - $ Change in Bills by Year	2023	2024	2025	2026	2027	2028
Single Family Residential		$2.80	$3.40	$3.51	$3.61	$3.72
Multi-Family Residential (2 Units)		$39.30	$4.61	$4.75	$4.89	$5.04
Commercial - Low		$57.81	$9.44	$9.72	$10.01	$10.31
Commercial - Medium		-$14.99	$14.00	$14.42	$14.85	$15.30
Commercial - Medium/High		$159.32	$68.17	$70.22	$72.32	$74.49
Recycled - Dual-Plumbed		*$11.27*	*$2.51*	*$2.59*	*$2.67*	*$2.75*

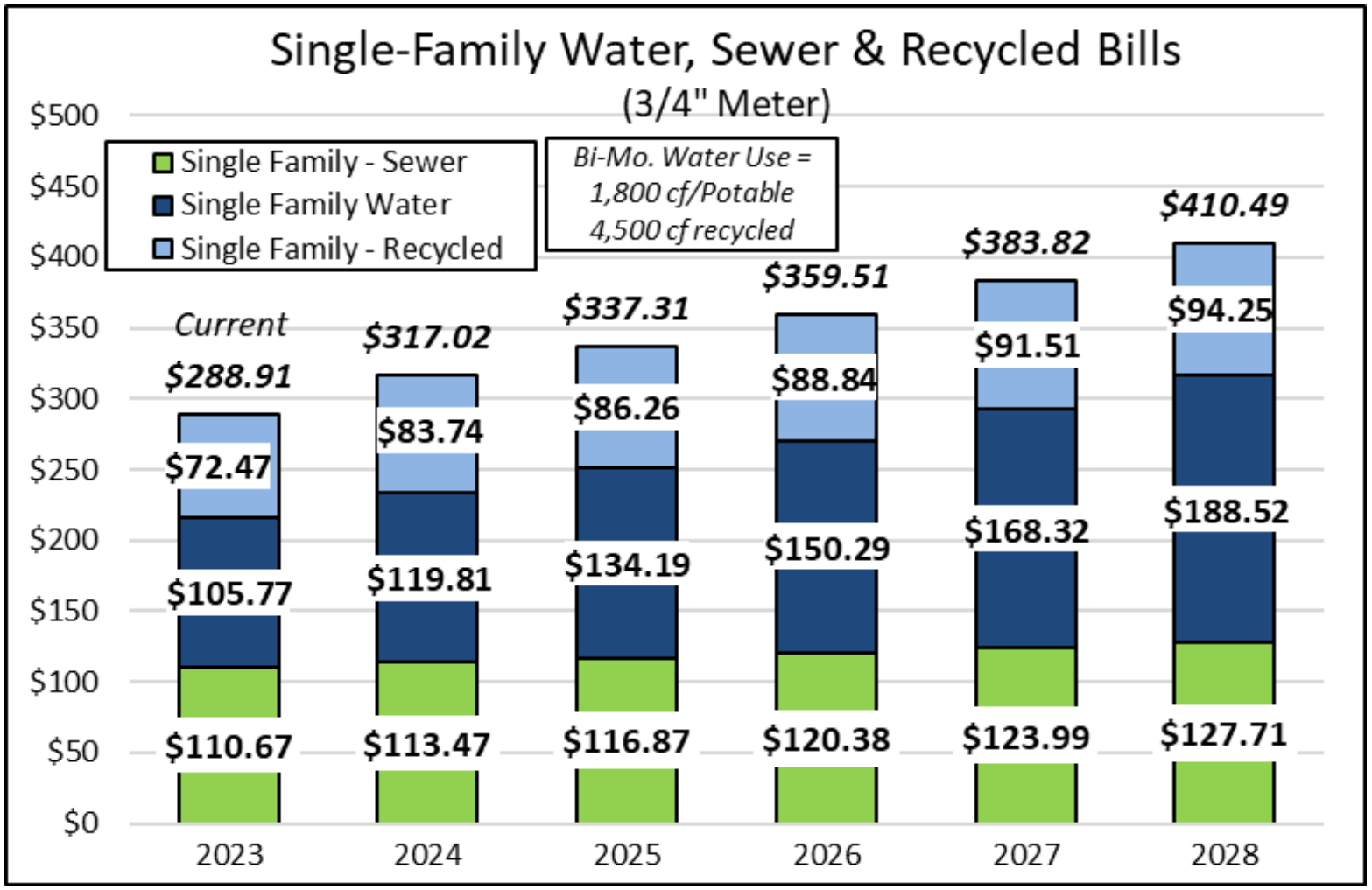
Sewer - % Change in Bills by Year	2023	2024	2025	2026	2027	2028
Single Family Residential		2.5%	3.0%	3.0%	3.0%	3.0%
Multi-Family Residential (2 Units)		34.4%	3.0%	3.0%	3.0%	3.0%
Commercial - Low		22.5%	3.0%	3.0%	3.0%	3.0%
Commercial - Medium		-3.1%	3.0%	3.0%	3.0%	3.0%
Commercial - Medium/High		7.5%	3.0%	3.0%	3.0%	3.0%
Recycled - Dual-Plumbed		*15.6%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*

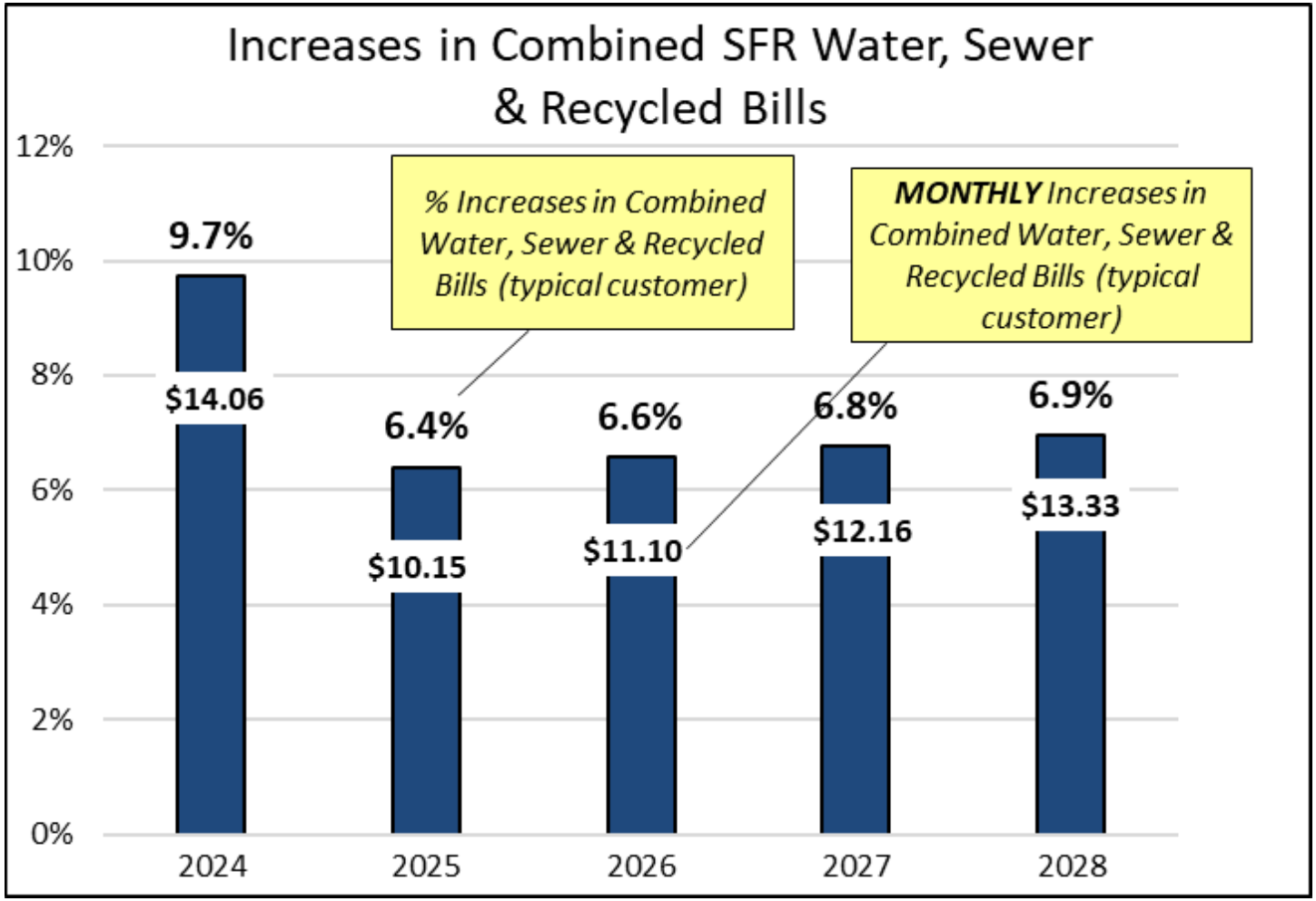
Bill Comparisons – Combined Water and Sewer Customers


Single-Family Water & Sewer Bills (3/4" Meter)
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
Single Family - Sewer
Single Family Water* - 3-Tier ($)
Avg. Bi-Mo. Water Use = 2,600 cf/DU
Current
$233.27
$252.88
$273.01
$295.25
$319.85
$347.07
$122.59
$139.41
$156.14
$174.87
$195.86
$219.36
$110.67
$113.47
$116.87
$120.38
$123.99
$127.71
2023
2024
2025
2026
2027
2028


Increases in Combined SFR Water & Sewer Bills
9%
8%
7%
6%
5%
4%
3%
2%
1%
0%
8.4%
8.0%
8.1%
8.3%
8.5%
$9.81
$10.07
$11.12
$12.30
$13.61
2024
2025
2026
2027
2028
Annual % Increases in Combined Water and Sewer Bills (typical customer)
MONTHLY Increases in Combined Water and Sewer Bills (typical customer)

Bill Comparisons – Combined Water, Sewer & Recycled Customers


Single-Family Water, Sewer & Recycled Bills
(3/4" Meter)
Single Family - Sewer
Single Family Water
Single Family - Recycled
Bi-Mo. Water Use =
1,800 cf/Potable
4,500 cf recycled
$500
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
Current
$288.91
$72.47
$105.77
$110.67
$317.02
$83.74
$119.81
$113.47
$337.31
$86.26
$134.19
$116.87
$359.51
$88.84
$150.29
$120.38
$383.82
$91.51
$168.32
$123.99
$410.49
$94.25
$188.52
$127.71
2023
2024
2025
2026
2027
2028


Increases in Combined SFR Water, Sewer & Recycled Bills
12%
10%
8%
6%
4%
2%
0%
% Increases in Combined Water, Sewer & Recycled Bills (typical customer)
MONTHLY Increases in Combined Water, Sewer & Recycled Bills (typical customer)
9.7%
$14.06
6.4%
$10.15
6.6%
$11.10
6.8%
$12.16
6.9%
$13.33
2024
2025
2026
2027
2028

Questions and Discussion of COSA and Draft Rates

- Board feedback and discussion from today's meeting will be incorporated into the final cost of service analysis, rate design, and proposed rates.

Next Steps and Schedule

Next Steps

- Incorporate feedback from today's discussion to modify cost of service and proposed rates as needed
- Return to Board on October 23
  - Approve proposed cost of service and rate design
  - Proceed with issuance of Prop 218 noticing
  - Schedule Public Rate Hearing to Adopt Rates for Dec. 11
- Schedule Community Workshops in November
- Provide Draft Rate Study Report for Nov. Board Meeting

EL DORADO IRRIGATION DISTRICT

SUBJECT: Key Performance Indicators and Goals Summary update.

PREVIOUS BOARD ACTIONS

The General Manager presents the Key Performance Indicators and Goals Summary annually.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 12020 Duties and Powers
BP 0030 Accountability

SUMMARY OF ISSUE

Staff initially developed the Key Performance Indicators and Goals Summary to track many of the District's strategic initiatives. Staff expanded it to include performance indicators used to track improvement or benchmark with similar agencies to measure the District's performance against industry standards.

BACKGROUND/DISCUSSION

In 2022, the District achieved excellent financial performance and customer satisfaction ratings and significantly progressed on its 2022-2026 goals. However, warning signs continue to appear in the trends and measurements of the District's performance in service reliability. One of the Board's 2022 priorities was replacing aging assets to improve utility infrastructure reliability, specifically water service lines and main replacements. This topic and many others are discussed below and will be presented during the Board meeting.

100% Safety

The District maintains high employee safety training, practices, and performance standards. Safety-related incidents remained low in 2022, with zero lost-time injuries (LT), five injuries requiring medical attention (IRMAs), and ten avoidable accidents. The low number of incidents reflects an excellent industrial safety record and the staff's commitment to the District's Guiding Principle of *100% Safety*.

It is also important to highlight the District's 2022 (July 2021–July 2022) annual workers' compensation insurance premium, which continued to remain low at $244,686. The insurance premium is down from $1.9 million in 2003. The ongoing, year-over-year annual savings the District achieves on insurance premiums directly result from employees working safely. The 2022 premium marks the fourth year in a row the District has achieved record low premiums, no small accomplishment. It is anticipated that the District will once again receive the *President's Special Recognition Award* from the Association of California Water Agencies/Joint Powers Insurance Agency (ACWA/JPIA) as we continue to be among the best-rated agencies within ACWA/JPIA's pool of insured members.

The Key Performance Indicators for public health and safety track the number of regulatory violations in the water, wastewater, and hydroelectric systems. In 2022, the District again had no violations associated with its drinking water and hydroelectric facility operations. Unfortunately,

seven violations were related to the operation of the District's wastewater facilities— three attributed to an elevated coliform level, three to the 2023 extreme storms, and one with an anomalous data result.

Respect for the Individual

The District prides itself on establishing and maintaining a positive and respectful work environment. The District conducts employee surveys every few years to measure the work environment. The results of the 2022 Employee Engagement survey indicated high employee satisfaction levels. For example, the survey results indicated that 97% of employees know the District's mission statement and guiding principles, 90% agreed or strongly agreed that they received the safety and skill training they need to be successful in their job, and 86% indicated that working at the District provides a feeling of accomplishment.

Excellent Customer Service

The District conducts customer satisfaction surveys every two years, and the results remain positive. In 2023, 91% of customers were satisfied or very satisfied with the District's service. They rate phone service at 98% satisfied or very satisfied and field service at 98% satisfied or very satisfied. Additionally, customer perception of the reasonableness of water and wastewater rates increased by approximately 10%, from 61% to 70% for water and 51% to 61% for wastewater.

We continue expanding services on the District's website, including email notifications and online bill-pay opportunities. Currently, 72% of customers use the District's online bill pay feature. As of December 31, 2022, 90% of customers either receive information from the District via email or have expressly opted not to do so. Consequently, we use this email database to tell the District's story on project status, budgeting, and even legislative activity affecting their services. The database was vital for EID's communications efforts during emergencies like the Caldor Fire and last winter's storm events that challenged the District's drinking water treatment operations.

Excellent customer service is anchored in clear, diverse communication and active public outreach. To better serve our customers and community, the District creates trustworthy, transparent communications about the projects and services our customers depend upon for safe and reliable services. The District pursues this goal using various growing platforms and communications methodologies to inform, educate, and serve District ratepayers. By tracking Key Performance Indicators associated with website usage and social media engagement and reach, the District can continuously tailor its messaging to increase its impact on our customers and community. The District also expanded the use of Facebook and Nextdoor to communicate with our customers and continues to increase engagement on its YouTube channel.

Service Reliability

To quantify the reliability of the District's water and wastewater services, the District tracks the number, duration, and rate of water outages, line breaks, and sanitary sewer overflows (SSOs) and compares each to industry benchmarks. Many comparisons are made using the most recent 2022 American Water Works Association (AWWA) benchmark. The District is performing well below industry medians (mainly in the bottom quartile nationally and even lower in the western region of the United States) in the number of short- and medium-duration drinking water outages and the number of line breaks per 100 miles of pipe. System losses also remain stubbornly high. However, the new Main Ditch pipeline completed in 2022 eliminated a large contributor to overall water losses. Overall, water system reliability remains below industry standards. Continued, sustained investment in the Capital Improvement Plan (CIP) will help the District gradually close the gap.

In the wastewater system, the rate of SSOs remains within industry standards. This rating was achieved thanks to the extensive preventative maintenance on 647 miles of sewer lines utilizing hydro-cleaning, chemical root treatments, and camera inspections designed to proactively monitor for signs of pipeline failures. However, like the water system, the wastewater system is aging, and to maintain current service levels, continued capital investments are needed to replace these assets before they fail.

It is important to note that industry and regulatory standards are not necessarily synonymous. Industry standards are considered industry average or best practice targets, depending on the benchmark, while regulatory standards are legal requirements that must be met to avoid civil or administrative liability. The District could face significant monetary penalties and costly mandated facility upgrades if it cannot consistently meet regulatory standards, even while meeting industry standards. Therefore, staff's objective remains to prioritize aging infrastructure rehabilitations or replacements in advance of such situations to avoid unnecessary emergency expenditures by the District.

The service reliability metrics indicate that improvement is needed, particularly on the drinking water side of the District's operations. As staff continues to advise the Board, leaks in service lines, distribution lines, and transmission lines continue to divert time and monetary resources from preventative maintenance efforts, which further compounds the challenge of safe and reliable operations of the District water system. The District must invest significant capital funds into pipeline and asset replacements to improve results. The 2023–2027 CIP included a five-year total of $23 million for service line replacement and $35 million for water line replacements. In 2023, the Board approved $5 million to replace about 1 mile of leaking steel waterlines along Forebay and Drop Off Road in Pollock Pines. The District is on schedule to replace the 4-mile Sly Park Intertie pipeline in 2024-2025 once design and environmental review efforts are complete.

Still, the District has nearly 1,300 miles of drinking water pipelines with an average service life of 80 years, and many of those lines are over a half-century old. Therefore, the desired replacement rate would be about 16 miles yearly – far greater than the rate programmed into the current CIP. However, the current financial plan embedded in the Cost of Service Analysis (COSA) indicates that it will be challenging to maintain the current inadequate pace even with proposed rate adjustments. Consequently, given that the District must also meet its financial obligations, staff is not recommending an increase to the current pace; instead, staff understands the need to make uncomfortable deferrals of necessary reinvestments and maintenance activities.

Recent efforts to replace sewer force mains have improved the overall picture for the wastewater side of the business, and similar levels of ongoing collection line replacement/rehabilitation are needed to avoid increased SSOs and interruptions of wastewater service. The 2023-2027 CIP included $23 million for wastewater line replacement. In 2023, the Board approved $15 million to replace a large section of the Motherlode Force Main. This multi-phase project is currently under construction and will eliminate a troubling number of line breaks and SSOs experienced in recent winters and increase our capacity to convey peak flows to our wastewater plant. Also, multiple locations within the collection system have been lined and repaired to extend the service life of the gravity sewer collection system. With no shortage of issues to address, staff are analyzing a new situation with Marina Village 1 lift station and force main in El Dorado Hills, given a recent spike in leaks.

One industry target the District has been working to meet is hydrant maintenance, particularly in light of the greater awareness of the impacts of wildland fire in California and increasing rates and cancellation of homeowner insurance for our customers. In addition to a number of private water systems with private fire hydrants throughout the District's service area, staff maintain an inventory of approximately 6,500 fire hydrants with the goal of exercising and servicing each hydrant once every five years. Last year, staff was able to service 1,121 hydrants (17%) of its inventory. During the first seven months of 2023, staff was able to service 805 hydrants (12%), so staff is getting closer to meeting its 20% annual goal.

Meter function, accuracy, and reliability are essential for accurate data collection and billing of water usage. Capturing accurate water consumption data ensures appropriate revenue recovery needed to support operations and reliable water delivery to our customers. Additionally, accurate and reliable data collection helps promote water use efficiency. District staff maintains and reads over 48,400 water and recycled water meters. Approximately 62% of the meters are read through cellular, radio, and vehicle reading devices, while the remaining 38% are read manually. The District continues to upgrade all manual read meters to ensure accuracy. For 2022, the District falls in the top target category for meter function through AWWA benchmarking at 99.997%.

The District continues to make good progress in carrying out our CIP. Over the past years, the District has met the overall goal for CIP expenditures, averaging 78% of planned expenditures to ensure the District continues to reinvest in replacing aging assets, maintain reliability, and address regulatory mandates and safety while meeting financial plan objectives. The District has invested approximately $225 million ($45 million annually) in asset replacement and upgrades over the last five years.

Staff continues to seek and apply for grant funding for CIP projects. Between 2014 and 2019, the District was awarded seven grants totaling $12 million for water infrastructure projects and hazard fuel reduction on District-owned property. Since 2020, the District has been awarded five grants for emergency backup generators, waterline replacement, emergency dam repairs, and fuel reduction, totaling $15.5 million. Staff is currently seeking additional grant funding for our projects, including Silver Lake dam replacement, flume replacement, floating cover reservoir replacement, recreation improvements, and hazard fuel reduction projects to protect our water conveyance system from the effects of wildfire. The District has had high success with fuel reduction grants and was recently awarded a grant from the California Department of Forestry and Fire Protection (CAL FIRE) to reduce fuels near Flume 46 along the El Dorado Canal (nearly two-thirds of a mile in length). The District has submitted six grant applications for review with a maximum potential of $41 million in funding.

Given the ongoing need to replace aging infrastructure, staff continues to respond to Pacific Gas and Electric (PG&E) Public Safety Power Shutoff (PSPS) and Enhanced Powerline Safety Settings (EPSS) programs, which can impact the District's ability to maintain safe and reliable operations. To help guard against the impacts of the PSPS and EPSS programs, the District has invested in significant additional backup generator capability. Today, staff can deploy and maintain a fleet of up to 196 generators, including nine large portable and 79 stationary generators providing emergency power to critical District water, wastewater, and hydro facilities. Additionally, the District can deploy 110 small portable generators to power monitoring equipment during each PSPS or EPSS event or other power outages such as rolling blackouts or winter storms. The additional 22 generators that will eventually be installed over a year-long period with the help of a $3.6 million FEMA grant (recently doubled in value from the initial award to cover increased costs) will further support ongoing reliable drinking water and wastewater operations during these challenging conditions.

Fiscal Responsibility—Rate Comparability

Compared to neighboring utilities, the District's average water bill was $134.61 compared to an average of $166.29. The average wastewater bill for EID was $135.33 and well below similar agencies of $171.63.

Fiscal Responsibility—Indebtedness

In 2022, the District issued new debt with a face value of $71.5 million. The new debt was used to pay off the District's Unfunded Accrued Liability (UAL), which was increasing year-over-year based, in part, on the volatility of the California Public Employees' Retirement System (CalPERS) system's rate of return, thus converting this liability into a fixed, low-interest debt which will save significant District funds. Moody's and Standard & Poor's credit ratings of the District are AA- and Aa3 credit rating tier, respectively, and were reaffirmed as part of the major refinance transactions in 2021. The high credit ratings lowered the District's true interest costs by increasing the premiums at which the bonds sold. This saved additional money by allowing the District to forego municipal bond insurance to enhance the bonds' ratings and reduce the premiums. The face value of the total outstanding debt on December 31, 2022, was $406.1 million. The District's Total Debt to Total Net Capital Assets is 44.9%, which Standard & Poor's rates as "strong" for US water and sewer utility enterprises.

Business Practices

The District is progressing toward its succession planning goal, but there is still much to be done. The recent and pending loss of experienced staff and institutional knowledge is a significant risk to District operations, as nearly half of the District's current staff could retire in the next five years. The risk is spread across all levels and departments of the organization. To address this, departments are working collaboratively to develop and share promising talent through training and internal promotional opportunities, capture and preserve valuable institutional knowledge in systems and software databases, enhance functional and best practices training, improve decision support data and resources, automate and optimize workflows as opportunities arise, and other steps. At the same time, the District continues to manage through retirements and fill open positions.

Ongoing progress and improvements are being made in the District's Information Technology (IT) investments. Significant upgrades to the Geographic Information System (GIS) now enable staff in the field to access and make redline updates to system maps and asset data on mobile devices without the need for wireless network access. Major upgrades are in progress to enhance the reliability, security, functionality, and performance of the District's Supervisory Control and Data Acquisition (SCADA) system, which controls and monitors water and wastewater treatment and delivery processes. Efforts to upgrade the aging and mission-critical Hansen software application supporting customer service, utility billing, new development, permitting, asset management, and maintenance functions are well underway. The integration will further transform and optimize District operations in many ways, including significantly enhancing mobile capabilities for field staff, automating tasks, speeding service delivery, capturing institutional knowledge, and improving asset data, maintenance, and performance management programs. To ensure project success while sustaining District operations, the District dedicated a core team of experienced system integrators and critical cross-functional staff to the project and temporarily backfilled portions of the core team members' duties with temporary job assignments and limited-term employees.

2023–2027 Goals

Staff will continue to pursue additional points of diversion for Permit 21112 water supplies to utilize existing water rights efficiently and will continue efforts to obtain additional drought-year water supplies to improve our resiliency.

The District will continue focusing on increasing non-rate revenues, including surplus property sales and water transfer opportunities, such as the planned transfer from the water that is conserved by piping the Upper Main Ditch between Forebay Reservoir and the Reservoir 1 Water Treatment Plant.

The District will need to continue to optimize the capital replacement of the District's aging infrastructure and manage replacement funding through pay-as-you-go projects and long-term low-interest debt financing. There will be a continued need to finance additional major infrastructure projects in the next 5 to 10 years. The draft 2024–2028 CIP includes approximately $320 million in planned infrastructure spending. This includes significant improvements to our water treatment plants, the Sly Park Intertie replacement, Silver Lake dam replacement, and continued projects to strengthen water and wastewater system reliability with water line and sewer line replacement, upgrades to storage tanks, pressure reducing stations, and pump stations. These endeavors are critical to the long-term reliability and rate stability for District ratepayers.

Also, the District plans to update the new developer hookup fees (Facility Capacity Charges) in 2024 following the completion of an update to the District's water master plan that identifies future infrastructure needs to serve new connections.

Staff will continue negotiating a voluntary settlement with the State Water Resources Control Board (SWRCB) Phase 2 Bay-Delta Water Quality Control Plan Update. The SWRCB has proposed implementing an "unimpaired flow" requirement in all Bay-Delta tributaries, including the American River from which the District obtains much of its water supplies. Such a requirement would restrict the District's ability to divert water for its customers as it has historically done. District staff are working with regional partners, such as Placer County Water Agency and the many water agencies in the greater Sacramento region, to negotiate a voluntary settlement agreement that will avoid the imposition of "unimpaired flow" restrictions in place of voluntary measures to meet the objectives of the Bay-Delta Water Quality Control Plan Update.

The Key Performance Indicators and Goals are the foundation for high-priority, districtwide goals, and performance assessment and are used to assign departmental responsibilities and tasks to meet designated targets and timelines. They also form the basis of performance evaluations for all District employees, including the General Manager and General Counsel. Accomplishing these goals will help ensure continued success for the District and its ratepayers.

BOARD OPTIONS

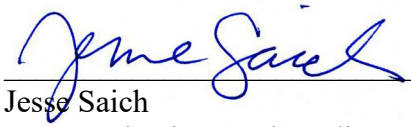
None – Information only.

RECOMMENDATION

None – Information only

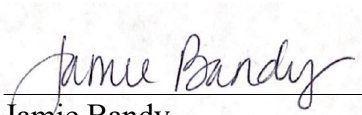
ATTACHMENTS

Attachment A: Key Performance Indicators and Goals Summary

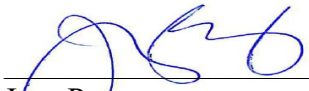


Jesse Saich
Communications and Media Relations Manager

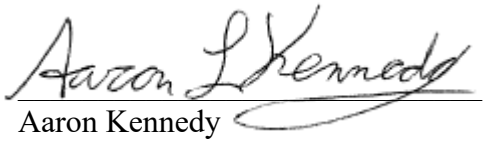
Brian Mueller
Engineering Director



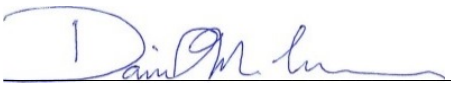
Jamie Bandy
Finance Director



Jose Perez
Human Resources Director

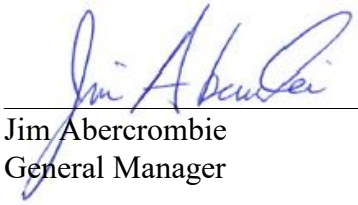


Aaron Kennedy
Information Technology Director



Dan Corcoran
Operations Director

Brian Poulsen
General Counsel



Jim Abercrombie
General Manager

Attachment A

El Dorado Irrigation District

Key Performance Indicators and Goals

Mission Statement

We are a public agency dedicated to providing high quality water, wastewater treatment, recycled water, hydropower and recreation services in an environmentally and fiscally responsible manner.

Guiding Principles

100% Safety
Respect for the Individual
Excellent Customer Service
Fiscal Responsibility

100% Safety

Employee					
Key Performance Indicators	**Target**	**Results 2020**	**Results 2021**	**Results 2022**	**Results 2023[4]**
Lost-time injuries (LT)	0	6[1]	4[2]	0	2
Injuries Requiring Medical Attention (IRMA)[3]	0	4	11	5	5
Avoidable Accidents (AA)	0	15	15	10	6
Safety training	100%	99.9%	99.4%	100%	99.6%
Other required training	100%	100%	100%	99.7%	98.2%

[1]Four of six recordable cases were COVID-19 related

[2]One of four recordable cases were COVID-19 related

[3]Includes OSHA non-recordable incidences

[4]As of July 31, 2023

100% Safety

Fiscal Responsibility

Key Performance Indicators	Target	Results 2020[3]	Results 2021[3]	Results 2022[3]	Results 2023[3]
Control Annual Workers' Compensation Premiums[1]	<1.0% Experience Modification Rating[2]	0.59%	0.59%	0.60%	0.66%

[1]The District maintains workers' compensation insurance coverage, as required by the State, from the Association of California Water Agencies/Joint Powers Insurance Authority (AWCA/JPIA).

[2]The Experience Modification Rating (EMR) is a metric that insurers use to calculate workers' compensation premiums; it takes into account the number of claims (work related injuries/illnesses) a company has had in the past and the corresponding costs. An EMR of 1.0% is the benchmark average, therefore if the EMR is lower than average (e.g., less than 1.0%) then the workers' compensation insurance premium will be lower than average. An EMR greater than 1.0% will result in higher than average premium.

[3]For the last four years, the District has maintained a low EMR rate. The 2023 annual workers' compensation premium for the District was $308,872; by comparison, the highest workers' compensation insurance premium paid by the District was in 2003 ($1,937,393) resulting from an EMR of 1.74%.

100% Safety

Public – Meet all Health and Safety Standards

Regulatory Violations

Key Performance Indicators	Target	Results 2020	Results 2021	Results 2022	Results 2023[4]
Water	0	0	0	0	0
Wastewater Recycled Water	0	1[1]	0	7[3]	0
Hydro	0	1[2]	0	0	0

[1]Pipeline leak resulted in chemical release increasing the pH at the El Dorado Hills Wastewater Treatment Plant (EDHWWTP)

[2]Under release from Echo Lake

[3]Three events related to a single storm–three related to a single coliform event–one anomalous data result

[4]As of July 31, 2023

Respect for the Individual

Employee			
Key Performance Indicators	**Target**	**Results 2020**	**Results 2022[1]**
District employee engagement survey	Bi-annual	Delayed; Next survey planned for 3rd Qtr. 2022	Completed 2022; 86% agree or very satisfied
Labor Management Committee (LMC)	Monthly meetings; Evaluate success in employee survey	Delayed; Next survey planned for 3rd Qtr. 2022	Evaluated 2022; 71% agree or strongly agree

[1]Employee engagement levels increased from 73% in 2017

Excellent Customer Service

Customer Satisfaction Survey				
Key Performance Indicators	**Target**	**Results 2019**	**Results 2021**	**Results 2023**
Overall	Greater than 90%	90%	91%	91%
Phone	Greater than 90%	96%	97%	98%
Field	Greater than 90%	96%	96%	98%
Reasonableness of water rates	Greater than 80%	61%	61%	70%
Reasonableness of wastewater rates	Greater than 60%	51%	51%	61%

Excellent Customer Service

Customer Engagement				
Key Performance Indicators	**Target**	**Results 2020**	**Results 2021**	**Results 2022**
Online bill pay customers	Trend	62%	68%	72%
Customers with email addresses	Trend	90%	91%	90%

Excellent Customer Service

Customer Engagement

Key Performance Indicators	Target	Results 2020	Results 2021	Results 2022
District website visitors	Trend	520,966	432,049	451,179
District website eNews subscribers	Trend	2,504	2,738	2,905
District website email notifications	Trend	143,446	162,087	113,716
Facebook Post: Engagement[1]	>2%	---	4%	2%
Facebook: Reach[2]	Trend	---	147,672	104,779
Facebook: Impressions[3]	Trend	---	160,922	113,558
Nextdoor: Impressions[4]	Trend	---	205,723	275,394

[1]Percentage derived from the number of people a post reaches who then like, comment, share or click (engagement) on the post, divided by the total reach of the post

[2]Number of people who saw any content from a Facebook page or about the page

[3]Number of times any content from the page or about the page entered a person's screen

[4]Number of residents who viewed a post, the number of opens of email notifications that are sent, and number of clicks on a post

Excellent Customer Service

Service Reliability

Key Performance Indicators	Target[1]	Results 2022	Results 2023[2]
Number of unplanned water outages per 1,000 accounts			
Less than 4 hours	0.24 top 0.85 median 2.10 bottom	13.16 outages (566 outages)	5.95 outages (256 outages)
4 to 12 hours	0.08 top 0.35 median 0.99 bottom	1.56 outages (67 outages)	1.02 outages (44 outages)
Greater than 12 hours	0.00 top 0.01 median 0.09 bottom	0.07 outages (3 outages)	0.05 outages (2 outages)

[1]American Water Works Association (AWWA) Benchmarking Performance Indicators for Water and Wastewater: 2022 Edition (nationwide statistics) [2]As of July 31, 2023

Excellent Customer Service

Service Reliability			
Key Performance Indicators	**Target[1]**	**Results 2022**	**Results 2023[3]**
Number of water system leaks/breaks per 100 miles	7.2 top 18.8 median 36.1 bottom	45.43 outages (636 leaks/breaks)	21.57 outages (302 leaks/breaks)
Non-Capacity Sanitary Sewer Overflows (SSO) per 100 miles of pipe	0.8 top 1.9 median 3.4 bottom	2.9[2] (19 SSOs)	2.2 (14 SSOs)

[1]American Water Works Association (AWWA) Benchmarking Performance Indicators for Water and Wastewater: 2022 Edition (nationwide statistics)

[2]Increase attributed to root intrusion associated with drought

[3]As of July 31, 2023

Excellent Customer Service

Service Reliability			
Key Performance Indicators	**Target**	**Results 2022**	**Results 2023[2]**
Number of fire hydrants serviced[1]	6,565	1,121	805
	20%	17.1%	12.3%
Number of service lines replaced			
Unplanned (leaks/failures)	165	522	335
	33%	90.5%	80.7%
Planned	335	55	80
	67%	9.5%	19.3%

[1]American Water Works Association (AWWA) annually; District target: serviced once every five years
[2]As of July 31, 2023

Excellent Customer Service

Meter Function			
Key Performance Indicators	**Target[1]**	**Results 2021**	**Results 2022**
Small Meters	99.6% top 99.0% median 98.2% bottom	99.995% (1,182 of 294,582)	99.997% (768 of 295,350)
Large Meters	99.9% top 99.0% median 98.0% bottom	99.997% (19 of 9,072)	99.998% (16 of 9,036)

[1]American Water Works Association (AWWA) Benchmarking Performance Indicators for Water and Wastewater: 2022 Edition (nationwide statistics)
Formula: Total number of confirmed "stuck" meters divided by (total number of meters multiplied by number of billing cycles per year)
Small Meters = 1 inch or smaller (including commercial, agriculture, residential, multifamily, recreational turf)
Large Meters = 1.5 inches or larger (including commercial, agriculture, wholesale, residential, multifamily, recreational turf)
Stuck = Meters that under register water usage

Fiscal Responsibility

Budget Compliance				
Key Performance Indicators	**Target**	**Results 2021**	**Results 2022**	**Results 2023**
Operating expenses	Less than 100% at year-end	1st Qtr. = 20.5%	1st Qtr. = 19.6%	1st Qtr. = 18.2%
		2nd Qtr. = 45.8%	2nd Qtr. = 46.0%	2nd Qtr. = 38.4%
		3rd Qtr. = 66.5%	3rd Qtr. = 75.4%	
		4th Qtr. = 91.9%	4th Qtr. = 95.8%	

Note: Each quarter is shown year-to-date

Fiscal Responsibility

Budget Compliance				
Key Performance Indicators	**Target**	**Results 2021[1]**	**Results 2022[1]**	**Results 2023**
Capital expenses	Between 70-90% at year-end	1st Qtr. = 21.8%	1st Qtr. = 29.8%	1st Qtr. = 7.6%
		2nd Qtr. = 42.4%	2nd Qtr. = 31.0%	2nd Qtr. = 21.6%
		3rd Qtr. = 54.4%	3rd Qtr. = 65.4%	
		4th Qtr. = 88.5%	4th Qtr. = 81.9%	

Note: Each quarter is shown year-to-date [1]Includes Caldor Fire flume 4, 5 and 6 replacement costs

Fiscal Responsibility

Debt Service Coverage				
Key Performance Indicators	**Target**	**Results 2020**	**Results 2021**	**Results 2022**
Annual Ratio without FCCs[1]	≥1.25	1.78	1.83	1.77
Annual Ratio with FCCs[2]	2.93 top 2.44 median 1.90 bottom	2.23	2.68	2.55

Facility Capacity Charge (FCC)

[1]Board Policy 3010

[2]Moody's Investor Service, May 26, 2022 (publication rating similar utilities)

Fiscal Responsibility

Debt Management					
Outstanding Debt (in millions)					
2010	**2018**	**2019**	**2020[1]**	**2021**	**2022**
$387.9	$310.0	$280.0	$353.4	$339.1	$406.1
Annual Debt Payments (in millions)					
$19.1	$13.8	$29.6	$16.0	$14.3	$15.0

[1]Issued $61.1 million new debt

Fiscal Responsibility

Delinquencies

Key Performance Indicators	Target	Results 2020	Results 2021	Results 2022
Delinquency Rate[1]	4.0% top 8.0% median 15.7% bottom	2.00%	1.80%	1.09%
Write off	<1%	0.03%	0.04%	0.05%

[1]American Water Works Association (AWWA) Benchmarking Performance Indicators for Water and Wastewater: 2022 Edition (nationwide statistics)

Business Practices

Trends Over Time

Key Performance Indicators	Target	Results 2020	Results 2021	Results 2022
Operating expenses per service	Trend	$337.10	$333.57	$374.36
Services per employee	Trend	329	323	317
Overtime hours[1]	Trend	6.05%	7.49%	5.91%
Outside legal expenses – operating	<1%	0.12% $68,079	0.05% $31,409	0.03% $19,953
Outside legal expenses – capital	<1%	0.37% $206,775	0.07% $43,271	0.01% $8,666

[1]Based on non-exempt employees

Business Practices

Customer Services Per Employee[1]

Agency	Service	Services	Employees	Services / Employee
Tuolumne Utilities District (TUD)	Water/Wastewater	26,135	74	353
El Dorado Irrigation District (EID)	Water/Wastewater Recycled	73,268	228	321
Calaveras County Water District	Water/Wastewater	17,928	66	272
San Juan Water District	Water	10,675	48	222
Amador Water Agency	Water/Wastewater	8,643	45	192
Placer County Water Agency (PCWA)	Water	42,873	232	185
Nevada Irrigation District (NID)	Water	24,882	203	123

[1]As of June 2022

Business Practices

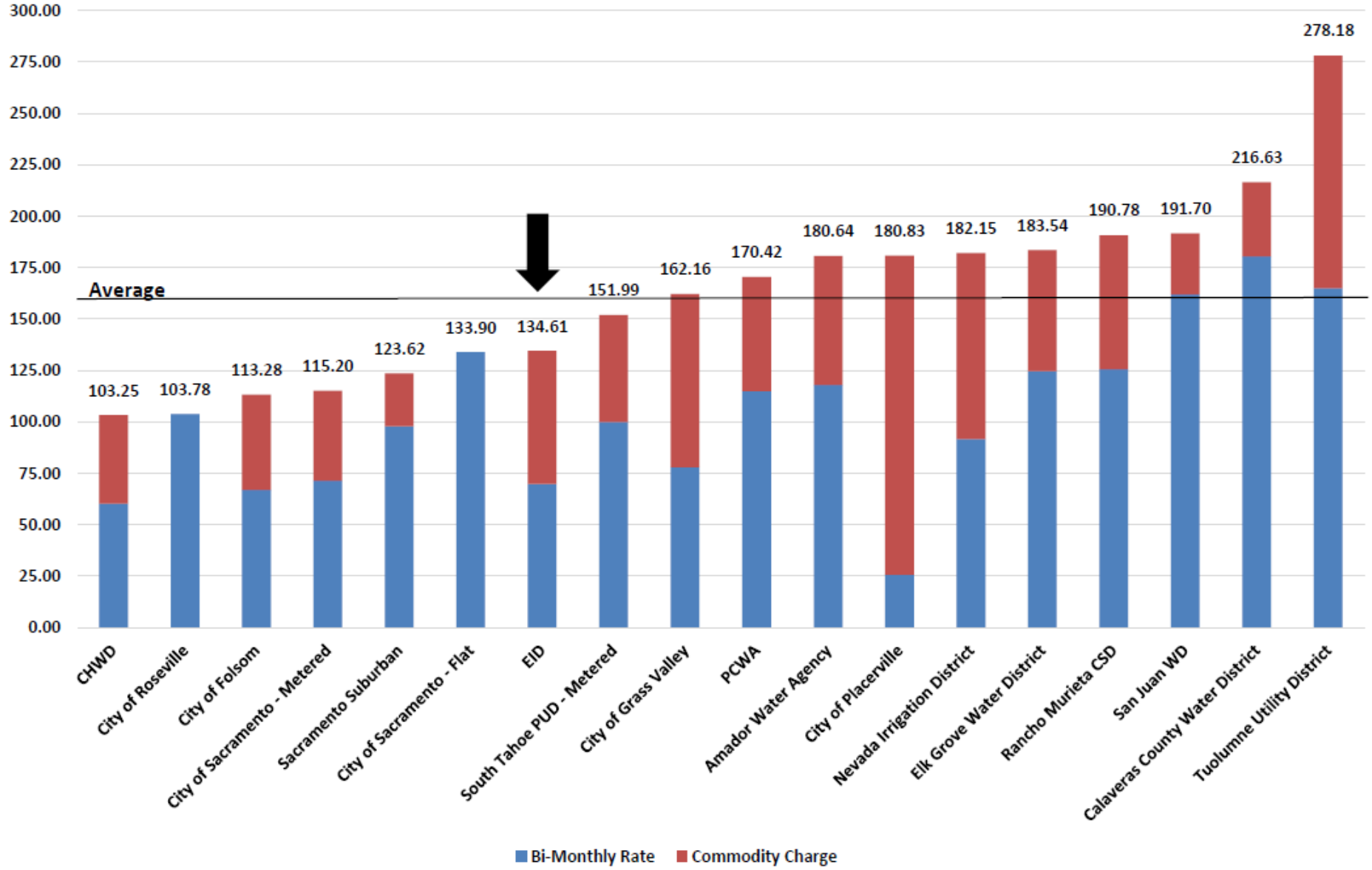
Trends Over Time				
Key Performance Indicators	**Target**	**Results 2021**	**Results 2022**	**Results 2023**
Water rates (bi-monthly)	At or below median of similar agencies ($166.29*)	$122.10[1]	$128.21[1]	$134.61[1]
Wastewater rates (bi-monthly)	At or below median of tertiary agencies ($171.63*)	$133.98[2]	$133.98[2]	$135.33[2]

*August 2023 other agency comparisons; [1]assuming 30 ccf water usage; [2]assuming 16 ccf winter water usage Hundred Cubic Feet (ccf)

Regional Water Bill Comparison - 2023

For

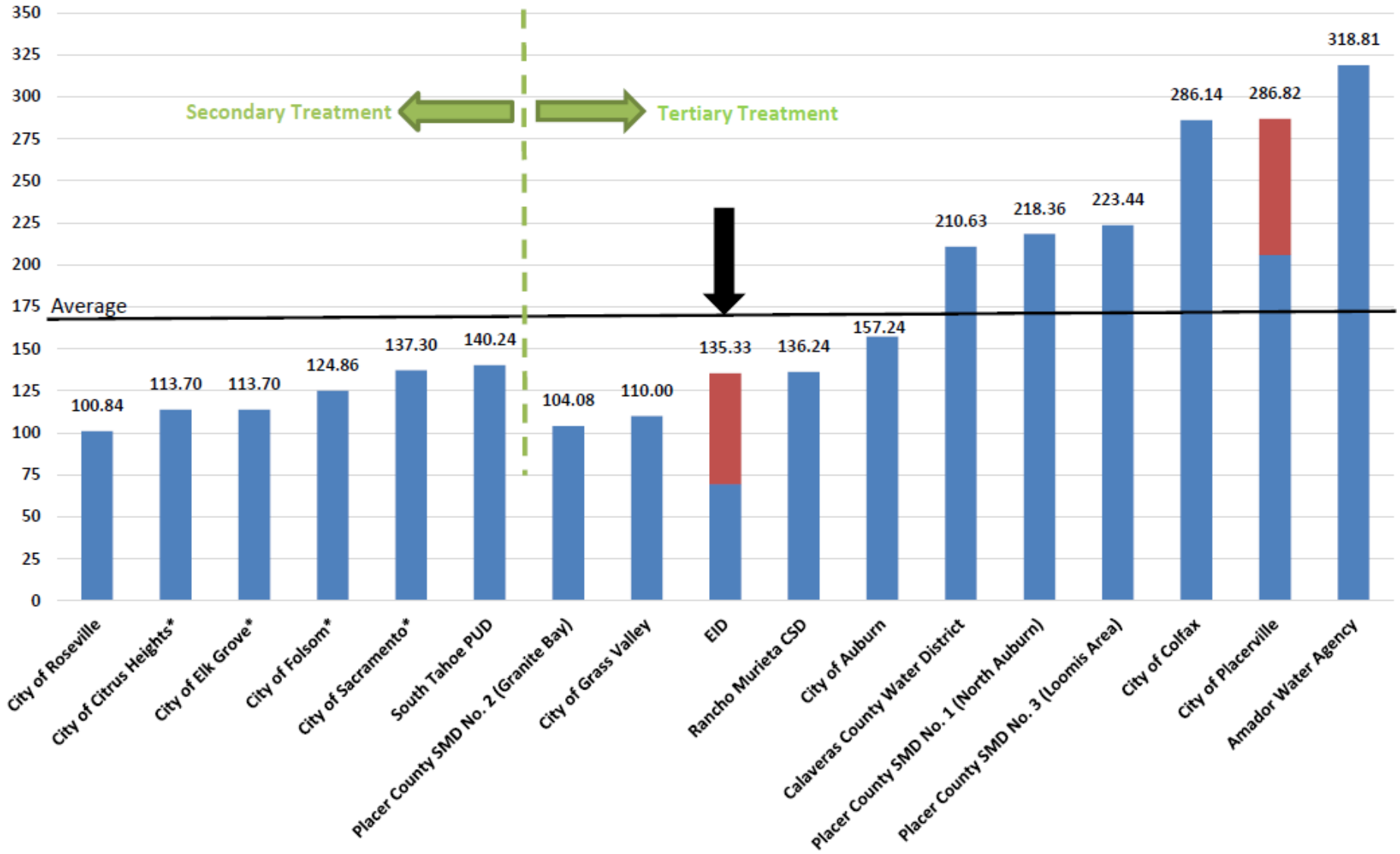
Bi-Monthly Service - Single Family Residence: 5/8 - 3/4" Meter & 3000 cf of Usage



Regional Sewer Bill Comparison - 2023

for

Bi-Monthly Service - Single Family Residence: 1600 cf of Winter Usage



*Serviced by Sacramento Regional Sanitation District (SRCSD) regional wastewater treatment facility. Mandated treatment facility improvements from seondary to tertiary are estimated to be completed by 2023.

Fixed Charge Commodity Charge

Business Practices

Water and Sewer Utility Credit Ratio Ranges				
Key Performance Indicators	**Target**	**Results 2020**	**Results 2021**	**Results 2022**
Debt to capitalization ratio	35 - 50% Strong[1]	43%	42%	45%

[1] *Standard & Poor's Global Credit Portal RatingsDirect®*, January 19, 2016

Historical costs of depreciable assets is $1.14 billion

Summary of Goals

Summary

2023-2027 Goals

Goal	Target	Revised Target	Results
Pursue drought year water supply (SMUD) transfer agreement	2021-2022	2025	Pending negotiations with EDWA
Add points of diversion to Permit 21112	2021-2022	2023	Completed project description in 2019; Hired EIR and modeling consultants in 2020; Conducting stakeholder outreach and analyzing environmental impacts; DEIR February 2024
Reduce unaccounted for water loss by 20% by 2025	2025	---	Main Ditch Project will significantly reduce water losses

El Dorado Water Agency (EDWA)

Environmental Impact Report (EIR)

Draft Environmental Impact Report (DEIR)

Summary

2023-2027 Goals		
Goal	**Target**	**Results**
Expand non-rate revenue through marketing water transfers	Annual	Completed 577 AF transfer in 2022; Working on conserved water transfer with Bureau of Reclamation
Continue with succession planning and transition	Annual	Annual evaluation
Replace Hansen 7	2019-2022	Contract awarded March 2021; Underway with expected go-live for CMMS in February 2023; CIS in April 2023; CDR April 2024

Acre Feet (AF)
Computerized Maintenance Management System (CMMS)
Customer Information System (CIS)
Community Development Resources (CDR)

Summary

2023-2027 Goals		
Goal	**Target**	**Results**
Complete improvements of Silver Lake Dam, Flume 46 and Sly Park Intertie	Included in 2023–2027 CIP	Silver Lake Dam: Preliminary design underway, Start construction by 2027 Flume 46: Feasibility 2022 Sly Park Intertie: Construction 2024-2025
Update COSA and implement findings	2023-2024	Underway; Expected completion December 2023
Powerhouse interconnection agreement with PG&E	November 2023	Scheduled to engage PG&E fall 2023
Complete Bass Lake relocation and transition	2018	Completed 2023

Capital Improvement Plan (CIP)
Cost of Services Analysis (COSA)

Summary

2023-2027 Goals		
Goal	**Target**	**Results**
Reduce unfunded OPEB obligation by allocating non-rate revenue	Reduce UAL by 5% per year pending Board action	$6 million prepayment into OPEB CERBT in 2012; Current value $12.7 million
Develop and implement disposition strategy for surplus properties	2023-2025	Completed phase 1 in 2018; Resumed phase 2
Successfully negotiate SWRCB Phase 2 Water Quality Control Plan Update Voluntary Settlement Agreement	---	In negotiations

Other Post-Employment Benefits (OPEB)
California Employers' Retiree Benefit Trust (CERBT)
Unfunded Actuarial Liability (UAL)
State Water Resources Control Board (SWRCB)

Summary

2023-2027 Goals		
Goal	**Target**	**Results**
Update Master Plan, FCC study and implement findings	2021	Master Plan underway in 2023; FCC update 2024
Continue to explore opportunities to refinance or pay down debt to lower overall costs	Ongoing	In 2022, issued Refunding Revenue Bonds to pay off $70.8 million unfunded pension liability in 2022: Cash flow savings of $16.2 million; Net present value savings of $10.5 million
Bond issuance for major projects	2024	$60 million planned in 2024; $120 million planned in 2027

Facility Capacity Charge (FCC)

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider ratifying EID General Warrant Registers for the periods ending September 19 and September 26, 2023, and Board and Employee Expense Reimbursements for these periods.

PREVIOUS BOARD ACTION

The Board ratifies the District's General Warrant Registers at each regular meeting of the Board.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

Section 24600 of the Water Code provides that no claim shall be paid unless allowed by the Board.

SUMMARY OF ISSUE

District staff notifies the Board of proposed payments via email and requests ratification of the warrant registers at the subsequent regular meeting of the Board. Copies of the Warrant Registers are sent to the Board on the Friday preceding the Warrant Register's date. If no comment or request to withhold payment is received from any Director prior to the following Tuesday morning, the warrants are mailed out and formal ratification of said warrants is agendized on the next regular Board agenda.

BACKGROUND/DISCUSSION

Current Warrant Register Information

Warrants are prepared by Accounts Payable; reviewed and approved by the Finance and Accounting Manager, the Director of Finance, and the General Manager or their designee.

Register Date	Check Numbers	Amount
September 19, 2023	706165 – 706267	$2,068,207.63
September 26, 2023	706268 – 706418	$4,437,977.23

Current Employee Expense Reimbursements

Employee Expenses and Reimbursements have been reviewed and approved by the Finance and Accounting Manager, the Finance Director, and the General Manager prior to the warrants being released. These expenses and reimbursements are for activities performed in the interest of the District in accordance with Board Policy 12065 and Resolution No. 2007-059.

Additional information regarding Board and employee expense reimbursements is available for copying or public inspection at District headquarters in compliance with Government Code Section 53065.5.

BOARD OPTIONS

Option 1: Ratify the EID General Warrant Registers and Board and Employee Expense Reimbursements as submitted.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Executive Summaries
Attachment B: Employee Expense Reimbursements totaling $100 or more
Attachment C: Board Expense Reimbursements

Rebecca Lane
Finance and Accounting Manager

Jamie Bandy
Finance Director

Jennifer Sullivan
Clerk to the Board

Jim Abercrombie
General Manager

Attachment A

September 14, 2023

To: Jim Abercrombie, General Manager

From: Rebecca Lane, Finance and Accounting Manager

Via: Jamie Bandy, Director of Finance

RE: Warrant Register Executive Summary Approval

Attached is the summary for September 19, 2023 for your review and approval.

Executive Summary for September 19, 2023 -- $2,068,207.63:

This summary highlights significant disbursements made by major business activity:

Development Services (Fund 105)

- $4,138—Zanjero for surface water hydrology assessment – Town and Country Village WSA (D1057631)

General District Operations (Fund 110)

- $4,998—ABM Janitorial Services for janitorial services at headquarters
- $9,924—AT&T for phone service
- $19,825—CERES Imaging, Inc. for image analysis services
- $19,553—Dataprose, LLC for August 2023 billing services
- $59,813—ESRI Environmental Systems Research Institute, Inc. for annual software maintenance subscription
- $31,153—Hunt & Sons, Inc. for card lock fuel and fuel and oil deliveries at various locations

Engineering Operations (Fund 210)

- $3,045—Backflow Technologies, Inc. for a backflow preventer repair kit

Water Operations (Fund 310)

- $8,506—BSK Associates for regulatory lab testing
- $9,584—Frank A. Olsen Company for valve repair and rebuild kits
- $6,038—GEI Consultants, Inc. for biological resource support – Right of Way Reinforcement Program (#T2022.06)
- $21,883—MCS Inspection for specialty tank coating inspection services
- $287,315—PG&E for electric service
- $5,059—Ryan Process, Inc. for a diaphragm dosing pump and valve kit at EDHWTP

Wastewater Operations (Fund 410)

- $6,857—CLS Labs for regulatory lab testing at CHWWTP, DCWWTP and EDHWWTP
- $5,991—Herc Rentals, Inc. for vacuum-assisted pump rental
- $92,575—PG&E for electric service
- $55,882—Synagro West, LLC for sludge hauling and disposal at DCWWTP and EDHWWTP

Recycled Water Operations (Fund 510)

- $17,626—PG&E for electric service

Hydroelectric Operations (Fund 610)

- $3,083—Amazon Business for five handheld two-way radios with GPS, camera and topographic mapping
- $4,425—Herc Rentals, Inc. for a ride-on roller rental
- $6,981—PG&E for electric service

Recreation Operations (Fund 710)

- $14,108—El Dorado Disposal Service, Inc. for trash disposal

Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $12,990—A T.E.E.M. Electrical Engineering for engineering services:
  >Project #21040.01 – Generator FEMA Grant-Water ($6,495)
  >Project #21041.01 – Generator FEMA Grant-Wastewater ($6,495)
- $122,708—Auburn Constructors, LLC for construction services ($129,166) – EDHWWTP Effluent Pump Station Upgrade (Project #21077.01). Retention held $6,458
- $6,236—CA Department of Fish and Wildlife for lake and streambed agreement fee – Sly Park Intertie Improvements (Project #21079.01)
- $18,796—Carollo Engineers, Inc. for project management, modeling and planning services – Integrated Water Resources Master Plan (Project #STUDY10.01)
- $12,037—CDW Government for computer hardware:
  >Project #19033.01 – Reservoir A PLC Replacement ($7,858)
  >Project #23024.01 – Enterprise Server Replacement ($4,179)
- $169,795—Costa Fencing, Inc. for animal control fencing replacement services – P184 Animal Fence Replacement-CDF (Project #22052.01)
- $710,308— Doug Veerkamp General Engineering, Inc. for construction services ($747,693) – Forebay Road Waterline Replacement (Project #18040.01). Retention held $37,385
- $3,792—Dudek for spotted owl survey services:
  >Project #17025.01 – Flume 45 Abutment Replacement ($832)
  >Project #21013.01 – Flumes 45A, 46A, 47A, and 47B Replacement ($2,960)
- $17,760—GHD, Inc. for engineering design and construction inspection services:
  >Project #21013.01 – Flumes 45A, 46A, 47A, and 47B Replacement ($1,260)
  >Project #22014.01 – Flume 45 Section 3 Replacement ($6,990)
  >Project #21047.01 – Flume 4 Replacement ($1,176)
  >Project #21048.01 – Flume 5 Replacement ($1,176)
  >Project #21049.01 – Flume 6 Replacement ($1,176)
  >Project #21008.01 – Diversion - Facility Upgrades ($5,982)
- $5,235—Hastie's Capitol Sand and Gravel Co. for rock deliveries – Water Service Line Replacement (Project #23002.01)
- $15,362—Herwit Engineering for construction engineering and design services:
  >Project #22035.01 – DCWWTP Blower Replacement ($6,432)
  >Project #18035.01 – EDHWWTP WAS DAFT Rehabilitation ($940)
  >Project #22039.01 – EDHWWTP Filter 5 Rehabilitation ($2,820)
  >Project #19033.01 – Reservoir A PLC Replacement ($5,170)
- $5,135—ICM Group, Inc. for construction inspection services – EDHWWTP Secondary Effluent Pump Station Modifications (Project #21077.01)
- $19,381—MCK Americas, Inc. for construction management services – Flume 45 Abutment Replacement (Project #17025.01)
- $61,525—Sierra Asphalt, Inc. for access road paving and curb replacement – Reservoir 2 Roof and Rafter Replacement (Project #21051.01)

- $42,061—TNT Industrial Contractors, Inc. for construction services ($44,275) – EDHWWTP Filter 5 and 6 Rehabilitation (Project #22039.01). Retention held $2,214
- $5,572—Water Works Engineers, LLC for engineering services:
  >Project #STUDY16.01 – Deer Creek Collection System Modeling ($3,376)
  >Project #21018.01 – 2022 Collection Pipeline Replacement ($2,196)
- $70,318—Xylem Water Solutions USA, Inc. for a submersible pump – North Uplands Pump Replacement (Project #23008.01)

September 21, 2023

To: Jim Abercrombie, General Manager

From: Rebecca Lane, Finance and Accounting Manager

Via: Jamie Bandy, Director of Finance

RE: Warrant Register Executive Summary Approval

Attached is the summary for September 26, 2023 for your review and approval.

Executive Summary for September 26, 2023 -- $4,437,977.23:

This summary highlights significant disbursements made by major business activity:

Development Services (Fund 105)

- $16,109—MCK Americas, Inc. for construction inspection services

General District Operations (Fund 110)

- $6,852—AT&T for internet service
- $11,000—Ayda Mouradian for a claim payout for floor damage due to flooding
- $5,432—City of Placerville for water and sewer service
- $3,395—Doug Veerkamp General Engineering for a credit balance refund on customer account
- $46,835—Hunt & Sons, Inc. for card lock fuel and fuel deliveries at various locations
- $5,145—Liebert Cassidy Whitmore for legal services
- $24,259—NBS for consulting services related to Cost of Service Study
- $8,637—Pace Supply Corporation for warehouse inventory
- $31,030—PG&E for electric service
- $3,900—Pronesti Environmental, Inc. for a credit balance refund on customer account
- $9,500—Reeb Government Relations, LLC for October 2023 retainer
- $6,231—Ron DuPratt Ford for miscellaneous vehicle maintenance supplies and engine assembly repair service
- $5,494—Shell Door Service, Inc. for parts and labor to service doors at headquarters
- $5,371—Thompsons Auto & Truck Center, Inc. for an automatic transmission assembly

Engineering Operations (Fund 210)

- $10,634—Talmo & Associates, Inc. for temporary labor in Engineering Department

Water Operations (Fund 310)

- $34,334—ACTenviro/Fremouw Environmental Services for diesel spill cleanup services at Reservoir 2
- $166,440—Cal. Sierra Construction, Inc. for Bass Lake Tanks 1 and 2 recoating ($175,200). Retention held $8,760
- $10,758—Carsten Tree Service for tree removal services at Reservoir 1 and Camino conduit
- $6,271—Clean Harbors Environmental Services, Inc. for diesel spill cleanup services at Reservoir 2
- $4,522—EAN Services, LLC for two long-term F-350 truck rentals
- $17,504—Enoven Industries, LLC for a snow plow
- $24,744—G W Demolition, Inc. for building demolition services and debris removal at Reservoir 1
- $6,627—Grainger for a voltage detector, brass valves and rebuild kits, two general purpose motors, welding wire and other miscellaneous operating supplies
- $14,626—Holt of California for two excavator rentals
- $4,320—Lindsei Ann Crowder (Sweet Pea's Janitorial) for janitorial services at Reservoir 1, Reservoir A and EDHWTP
- $6,921—National Trench Safety, Inc. for K-rail and trench plate rentals

- $9,571—PG&E for electric service
- $6,750—Superior Tank Solutions, Inc. for tank repairs
- $93,748—U.S. Bureau of Reclamation for Folsom water deliveries and restoration fund payments
- $13,489—Univar Solutions USA, Inc. for sodium hydroxide at EDHWTP and Reservoir A

Wastewater Operations (Fund 410)

- $7,750—A.C. Septic Service for lift station pumping services
- $5,088—CA Water Environment Association for certifications, membership dues and safety conferences
- $4,958—Clipper Controls, Inc. for an insertion mass flow transmitter at DCWWTP
- $4,798—Grainger for a fire hose, a fire hose nozzle, pliers, respirators, binoculars, modular hose bridge channels and other miscellaneous operating supplies
- $4,682—Konecranes for crane hoist repair at EDHWWTP and August 2023 inspection at DCWWTP
- $32,086—PG&E for electric service
- $5,478—Ski Air Incorporated for mini split installation at DCWWTP and A/C repair at DCWWTP
- $14,259—Univar Solutions USA, Inc. for sodium hydroxide at DCWWTP

Recycled Water Operations (Fund 510)

- $3,488—Solenis, LLC for flocculant at EDHWWTP
- $15,001—PG&E for electric service
- $30,791—Univar Solutions USA, Inc. for sodium hydroxide at EDHWWTP

Hydroelectric Operations (Fund 610)

- $3,810—Ace Commercial Cleaning Services for janitorial services at Camp 5
- $3,473—Hastie's Capitol Sand and Gravel Co. for permeable base rock delivery
- $3,079—Hydraulic Power Sales, Inc. for hydraulic pumps and generator valves

Recreation Operations (Fund 710)

- $3,400—Carsten Tree Service for tree removal services at Silver Lake West Campground and Sand Harbor parking area
- $33,191—Talmo & Associates, Inc. for temporary labor at Sly Park Recreation

Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $3,671—Apex Underground Supply for pipe splitting tools and expanders – Water Service Line Replacement (Project #23002.01)
- $47,523—MCK Americas, Inc. for construction management services:
  >Project #18040.01 – Forebay Road Waterline Replacement ($47,173)
  >Project #20030.01 – Drop Off Road Waterline Extension ($350)
- $4,720—National Trench Safety, Inc. for trench safety equipment – Water Service Line Replacement (Project #23002.01)
- $3,490,417—Teichert Construction for construction services ($3,674,123) – Motherlode Force Main Replacement Program (Project #21081.01). Retention held $183,706

Attachment B

Employee Expense Reimbursements
Warrant Registers dated 08/22/23 - 09/12/23

EMPLOYEE	DESCRIPTION	AMOUNT
Jon Money	Travel Advance - ASDSO Conference	$1,000.00
Charles Busuttil	Timper Operator & Class A Driver's License	$113.00
Dan Stevenson	Course & Test Booklets for D4 Certification	$234.25
Daniel Corcoran	Dinner for Line Break Crew	$329.13
Carl Certiberl	World Ranger Day / Conference	$252.46
Eric Henderson	D2 & T2 Certificatoin Renewals	$120.00
Robert Burwell	WTPO 1 Course Package	$211.25
		$2,260.09

Attachment C

Board Expense Reimbursements
Warrant Registers dated 09/19/23 - 09/25/23

DESCRIPTION	Lori Anzini	Alan Day	Pat Dwyer	Brian Veerkamp	George Osborne	Total
Personal Vehicle Expense						$0.00
Hotel						$0.00
Meals or Incidentals Allowance						$0.00
Airfare, Car Rental, Misc Travel						$0.00
Fax, Cell or Internet Service				$160.00		$160.00
Meeting or Conference Registration						$0.00
Meals with Others						$0.00
Membership Fees/Dues						$0.00
Office Supplies						$0.00
Reimburse prepaid expenses						$0.00
Miscellaneous Reimbursements						$0.00
	$0.00	$0.00	$0.00	$160.00	$0.00	$160.00

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider approving Contract Change Order Nos. 12 and 13 to Quantum Resolve in the not-to-exceed amount of $391,625.55 and $313,958.35, respectively, for software integration and implementation, Contract Change Order 2 to Raftelis, Inc. in the not-to-exceed amount of $90,000 for project management support, and authorize total additional funding of $400,000 for the Hansen Core Software Upgrade Project, Project No.18055.

PREVIOUS BOARD ACTION

December 9, 2019 – Board awarded a contract to Westin Technology Solutions in the not-to-exceed amount of $276,000 for utility business and technology consulting services and authorized additional funding of $516,000 for the Hansen 7 Upgrade Project, Project No.18055.

February 8, 2021 – Board received an update on the Hansen Core Software Upgrade Project.

March 22, 2021 – Board awarded contracts to Quantum Resolve in the fixed cost amount of $6,044,550 for software integration and implementation and Infor Public Sector, Inc. in the not-to-exceed amount of $343,007 for software licenses and support; approved a contract amendment to Westin Technology Solutions in the not-to-exceed amount of $765,000 for consulting services; authorized additional funding of $3,240,000 for capitalized labor and contingency for a total funding request of $10,392,557 for the Hansen Core Software Upgrade, Project No.18055; and approved extension of Infor Public Sector, Inc. software maintenance agreement through September 30, 2026, in the not-to-exceed amount of $745,000.

October 25, 2021 – Board awarded a contract to Selectron Technologies, Inc. in the not-to-exceed amount of $39,627.20 for purchase of a customer service Interactive Voice Response system for the Hansen Core Software Upgrade, Project No. 18055 and approved an extended service contract with Selectron Technologies, Inc. through April 30, 2027 in the not-to-exceed amount of $148,894.50.

November 14, 2022 – Board adopted the 2023-2027 Capital Improvement Plan (CIP), subject to available funding.

December 12, 2022 – Board adopted the 2023-2024 Operating Budget.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 5010 Water Supply Management
BP 6010 Wastewater System Management
BP 8010 Hydroelectric System Management
BP 9010 Customer Service

SUMMARY OF ISSUE

The Hansen software is critical to District operations and has reached the end of its useful life. Integration and implementation of new core software upgrade has been underway since 2021. The upgrade is a multi-phased, complex project requiring extensive work by a specialized software integrator, consulting staff support, and dedicated District staff resources while continuing to perform critical operations using the current core software. This multi-year project is crucial for continued District operations. Multiple factors have led to delays in completing the Hansen Upgrade Project (Project), including natural disasters, staff attrition, workload, and availability.

BACKGROUND/DISCUSSION

The Hansen software upgrade is being performed in three phases. Each component is utilized by employees in the performance of their daily duties:

- Computerized Maintenance Management System (CMMS)
  - The CMMS application supports preventive maintenance and corrective work orders performed on over 250,000 District infrastructure assets across the Drinking Water, Wastewater/Recycled Water, Hydro/Watershed Management, and Fleet Divisions.
  - Effective maintenance management of the District's assets is crucial to ensure reliable and safe services for maintained assets totaling well over $1 billion in current replacement value.
- Customer Information System (CIS)
  - The CIS application supports the District's metering, utility billing, cashiering, and customer service functions for EID's water, sewer, and recycled water customers.
  - CIS helps the District manage over 70,000 water and wastewater connections and service billings and collection in excess of $60 million annually.
- Community Development and Regulation (CDR)
  - The CDR application supports the daily management of new connection requests and developer projects that add substantial infrastructure, including additional pipes, valves, lift and pump stations, and other new assets into the District's service delivery systems.

The CMMS phase has been completed. The CIS phase is underway; however, as further described below, this phase needs to be extended. The original schedule for the final CDR phase was to commence in parallel with the CIS phase. To avoid further delays in completion in the CIS phase, staff is proposing to delay the CDR phase until CIS is completed.

The Project requires considerable staff time and the expertise of an established internal core team and several subject matter experts. When staff is unavailable to work on the Project as initially intended, the deliverables are subsequently delayed. Multiple unforeseen events, including the Caldor Fire, extreme weather-related events, staffing issues, and attrition, have impacted the Project's progress. When such events occur, the Project's core team must return to their regular assigned duties to ensure the continuation of the District's core operations.

The original Project timeline relied on the core team's full-time participation over 30 months. As the Project has progressed, it has not been possible for the core team to dedicate the amount of time and resources as initially planned due to the abovementioned reasons. Additionally, several key staff members are concurrently involved in multiple Project phases, which has impacted the efficiency of completing phases simultaneously. The CDR phase was initially scheduled to overlap the CIS phase. However, the capacity for the core team to work on two phases at once while continuing to perform their regular assigned duties reduces the efficiency and extends the time it takes to complete scheduled tasks. Therefore, staff and management have determined that the best course of action is to pause the originally scheduled overlapping phases of CIS and CDR, concentrate on completing the already in-progress CIS phase, and delay the start of the CDR phase until CIS is complete.

Change Order No. 12 for the extended CIS phase

The CIS phase of the Project was originally scheduled to start in July 2021 and be completed by October 2022. This phase began in September 2021 and was planned to be completed by December 2022. However, with the issues previously described regarding core team availability,

the CIS phase will not be complete until April 2024, even with the proposed sequence adjustments. To complete the CIS phase of the Project, staff negotiated a change order of $391,625.55 to Quantum Resolve for continued implementation support services.

Change Order No. 13 to delay CDR phase and implement further improvements to CMMS phase
Staff negotiated a corresponding change order to Quantum Resolve for $313,958.35 to extend the CDR phase of the Project up to five months, pausing active work on CDR. The change order includes a provision to reassign the contractor's staff to work on additional improvements for efficiencies in functionality and workflow on the completed CMMS phase. After completing and implementing the CMMS phase, staff identified several ways to improve efficiencies in product workflow that were not included in the original Project scope.

Change Order No. 2 for Raftelis - project management support
Raftelis' continued participation is required to assist staff with project management and support tasks. The Raftelis contract must be extended to facilitate the above change in scheduling and resource availability. The proposed change order to Raftelis is not to exceed $90,000 for six months of additional project management support and consulting. Approval of this change order is within the General Manager's approval authority; however, staff is requesting Board approval in the context of the overall project cost.

FUNDING
The following table summarizes the total Project funding status:

Total Project Funding		
Total funding to date	$	11,008,537.00
Spent to date	$	8,699,362.83
Balance remaining	$	2,309,174.17

While there is a significant remaining balance in the Project, those funds are primarily encumbered for continued capitalized labor expenditures of the core team and original contract payments for the CIS and CDR phases to complete the Project.

Within the total funding approved by the Board, $940,000 was designated for contingencies. Since initial Board approval and funding, staff has approved 11 change orders for a total of $493,400.95 under the General Manager's approval authority and within the Board-approved contingency funding. The following table summarizes the status of contingency funding and the additional funding needed.

Contingency Funding	
Designated contingency funding	$940,000.00
Change Orders to date	($493,400.95)
Balance remaining	$446,599.05
Proposed change orders	($795,583.90)
Subtotal	($348,583.85)
Additional funding request	**$400,000.00**

The proposed change orders described total $795,583.90, which would exceed the remaining available contingency funding. Therefore, an additional funding authorization of $400,000 is requested.

The additional funding request represents an approximate 4% addition to the currently authorized and funded amount for the Project. The new total Project cost, as proposed, is $11,408,537.

BOARD OPTIONS

Option 1: Approve Contract Change Order Nos. 12 and 13 to Quantum Resolve in the not-to-exceed amount of $391,625.55 and $313,958.35, respectively, for software integration and implementation, Contract Change Order 2 to Raftelis, Inc. in the not-to-exceed amount of $90,000 for project management support, and authorize total additional funding of $400,000 for the Hansen Core Software Upgrade Project, Project No.18055.

Option 2: Take other action as directed by the Board.

Option 3: Take no action

RECOMMENDATION

Option 1

ATTACHMENTS

Attachment A: Change Order No. 12 from Quantum Resolve
Attachment B: Change Order No. 13 from Quantum Resolve
Attachment C: Change Order No. 2 from Raftelis

Aaron Kennedy
Information Technology Director

Jamie Bandy
Finance Director

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

for
Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Deployment Method

QuantumResolve

El Dorado Irrigation District

CHANGE REQUEST FORM

Ref: CRF No:

Customer Name:	El Dorado Irrigation District		
Date Raised:	August 10, 2023	**Requested by (EID):** August 10, 2023	
Project Number:	32507780	**Prepared by (QR/Infor):** September 7, 2023	
Project Name:	EID IPS Upgrade		
Functional Area:	CDR	**Issue number:** 12	
Ordering Doc. No.:			
Priority: *(Check one)*		**Customer Request?** (*Check one*):	
☒ High ☐ Medium ☐ Low		☒ Yes ☐ No	

Status *(check one)*:

☒ Open ☐ Assigned ☐ Investigated ☐ Resolved ☐ Deferred ☐ Approved ☐ No action required ☐ Expired

Reason for Change:

Unforeseen delays including natural disasters, vacancies, and unanticipated job tasks have caused schedule shifts leading to growing conflicts between overlapping phases of the Upgrade Project. EID recognized that these schedule shifts have led to its project resources being stretched too thin to participate in key project phase tasks and potentially risks delaying those tasks - in some cases by months.

EID considered options to address these concerns and has determined a delay/slow down of work on Project Phase III: CDR plus an extension of the CDR project timeline offers the best path forward.

Priority and needed resolution by:

The consultants from Quantum Resolve, Infor, and Rafetlis must now look past the original timelines set forth in the original scope of work presented to EID and incorporate this new delay within their own project schedules and resources. This CR only examines the resource levels from Quantum Resolve and Infor to address the delay. If EID wants to pursue this CR, it should be executed as soon as possible with an effective date set for the first of October 2023.

Short Title:
Extension of the Phase III: CDR Project Timeline by Up to Five Months

Description of the Change:
The Original Scope of the Phase III: CDR timeline was scheduled for approximately 12 months with a start date of April 2023. Because of the delays that the Phase I: CMMS phase it was decided by all parties to delay until a June 2023. After the first two months very little progress happened so a CDR Extension has been requested.

Quantum Resolve has looked at future project schedules, resources that need to be reallocated both within QR as well as at Infor and has come up with a projected monthly cost. QR has agreed during this "slow down" that QR will participate in CMMS enhancements that have been noted since the CMMS Go-Live. Some potential examples are listed below but this list does not constitute a required task list to this Change Request but just suggested task that might fit into the timeline and expertise of the QR resources.
Examples:

- One Extra Application Type Migration for CDR (Scope was for Nine and will migrate up to Ten)
- Lead service line assessment
- Mobile / Field Inspector enhancements
- CMMS dashboard and reporting enhancements
- Supplemental CMMS documentation
- Supplemental CDR documentation

QR will note task fitting into these types of request as more support task and belong to the Operations and Maintenance Support Purchase Order (#_____) instead of the IPS Upgrade Project budget. The monthly invoice by QR will be divided into these two categories so EID can make the appropriate budgetary separations.

Scope of Work:
The project scope of the Phase III: CDR will not change in respect to any of its components.

Impact on Detailed Project Plan (including timescales and estimated completion where applicable):
Once the delay has been lifted, a new project plan with the new schedule will be developed.

Impact Work Products / Milestones (including list of affected Work Products where applicable):
This will delay all Phase III: CDR milestones including the Go-Live

Impact on Risks:
N/A

Obligations & Assumptions:
N/A

Other Projects / Items Affected:
N/A

Impact on Funding?
☒ Yes ☐ No ☐ None at this point

Resource / Activity Task	Hours/Days (fixed price)	Rate	Fixed Monthly Fee
QR/Infor Monthly Extension for the Phase III: CDR	(1 month)	$60,291.67	$60,291.67
Monthly Travel Expenses	(1 month)	$2,500.00	$2,500.00
Totals by Month		**$62,791.67**	**$62,791.67**

Cashflow:
This is a fixed fee change request for three to five months of delay/slow down. **Not to Exceed $313,958.35.**

Recommendation:	
☐ Agreed ☐ Approved for further evaluation. ☐ Rejected, no further action required. "Notes" below includes reason for rejecting.	☐ Ordering document amendment required. Services associated with the further evaluation will not commence until an ordering document amendment is executed. ☐ No ordering document amendment required.
Notes:	
Associated Problem Report: None	**Associated Risk & Issue Form:** None
We hereby accept to deliver above services: **Accepted (QR/Infor), Date:**	**We hereby accept that above services will be delivered:** **Accepted (Client), Date:**

CHANGE REQUEST FORM, - WORKFLOW

(Optional)

Ref: CRF No:

Impact on:
(and order of review / approval)

Other Workstreams	☐ Yes ☐ No
Business Solution	☐ Yes ☐ No
Business Process	☐ Yes ☐ No
Systems Architecture	☐ Yes ☐ No
Interfaces, Business part	☐ Yes ☐ No
Interfaces, Solution part	☐ Yes ☐ No
Masterdata	☐ Yes ☐ No
Running Costs	☐ Yes ☐ No
Business Req. fulfillment	☐ Yes ☐ No
Business Objectives	☐ Yes ☐ No
Business Principles	☐ Yes ☐ No
Business Vision	☐ Yes ☐ No
Parallel projects	☐ Yes ☐ No
Other sub-projects	☐ Yes ☐ No
IT Delivery	☐ Yes ☐ No
Project cost	☐ Yes ☐ No
Project timeline	☐ Yes ☐ No
Project Scope	☐ Yes ☐ No

Notes:

CHANGE REQUEST FORM, - EVALUATION (Optional)

Ref: CRF No:

Scope:
Schedule:
Cost:
Quality:
Risk:
Project Management:
Evaluator's priority:
Alternatives and Recommendation:

infor Deployment Method QuantumResolve El Dorado Irrigation District

CHANGE REQUEST FORM

Ref: CRF No:

Customer Name:	El Dorado Irrigation District		
Date Raised:	September 12, 2023	**Requested by (EID):** September 12, 2023	
Project Number:	32507780	**Prepared by (QR/Infor):** September 15, 2023	
Project Name:	EID IPS Upgrade		
Functional Area:	CIS	**Issue number:** 13	
Ordering Doc. No.:			
Priority: *(Check one)*		**Customer Request?** (*Check one*):	
☒ High ☐ Medium ☐ Low		☐ Yes ☒ No	

Status *(check one)*:

☒ Open ☐ Assigned ☐ Investigated ☐ Resolved ☐ Deferred ☐ Approved ☐ No action required ☐ Expired

Reason for Change:

Unforeseen delays including natural disasters, vacancies, and unanticipated job tasks have caused schedule shifts leading to growing conflicts between overlapping phases of the Upgrade Project. The original CIS project schedule was impacted and several months will be needed to complete this phase.

Priority and needed resolution by:

The consultants from Quantum Resolve and Infor have projected the new timeline for the CIS phase. There were numerous points for this delay and the needed extension.

Short Title:
Extension of the Phase II: CIS Project Timeline for Four Months

Description of the Change:
The Original Scope of the Phase II: CIS timeline was scheduled for approximately 16 months with a start date of October 2021. Because of the delays, this timeline has now increased to have a final completion of April 2024. This is approximately 12 months past the original completion timeframe.

Infor will need to bring more resources or extend the current resources timeline to complete this phase. There are five separate job roles that are impacted on the Infor side to keep with this schedule and those roles are outlined in this Funding section. Quantum Resolve and Infor have negotiated an extension of just four months to be recognized by the project and those numbers are also represented in the Funding section.

Scope of Work:
The project scope of the Phase II: CIS will not change in respect to any of its components.

Impact on Detailed Project Plan (including timescales and estimated completion where applicable):
QR/Infor have already projected the new project plan with the new schedule and this has been presented to EID and approved.

Impact Work Products / Milestones (including list of affected Work Products where applicable):
This will delay all Phase II: CIS milestones including the Go-Live from the original schedule and new milestones have been noted in the new project plan.

Impact on Risks:
N/A

Obligations & Assumptions:
N/A

Other Projects / Items Affected:
N/A

Impact on Funding?

☒ Yes ☐ No ☐ None at this point

Resource / Activity Task	Estimated Hours	Rate	Estimated Task Total
Infor Project Manager	287	$300.45	$86.229.15
Senior Functional Consultant	460	$232.49	$106,945.40
Principal Funcational Consultant	419	$299.00	$125,281.00
Senor Prinicipal Technical Consultant	411	$90.00	$36,990.00
COE Technical Consultant	402	$90.00	$36,180.00
Total			**$391,625.55**

Cashflow:

This is a fixed fee change request for four months of project extension (January 2024 to April 2024). **Not to Exceed $391,625.55.**

Monthly Fixed Fee

January 2024	$97,906.39
February 2024	$97,906.39
March 2024	$97,906.39
April 2024	$97,906.38
Total Fixed Fee	**$391,625.55**

Recommendation:

☐ Agreed
☐ Approved for further evaluation.
☐ Rejected, no further action required.
"Notes" below includes reason for rejecting.

☐ Ordering document amendment required.
Services associated with the further evaluation will not commence until an ordering document amendment is executed.
☐ No ordering document amendment required.

Notes:

Associated Problem Report:
None

Associated Risk & Issue Form:
None

We hereby accept to deliver above services:
Accepted (QR/Infor), Date:

We hereby accept that above services will be delivered:
Accepted (Client), Date:

CHANGE REQUEST FORM, - WORKFLOW

(Optional)

Ref: CRF No:

Impact on:
(and order of review / approval)

Other Workstreams	☐ Yes ☐ No
Business Solution	☐ Yes ☐ No
Business Process	☐ Yes ☐ No
Systems Architecture	☐ Yes ☐ No
Interfaces, Business part	☐ Yes ☐ No
Interfaces, Solution part	☐ Yes ☐ No
Masterdata	☐ Yes ☐ No
Running Costs	☐ Yes ☐ No
Business Req. fulfillment	☐ Yes ☐ No
Business Objectives	☐ Yes ☐ No
Business Principles	☐ Yes ☐ No
Business Vision	☐ Yes ☐ No
Parallel projects	☐ Yes ☐ No
Other sub-projects	☐ Yes ☐ No
IT Delivery	☐ Yes ☐ No
Project cost	☐ Yes ☐ No
Project timeline	☐ Yes ☐ No
Project Scope	☐ Yes ☐ No

Notes:

CHANGE REQUEST FORM, - EVALUATION (Optional)

Ref: CRF No:

Scope:
Schedule:
Cost:
Quality:
Risk:
Project Management:
Evaluator's priority:
Alternatives and Recommendation:

El Dorado Irrigation District ("EID") RAFTELIS

Raftelis Change Order #002

Project Name: Hansen 7 Upgrade project: 1-6 month CDR postponement

Date: 09/06/2023

Presented by: Stacey Aukamp

Description of the change
Due primarily to resource constraints, the Hansen 7 Upgrade Project has had delays in several areas. CMMS has delayed some of their Field Inspector rollouts and other functions that are lingering into the CIS and CDR efforts. CMMS delays as well as CIS changes in scope (new bill codes) and other schedule changes as well due to fires, COVID, operations issues, etc. The team has decided to postpone resumption of the CDR project between 1 and 6 months' time, so we are offering a per-month rate to append to the end of the billing in original Professional Services Agreement 4/1/2021.

Impact Summary						
Areas Impacted by Change (Y/N)			**Impact to Project (Y/N)**			
Business	*Technical*	*Project Timeline*	*Cost*	*Critical Path*	*Deliverables*	*Benefits*
Y	Y	Y	Y	Y	N	N

Change Details Sheet	
Regulatory Imposed Change	N/A
Situation Prompting Change	1-6 month extension of professional services on CDR project at a run rate of $15k/month.
Business Justification to include in project	Accurate reflection of project resource requirements and a successful final solution and go live.
Suggested Solution	• Add 1 month $15,000 to a Project Management milestone for already agreed upon delay. • Add any additional months as agreed to by EID management team to Project Management milestones @ $15,000 a month at the end of the current milestone billing schedule.

Impact Assessment Details Sheet	
Business Impacts	Reduce currently overwhelmed EID staff to ensure that all three phases can be completed successfully.
Technical Design Impacts	N/A
Resource Requirements	Raftelis Project Managers, OCM
Deliverables & Scope	Process Change Order with Raftelis Money team and EID Accounts Payable departments

Cost Impact	$15,000 - $90,000 based on number of months added
Schedule Impacts	Extends project by 1-6 months for CDR phase

Approvals:

Stacey M. Aukamp **9/6/2023**

_____ _____

Stacey Aukamp
Vice President- Raftelis

Date

_____ _____

Jim Abercrombie
EID General Manager

Date

Hansen Project Update
Project No. 18055

El Dorado Irrigation District

October 10, 2023

PREVIOUS BOARD ACTION

- December 9, 2019 – Board awarded a contract to Westin Technology Solutions in the not-to-exceed amount of $276,000 for consulting services and authorized additional funding of $516,000 for the Hansen 7 Upgrade Project.
- February 8, 2021 – Board received an update on the Hansen Core Software Project.
- March 22, 2021 – Board awarded contracts to Quantum Resolve in the fixed cost amount of $6,044,550 for the software integration and upgrade; Infor Public Sector, Inc. in the not-to-exceed amount of $343,007 for license and support; approved a contract amendment to Westin Technology Solutions in the not-to-exceed amount of $765,000 for consulting services; authorized additional funding of $3,240,000 for capitalized labor ($2,300,000) and contingency ($940,000) with a total funding request of $10,392,557; and approved a contract extension of Infor Public Sector, Inc. software and maintenance agreement through September 30, 2026 in the not-to-exceed amount of $745,000.
- October 25, 2021 – Board awarded a contract to Selectron Technologies, Inc. in the not-to-exceed amount of $39,627.20 for the purchase of a customer service Interactive Voice Response system for the Hansen Core Software Upgrade project and approved an extended service contract with Selectron Technologies, Inc. through April 30, 2027 in the not-to-exceed amount of $148,894.50.
- November 14, 2022 – Board adopted the 2023-2027 Capital Improvement Program (CIP), subject to available funding.
- December 12, 2022 – Board adopted the 2023-2024 Operating Budget.

SUMMARY OF ISSUE

- The Hansen software is critical to District operations and has reached the end of its useful life. Integration and implementation of new core software upgrade has been underway since 2021.
- The upgrade is a multi-phased, complex project requiring extensive work by a specialized software integrator, support by consulting staff, and dedicated District staff resources while continuing to perform critical operations using the current core software.
- Multiple factors have led to delays in completing the Hansen Upgrade Project including, but not limited to natural disasters, staff attrition, workload, and availability.

BACKGROUND/ DISCUSSION

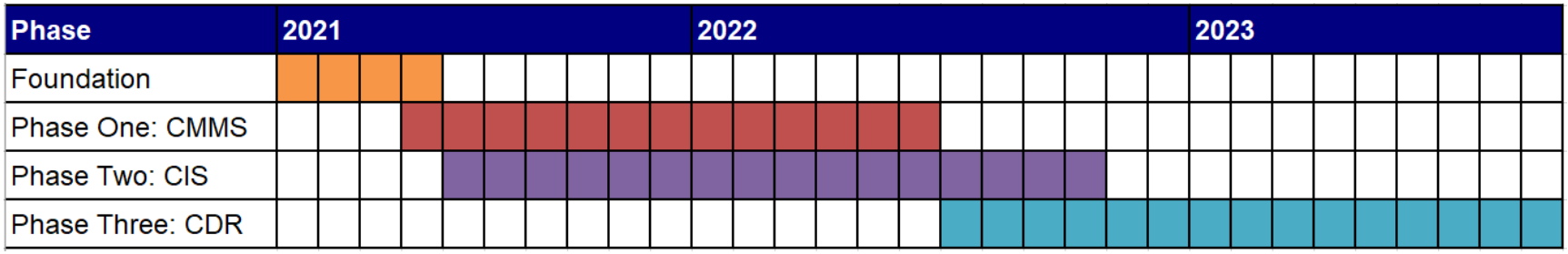
The original project was planned to take thirty (30) months or two and a half (2.5) years in total starting in March of 2021 completing in September of 2023.

- The Foundation phase was planned to take four (4) months.
- The Computerized Management and Maintenance System (CMMS) phase was planned to take thirteen (13) months with a one (1) month overlap with foundation.
- The Customer Information System (CIS) phase was planned to take sixteen (16) months with a twelve (12) month overlap with CMMS.
- The Community Development Records (CDR) phase was planned to take fourteen (14) months with a four (4) month overlap with CIS.

In total the core team was scheduled to work on more than one phase at a time for seventeen (17) months.

BACKGROUND/ DISCUSSION

Original Project Timeline



Foundation phase, March 2021 through June 2021
CMMS phase, June 2021 through June 2022
CIS phase July 2021 through October 2022
CDR phase July 2022 through September 2023

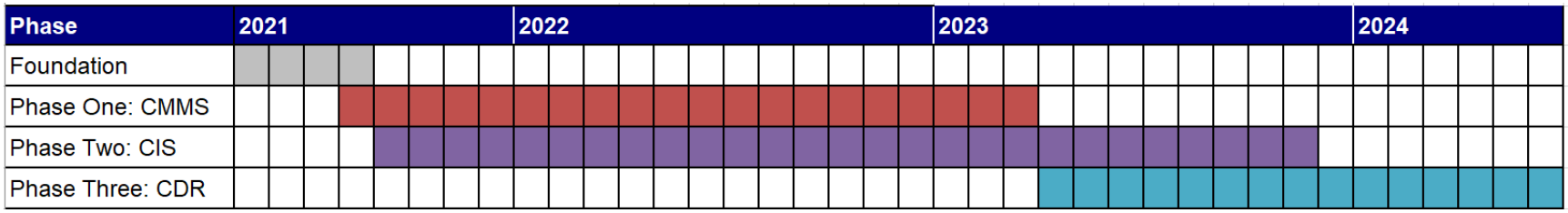
BACKGROUND/ DISCUSSION

Cause of delays

- Caldor Fire
- COVID 19
- Extreme weather events of 2022-2023 winter
- Staff attrition
- Workload overload
- Legislative requirements
- Changes to project deliverables

BACKGROUND/ DISCUSSION

Current Project Timeline



Foundation phase, May 2021 through August 2021. Completed on time.
CMMS phase, August 2021 through March 2023. Completed, 7 month delay.
CIS phase, September 2021 through November 2023. In progress
CDR phase, April 2023 through June 2024. Started.

BACKGROUND/ DISCUSSION

Total Project Funding	
Total funding to date	$11,008,537.00
Spent to date	$8,699,362.83
Balance remaining	$2,309,174.17

Contingency Funding	
Designated contingency funding	$940,000.000
Change Orders to date	($493.400.95)
Balance remaining	$446,599.05

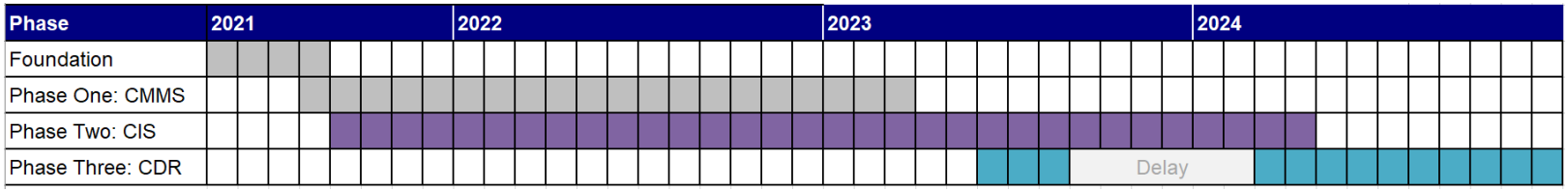
BACKGROUND/ DISCUSSION

Proposed Change Orders

- Change Order 12 – Quantum Resolve
  - Six month CDR phase hold.
- Change Order 13 – Quantum Resolve
  - Six month CIS phase extension
- Change Order 1 - Westin
  - Addition of six months of project management and consulting services

BACKGROUND/ DISCUSSION

Proposed Project Timeline



Foundation phase, May 2021 through August 2021. Completed.

CMMS phase, August 2021 through March 2023. Completed.

CIS phase, September 2021 through April 2024. In progress.

CDR phase, June 2023 through November 2024. On hold September 2023 through March 2024.

BACKGROUND/ DISCUSSION

Proposed Change Orders	
Change Order 12 – Quantum Resolve	$391,625.55
Change Order 13 – Quantum Resolve	$313,958.35
Change Order 1 - Westin	$90,000.00

Contingency Fund	
Balance remaining	$446,599.05
Proposed change orders	($795,583.90)
Subtotal	($348,583.85)
Additional funding request	**$400,000.00**

BOARD OPTIONS

- Option 1: Approve Contract Change Order Nos. 12 and 13 to Quantum Resolve in the not-to-exceed amount of $391,625.55 and $313,958.35, respectively for software integration and implementation, Contract Change Order 2 to Raftelis, Inc. in the not-to-exceed amount of $90,000 for project management support, and authorize total additional funding of $400,000 for the Hansen Core Software Upgrade Project, Project No.18055.

- Option 2: Take other action as directed by the Board.

- Option 3: Take no action.

QUESTIONS ?

EL DORADO IRRIGATION DISTRICT

SUBJECT: Consider adopting a Water Supply Assessment for the proposed Town and Country Village El Dorado Project.

PREVIOUS BOARD ACTION

February 8, 2021 – Board adopted the Water Supply Assessment for the Creekside Village Specific Plan.

June 28, 2021 – Board adopted Resolution No. 2021-007, approving the 2020 Urban Water Management Plan and Water Shortage Contingency Plan.

October 24, 2022 – Board received and filed the 2022 Water Supply and Demand Report.

BOARD POLICIES (BP), ADMINISTRATIVE REGULATIONS (AR) AND BOARD AUTHORITY

BP 5010 Water Supply Management
AR 5010 Water Availability and Commitments
AR 5011 Water Supply Management Conditions

SUMMARY OF ISSUE

El Dorado County (County) requested the District complete a Water Supply Assessment (WSA) for the proposed Town and Country Village El Dorado Project (Proposed Project). Preparation of a WSA by the District is required pursuant to Water Supply Assessment Law ("WSA Law") codified in Water Code section 10910 *et seq.* for proposed developments consisting of more than 500 dwellings. The Proposed Project is a 60-acre mixed-use development with more than 500 equivalent dwelling units in total; therefore, a WSA is required. The WSA is now complete, and Board approval is required before the County incorporates the WSA into their Environmental Impact Report (EIR).

BACKGROUND/DISCUSSION

Proposed Town and Country Village El Dorado Project

The Proposed Project is a mixed-use hotel resort, event center, and residential development on approximately 60.5 acres adjacent to Bass Lake Road and U.S. Highway 50. The total Proposed Project development is split into two development areas. The *Proposed Project Development Area* includes two hotels, retail services, two restaurants, a museum, an event center, parking, and 112 residential cottages totaling 30.3 acres. The *Program Study Area* includes uses that are not yet specifically defined but may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the County, totaling 30.2 acres. The WSA evaluates the total expected water demand from the *Proposed Project Development Area* and *Program Study Area* at full buildout.

Town and Country Village El Dorado Location Map

Water Supply Assessment

WSA Law requires an assessment of whether projected water supplies identified to serve a proposed project will be sufficient to meet existing and planned water demands over a 20-year horizon. WSA Law expressly anticipates events like the most recent drought by requiring an assessment of water supply sufficiency in single dry years and multiple dry years – not just under normal or average hydrologic conditions. The WSA (Attachment A) estimates the total Project water demands through buildout, identifies water supply availability to meet that demand and assesses whether expected water sources will be sufficient to meet the projected water demand of the Project during normal, single dry and multiple dry year conditions.

WSA Consultant Selection

In January 2023, the District issued a request for proposals to the Surface Water Hydrology consultants on the District's on-call list. Staff contracted with Zanjero (formally Tully & Young) for $39,255 to prepare the WSA. Zanjero has successfully completed WSA's for the District in the past and prepared the District's 2015 and 2020 Urban Water Management Plans. As described below, staff and consultant costs incurred by the District for the preparation and review of the WSA are paid 100% by the applicant of the Project.

Proposed Project Estimate Water Demands
The first step in the WSA process is the preparation of unit demand factors for various water uses within the proposed Project, including hotels, cottages, water features, pools, and landscaping. Conservative unit demand factors were determined for each category of use in the *Proposed Project Development Area* and *Program Study Area* at full buildout. Table 15 of the WSA summarizes the estimated demand of the entire Project at buildout is 207 acre-feet per year.

2020 UWMP Evaluation/Comparison
In 2021, the Board adopted the 2020 UWMP. The WSA evaluated whether the proposed Project was likely represented in the 2020 UWMP as part of EID's forecasted growth and, thus, whether this WSA can use the water system reliability assessment included in the 2020 UWMP to determine sufficiency under Water Code Section 10910 *et seq*. Specifically, Water Code section 10910 provides that a previously adopted UWMP can be used to support key elements of a WSA:

> *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment…[§10910(c)(2)]*

As evaluated in the WSA, the unit demand factors for the proposed Project are consistent with the unit demand factors used in the 2020 UWMP. The 2020 UWMP assumed an annual growth rate of slightly over 1 percent, resulting in an additional 7,054 new single-family homes and 375 non-residential connections in the El Dorado Hills Region. As presented in the 2020 UWMP, by 2045, the expected growth in the El Dorado Hills region is expected to add a total of 3,170 acre-feet per year of new water demand to EID's system across all new connections, regardless of connection type. The proposed Project's 207 acre-foot water demand represents about 6.5% of this assumed growth and falls within the general growth assumed in the 2020 UWMP.

A WSA must evaluate water demands and supplies over a 20-year horizon and consider water supply sufficiency in normal, single dry, and multiple dry years. The 2020 UWMP evaluated similar conditions over a 25-year horizon and found the District has sufficient current and planned supplies to meet projected project demands under all hydrologic conditions. Thus, the 2020 UWMP included a planning horizon sufficient to be used for purposes of this WSA.

Using the 2020 UWMP as a basis for the assessment, the WSA determined that the District has sufficient water supplies to serve the proposed Project.

Environmental Review
No environmental review is required at this time. The WSA does not commit the District to a specific course of action and, therefore, is not considered a project under the California Environmental Quality Act (CEQA). Rather, a WSA is a technical, informational, and advisory document for use by the lead land use agency (the County); it is not a final determination, finding, or decision. Procedurally, a WSA must be adopted by the District Board prior to the County's use as CEQA lead agency. If approved, the WSA will be included as an appendix of the EIR that the County will ultimately consider for certification.

FUNDING
The Project applicant is fully funding the cost of the WSA. Before the District issued a Notice to Proceed to Zanjero, the applicant provided a deposit to cover the cost of the WSA preparation, including anticipated District staff time associated with the review. All costs are billed against the deposit on a time-and-material basis. No funding is requested as part of this Board action.

BOARD OPTIONS
Option 1: Adopt a Water Supply Assessment for the proposed Town and Country Village El Dorado Project.

Option 2: Take other action as directed by the Board

Option 3: Take no action

RECOMMENDATION
Option 1

ATTACHMENTS
Attachment A: WSA for the Town and Country Village El Dorado Project

Mike Brink
Supervising Civil Engineer

Brian Deason
Environmental Resources Supervisor

Brian Mueller
Engineering Director

Brian Poulsen
General Counsel

Jim Abercrombie
General Manager

Attachment A

SB 610
Water Supply Assessment
for
Town & Country Village El Dorado

Prepared for
El Dorado Irrigation District

September 2023 Public Draft

Prepared by

Table of Contents

Section 1 – Project Introduction

As the lead agency under the California Environmental Quality Act ("CEQA"), the County of El Dorado ("County") is assessing the potential environmental effects associated with the proposed Town & Country Village (referred to as the "Proposed Project"). The Proposed Project is located within the El Dorado Irrigation District (EID) sphere of influence (annexation into EID's service area required), and the County has identified EID as the water supplier that would serve the Proposed Project, should it be approved. To inform the CEQA analysis, Zanjero has prepared this Water Supply Assessment ("WSA") to evaluate EID's water supply sufficiency to meet the new demands expected to be generated by the Proposed Project. This analysis relies upon information from EID, including but not limited to, the El Dorado Irrigation District 2020 Urban Water Management Plan ("EID UWMP"), adopted June 2021.[1]

Analytical method and legal requirements

This WSA estimates the Proposed Project's water demand through build-out, presents and discusses the availability of water sources identified to meet that demand, and assesses whether expected water supplies will be sufficient to meet the projected water demand of EID with the Proposed Project along with current customers and other planned uses during normal, single dry, and multiple dry year conditions.

The above-referenced analytical method is derived from the Water Supply Assessment Law ("WSA Law") codified at Water Code section 10910 et seq. The WSA Law, sometimes referred to as "SB 610," outlines the information and analysis that must be included in a CEQA document prepared for certain projects of a specified size and composed of certain land-uses. Triggers requiring the preparation of a WSA include residential developments of more than 500 dwelling units, shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space, commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space, and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. The Proposed Project is a 60-acre mixed-use development with more than 500 dwelling units in total, and therefore a WSA is required.

WSA Law requires an assessment of whether projected water supplies identified to serve a proposed project will be sufficient to meet existing and planned water demands over a 20-year horizon. The WSA Law expressly anticipates events like the most recent drought by requiring assessment of water supply sufficiency in single dry years and multiple dry years – not just under normal, or average, hydrologic conditions.

The WSA will be incorporated into the CEQA documents — an Environmental Impact Report (EIR) — being prepared for the Proposed Project (the Project EIR).

[1] A copy of the EID 2020 UWMP is available at https://www.eid.org/home/showpublisheddocument/5666/637619651261230000

Document preparation and approval

The WSA Law requires that the lead agency – in this case, the County of El Dorado – identify a "public water system" and further requires the lead agency to request that each identified public water system prepare a WSA for the project. The El Dorado Irrigation District operates a public water system in western El Dorado County and the Proposed Project lies within EID's service area (subject to annexation); it is anticipated that EID would serve the Proposed Project. Therefore, EID is required to determine, based on the entire record, whether its projected water supplies will be sufficient to satisfy the demands for the Proposed Project, in addition to existing customers and all planned future uses.

This WSA provides the necessary information for EID to make its determinations and to comply with the statutory assessment of water supply sufficiency as required by WSA Law. The governing body of EID is required to approve this WSA.

Document organization

The WSA is organized according to the following sections:

- **Section 1: Proposed Project Introduction**. This section provides an overview of the WSA's purpose and organization, along with a detailed description of the Proposed Project, including the land use elements that will create water demand.

- **Section 2: Proposed Project Estimated Water Demands**. This section describes the methodology used to estimate water demands of the Proposed Project and details the estimated water demands from initiation through build-out.

- **Section 3: Representation in 2020 UWMP**. This section presents relevant water demand and supply information from the 2020 EID Urban Water Management Plan and relationship to the Proposed Project for purposes of Water Code Section 10910(c)(2).

- **Section 4: Sufficiency Conclusion**. This section provides the concluding statement of water supply availability for purposes of Water Code Section 10910.

Proposed Project Description

The Proposed Project (Town & Country Village El Dorado, T&CVED) is a mixed-use hotel-resort, event center, and residential development situated on approximately 60.5 acres adjacent to Bass Lake Road and U.S. Highway 50. The total Proposed Project development is split into two development areas: the *Proposed Project Development Area* of the Proposed Project will be evaluated at a project level and includes two hotels, retail services, two restaurants, a museum, an event center, parking, and 112 residential cottages totaling 30.3 acres. The *Program Study Area* will be evaluated at a program level and includes uses that are not yet specifically defined but may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the zoning district, totaling 30.2 acres.

This WSA evaluates the total expected water demand from both the *Proposed Project Development Area* and *Program Study Area* at full buildout.

Project Development Area

Figure 1 provides a map of (a) the Proposed Project location and (b) the location of the *Project Development Area* and the *Program Study Area*.

Figure 1a & 1b – Proposed Project location and areas

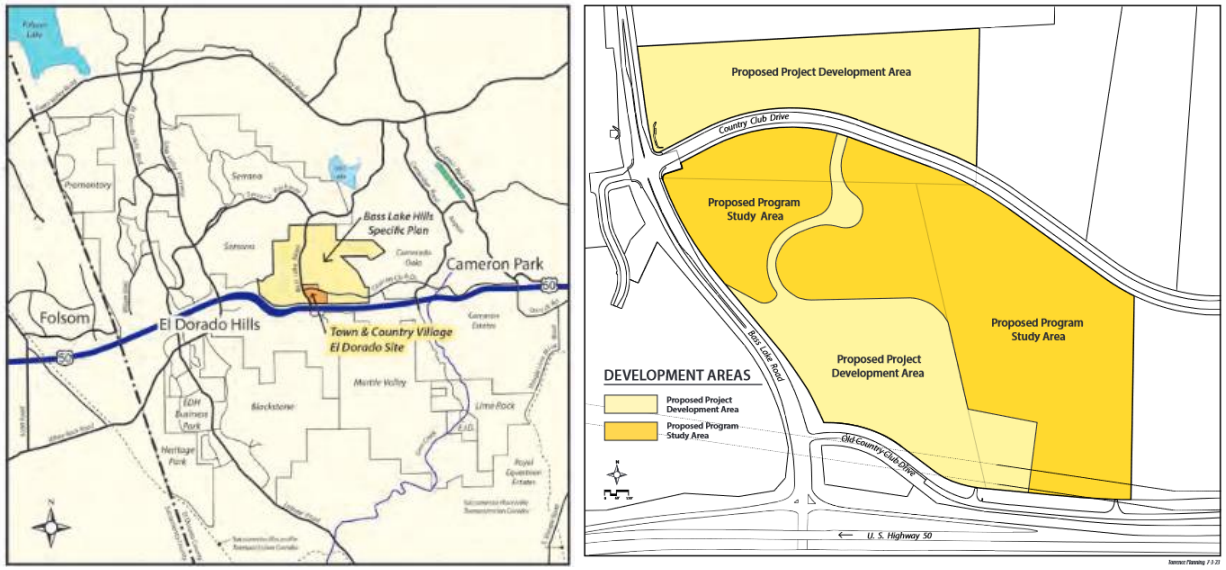


Figure 1a (left) presents the location of the Proposed Project within western El Dorado County, California. Figure 1b (right) presents the "Project Development Area", shaded tan, and "Program Study Area", shaded orange, within the overall Proposed Project.

The centerpiece of the *Project Development Area* is a pair of two 5 story 150-room masonry and timber hotels (300 rooms total) inspired by the historic Ahwahnee Hotel in Yosemite National Park. Adjacent to the hotels is a 3-story event center building, consisting of: two restaurants on the ground floor; an event center capable of hosting weddings, conferences, and other events on the second floor; and a museum focused on El Dorado County's Gold Rush history on the third floor.

In addition to the hotel/event center, the *Project Development Area* includes 112 residential cottages, with 56 intended for hotel employee housing and the other cottages that may be rented on a daily or extended stay basis. A detailed site plan of the *Project Development Area* is presented in Figure 2.

Figure 2 – Overall site plan

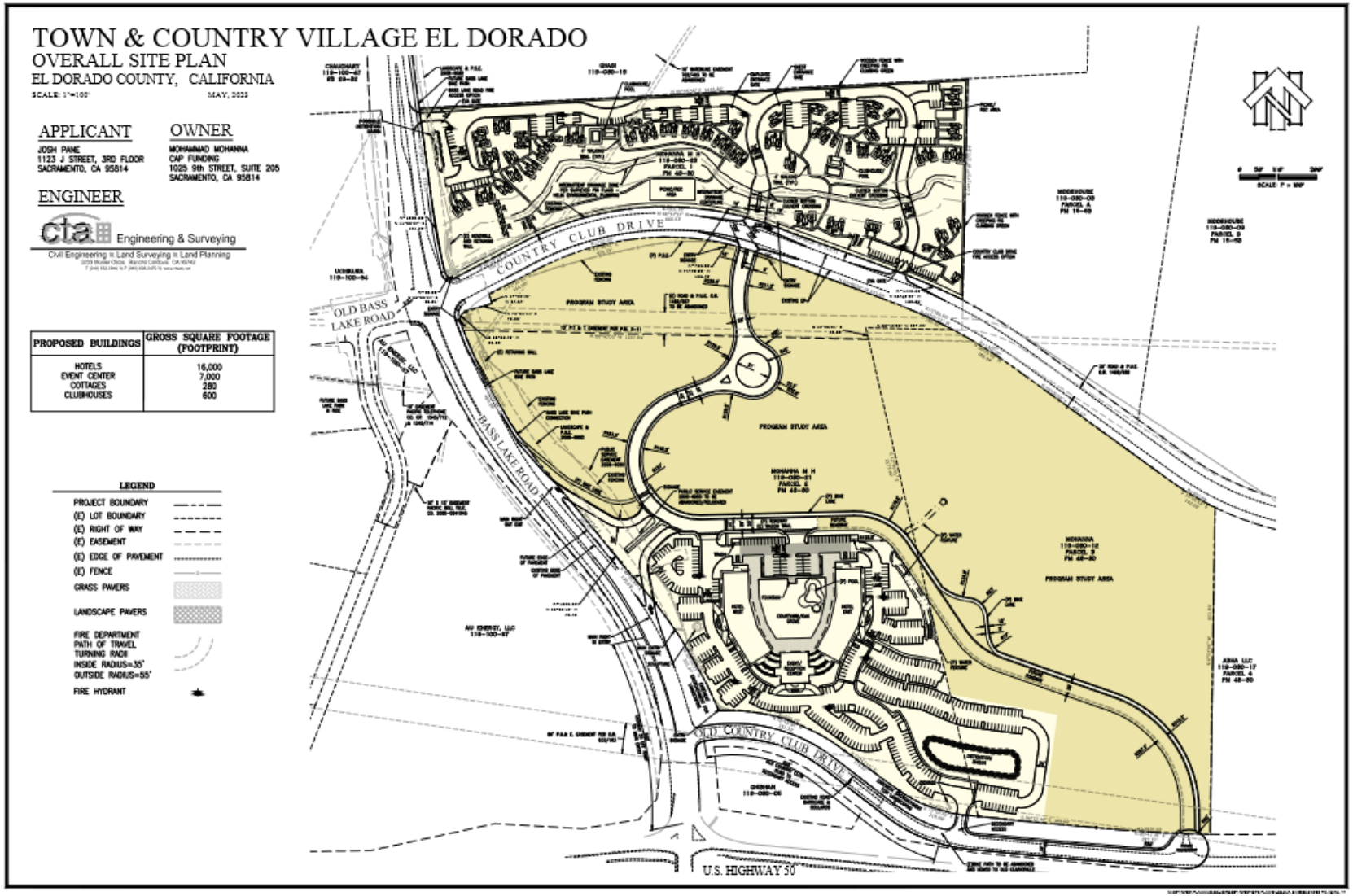


Figure 2 presents the overall site plan layout for the Project Development Area. Note that the Program Study Area (shaded darker tan) does not yet have a site plan specified, but may be developed in the future as part of the overall Proposed Project.

Program Study Area

As noted above, the exact uses of the 30.2 acres in the *Program Study Area* have not yet been specified, but will likely include a mix of commercial and residential uses allowed by County zoning. The timing of the *Program Study Area*'s construction is unknown at this time, but is anticipated to occur sometime after the construction of the *Project Development Area*. While a range of possible configurations are ultimately possible for this portion of the overall T&CV development, the project description proposes the following uses for the *Program Study Area*:

- 15.1 acres of multifamily residential land containing 352 dwelling units
- 5.0 acres of commercial land use reserved for a mixed-use senior housing development of 150 units and 10,000 SqFt of commercial development
- 6.9 acres of commercial land use reserved for a mixed-use development project consisting of 80,000 SqFt of commercial use and 200 apartment/condominium residential dwelling units
- 3.2 acres of open space

Although the specific development details of the *Program Study Area* are not yet finalized, it is necessary to include these potential water demands in the analysis of supply sufficiency in this WSA. Therefore, conservative assumptions about the range of possible water demands are used, as described in more detail in Section 2.

Section 2 – Proposed Project Estimated Water Demands

This section describes the methodology, provides the supporting evidence, and presents the estimated annual water demands for the Town & Country Village El Dorado (Proposed Project) development at build-out.

As described in Section 1, the Proposed Project features a hotel-resort, conferencing and event center, and multi-family residential components, as well as 30.2 acres of additional mixed-use development in the *Program Study Area*. To understand the water needs of this multifaceted project, unique water demand factors were calculated that correspond with the various commercial and residential features of Proposed Project. The water demand factors presented below are then multiplied by the quantities from the project description (number of hotel rooms, square feet of commercial, dwelling units, mixed-use acres, etc) to arrive at water demand estimates for each component of the proposed development. All water demands that would be served by EID, both indoor and outdoor, are considered.

The Proposed Project is divided into two distinct areas: the *Project Development Area* and the *Program Study Area*, as detailed in Section 1. The new land uses in the *Project Development Area* are described in detail, and water demand estimates presented in this WSA will be similarly specific. In the *Program Study Area*, a range of possible uses are proposed, and this WSA makes a conservative estimate of the water demand possible based on potential allowable uses. This WSA evaluates water supply sufficiency based on the total water demand expected from the entire Proposed Project.

Current and Future Mandates Affecting Water Use

There are several factors that affect the development of unit water demand use, ranging from state-imposed and EID or County imposed landscape ordinances and other water-use mandates, to changes in the types of housing products being offered. These factors are incorporated into unit water demand factor determination and discussed in this section. Characteristics of the factors relevant to this WSA are described below.

Water Conservation Orders

In 2009, Governor Arnold Schwarzenegger signed Senate Bill No. 7 (SBX7-7), which established a statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020 for urban retail water suppliers.[2] Since the Proposed Project is not yet built, this legislation only indirectly applies.

However, the efforts undertaken throughout the State by urban retail suppliers to comply with this statute, though not directly, would affect the Proposed Project's use of appliances, fixtures, landscapes, and other water using features, through changes or additions to EID and County ordinances and/or through a continuing "conservation ethic" developed in communities in and around the Proposed Project as a result of the most recent statewide drought conditions.

[2] California Water Code § 10608.20.

In response to the 2013 through 2015 multi-year drought conditions, Governor Brown issued Executive Order B-37-16 in May 2016 entitled "Making Water Conservation a California Way of Life." In May 2018, Governor Brown signed into law SB 606 and AB 1668, which imposed additional statutory requirements above and beyond the 20 percent by 2020 target reflected in the 2009 legislation. This is expected to result in continued efforts to increase water use efficiency and ultimately to reduce water demands of existing water users and continue to influence the expected demands of future water user.

Indoor Infrastructure Requirements

Beginning in January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (hereafter the "CAL Green Code") requiring the installation of water-efficient indoor and outdoor infrastructure for all new projects after January 1, 2011. The CAL Green Code was incorporated as Part 11 into Title 24 of the California Code of Regulations, and was revised in 2013 and in 2016 to address changes to the State's Model Water Efficient Landscape Ordinance ("MWELO") adopted during the drought.[3] Revisions to the CAL Green Code in 2019 modified sections to direct users to MWELO regulations contained in other regulatory sections.[4]

The CAL Green Code applies to the planning, design, operation, construction, use and occupancy of every newly constructed or remodeled building or structure. All new residential and non-residential customers must meet the water use requirements of the CAL Green Code as well as the outdoor requirements described by MWELO.

The CAL Green Code's indoor requirements generally manifest through: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20 percent reduction in water use from the building "water use baseline."[5] The Proposed Project will satisfy these indoor requirements through the use of appliances and fixtures such as high-efficiency toilets, faucet aerators, on-demand water heaters, or other fixtures, as well as Energy Star and California Energy Commission-approved appliances. Outdoor requirements are discussed in the following subsection.

[3] The 2016 Triennial Code Adoption Cycle consisted primarily of the MWELO updates adopted in response to the drought. Indoor infrastructure changes were limited to some minor non-residential fixture changes and changes to the voluntary Tier 1 and Tier 2 requirements. Additionally, the Code was updated to match the new Title 20 Appliance Efficiency Regulations.

[4] The 2019 updated sections to direct CAL Green code users to Title 23 of the California Code of Regulations to allow Title 23 to be the sole location of MWELO requirements.

[5] See CAL Green Code. For Residential construction, Section 4.303.1 provides the residential water conservation standard and Table 4.303.2 identifies the infrastructure requirements to meet this standard. Table 4.303.1 and Worksheets WS-1 and WS-2 are to be used in calculating the baseline and the reduced water use if Option 2 is selected. For non-residential construction, Section 5.303.2.3 provides the water conservation standard as well as the baseline and reduced flow rate infrastructure standards. Note that Worksheets WS-1 and WS-2 incorporate both residential and non-residential fixtures, yet the water use is still to be analyzed by "building or structure" as specified in Chapter 1, Section 101.3.

Model Water Efficient Landscape Ordinance (MWELO)

The Water Conservation in Landscaping Act was enacted in 2006, requiring the Department of Water Resources ("DWR") to update the Model Water Efficient Landscape Ordinance.[6] In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or to enact its own provisions equal to or more restrictive than the MWELO provisions.[7,]

In response to the Governor's executive order dated April 1, 2015, (EO B-29-15), DWR updated the MWELO and the California Water Commission approved the adoption and incorporation of the updated State standards for MWELO on July 15, 2015, effective after December 1, 2015.[8]

The changes included a reduction to 55 percent for the maximum amount of water that may be applied to a landscape for residential projects, which effectively reduces the landscape area that can be planted with high water use plants, such a turf. For residential projects, the coverage of high water use plants is reduced to 25% of the landscaped area (down from 33%). The newly updated MWELO also now applies to new construction with a landscape area greater than 500 square feet (the prior MWELO applies to landscapes greater than 2,500 square feet).[9] The El Dorado County Planning and Building Department reviews all new development for conformance with these standards.

The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency. Finally, the MWELO requires the landscape design plan to delineate hydrozones (based upon plant factors) and then to assign a unique water use value for each hydrozone (low, medium, high).[10]

Metering, Volumetric Pricing

California Water Code Section 525 requires water purveyors to install meters on all new service connections after January 1, 1992. California Water Code section 527 requires water purveyors to charge for water based upon the actual volume of water delivered if a meter has been installed. Though EID would be billing customers on a volumetric basis, this action alone is not expected to substantially reduce water use. However, it is anticipated that the retail billing system would encourage and help maintain reasonable use (e.g., through implementation of a tiered rate structure and/or water budgets), so that the Proposed Project's water demands at build-out are not expected to increase as the Proposed Project ages.

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[6] Gov. Code §§ 65591-65599.

[7] California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 492.4. The MWELO provides the local agency discretion to calculate the landscape water budget assuming a portion of landscape demand is met by precipitation, which would further reduce the outdoor water budget. For purposes of a conservative analysis, precipitation is not assumed to satisfy a portion of the outdoor landscape requirement because the determination of an appropriate effective precipitation factor is highly uncertain given the various landscape slopes, terrain composition, concurrent watering schedules, etc.

[8] These updated changes have been incorporated into California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 490-495.

[9] CCR Tit. 23, Div. 2, Ch. 27, Sec. 490.1.

[10] CCR Tit. 23, Div. 2, Ch. 27, Secs. 492.3(a)(2)(A) and 492.7(a)(2).

Urban Water Use Objectives

In 2018 CA State Legislature passed SB 606 and AB 1668 (Water Conservation and Drought Planning) which included provisions for urban water use efficiency standards and performance measures. This legislation "establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective (UWUO)." [11] Beginning in 2024, Urban Water Suppliers are required to calculate their own UWUO and compare it to the supplier's actual water use. Until 2025, indoor residential water use standard is 55 gallons per capita daily (gpcd), but this standard is tightened to 47 gpcd from 2025-2030, and is further reduced to 42 gpcd beyond 2030. The UWUO also includes additional efficiency requirements for commercial, industrial, and institutional (CII) landscapes.

EID will be required to comply with the UWUO requirements by the time the Proposed Project would begin construction. Therefore, it can be assumed that EID will implement demand management measures for its new and existing customers in order to comply with the UWUO requirements throughout the lifetime of the Proposed Project.

Project Development Area Demand Factors

Within the larger Proposed Project, the *Project Development Area* consists of 30.3 acres and includes: two hotels, retail services, two restaurants, a museum, an event center, parking, and 112 residential cottages (half for hotel employee housing and half that may be rented on a daily or extended stay basis). Because the components within the *Project Development Area* are described in detail, it is possible to develop unique indoor and outdoor water demand factors for each portion of the project that reflect the various mandates previously discussed.

Indoor water use

Hotels

The two planned hotels in the Proposed Project Development Area each consist of 150 rooms, for a total of 300 hotel rooms. Typical hotel indoor water usage, as documented in a sample of recent adopted WSAs from across California,[12,13,14] ranges from 80 to 150 gallons per day per occupied hotel room. This range includes all customer water use within rooms, as well as

[11] California Water Code § 10609-10609.38

[12] ICF (2022). Willow Village Master Plan Project Environmental Impact Report Appendix 3.15 Water Supply Assessment. *City of Menlo Park*. Retrieved from: https://beta.menlopark.org/files/sharedassets/public/community-development/documents/projects/under-review/willow-village/draft-eir/appendix_3.15_water-supply-assessment.pdf

[13] Marina Coast Water District (2018). Updated Water Supply Assessment for the Campus Town Specific Plan. Retrieved from: https://www.ci.seaside.ca.us/DocumentCenter/View/9774/Appendix-M-Campus-Town-Water-Supply-Assessment

[14] Golden State Water Company – Southwest (2019). Water Supply Assessment for Inglewood Basketball and Entertainment Center. Retrieved from: https://www.cityofinglewood.org/DocumentCenter/View/13921/M-Water-Supply-Assessment

laundry facilities and housekeeping. The central value of 115 gallons per day per occupied hotel room was selected as representative of hotel water use.

However, hotels are not always at full occupancy, so the per-room demand factor was adjusted to incorporate the developer's occupancy assumptions. As a conservative assumption, an annual occupancy factor of 80 percent was applied to this demand factor. As presented in Table 1, the occupancy adjusted annual indoor water demand of the 300 hotel rooms is 31 acre-feet per year.

Table 1 – Hotel Indoor Water Use

Rooms	Use Factor (gal/day/room)	Occupancy Factor	Total gal/year	AF/year
300	115	80%	10,074,000	31

Ground Floor Retail & Personal Services

On the ground floor of each hotel building, a combined total of 25,600 sq ft of retail space is proposed. The retail shops will include boutique shops and personal services such as beauty salons and spas, and will operate 7 days a week from 8 in the morning until 8 at night with a proposed capacity of 50 customers.

The water use factor of the proposed retail space is assumed to be 12 gallons per square foot annually, consistent with typical water use intensities for retail commercial space.[15] Multiplied by the total retail area proposed, this results in a total indoor water demand of approximately 307,200 gallons per year (conservatively rounded up to 1 acre-feet per year) for the ground floor retail portion of the Proposed Project.

Table 2 – Ground Floor Retail Indoor Water Use

Retail Area (SqFt)	Use Factor (gal/year/SqFt)	Total gal/year	AF/year
25,600	12	307,200	1

Restaurants, Event Venue, and Museum

The Restaurant/Event Venue/Museum is a stand-alone 3-story structure of 21,000 square feet (7,000 sq ft on each floor) and is intended for dining, weddings, receptions, local conferences, and community and family gatherings.

The ground floor of the event center building will contain two restaurants, each with a capacity of 120 patrons. Restaurant water use is conservatively estimated at 27.6 gallons per square foot of floor space per year.[16] This WSA has rounded this demand factor up to 30 gal/year/SqFt as a

[15] U.S. Energy Information Administration (EIA) (2017). 2012 Commercial Buildings Energy Consumption Survey: Water Consumption in Large Buildings Summary (Table W1).
[16] U.S. Energy Information Administration (2017)

conservative assumption. Across the 7,000 sq ft of total restaurant space, this equates to approximately 0.6 acre-feet per year of indoor water use.

On the second floor, an event venue capable of hosting weddings and conferences will operate one to two days per week from 8 in the morning until midnight with a variable capacity of between 50 and 300 persons. Water use of event venues is estimated as 26 gallons per square foot annually when occupied daily.[17] The wedding/conference center is expected to be occupied only 2 days per week at most, so an occupancy factor of 2/7 (29%) was applied. The resulting estimate of indoor water use for the 7,000 sq ft wedding/conference center is 0.2 acre-feet per year.

The third floor of the event center will feature a museum focusing on the Gold Rush era of California, with an emphasis on the culture and history of the early settlers. The museum will be open for visitors one to two days per week from 10 in the morning until 5 in the afternoon, with 50 to 100 visitors per day anticipated. For the purposes of this WSA, it is assumed that the museum's indoor water demands will be similar to that of a retail store of equal size, with all indoor water use attributable to the bathroom use of visitors and staff. Therefore, the retail water demand factor of 12 gallons per sq ft per year was used for this 7,000 sq ft space. Because the museum will only be open 2 days per week, occupancy factor of 2/7 (29%) was also applied. The resulting estimate of indoor water use for the 7,000 sq ft museum is 0.1 acre-feet per year.

The indoor water use of the Restaurant/Event Venue/Museum is summarized in Table 3. In total, the 3-story building is expected to demand 0.9 acre-feet/year of water for indoor use, which is conservatively rounded up to 1 acre-foot/year for the purposes of this WSA.

Table 3 – Restaurant, Event Center & Museum Indoor Water Use

Item	Floor Area (SqFt)	Use Factor (gal/year/SqFt)	Occupancy Assumption	Total gal/year	AF/year
Restaurant	7,000	30	100%	210,000	0.6
Event Venue	7,000	26	29%	52,000	0.2
Museum	7,000	12	29%	24,000	0.1
			Total	**286,000**	**1**

Residential Cottages

The Project Development Area will include a total of 112 residential cottage units, half of which will be used for hotel employee housing[18] and half may be rented on a daily or extended stay basis. Each cottage is designed as an individual two-story unit measuring 560 square feet and contains a bedroom, bathroom, full kitchen, and an outdoor deck.

[17] EIA (2017).

[18] Deed restrictions will ensure that 56 cottages are used exclusively for hotel employee housing.

The 56 hotel employee housing cottages indoor water demands are estimated using the per capita indoor water use standards required by the UWUO. This equates to a maximum of 55 gallons-per-person per day, multiplied by the assumed occupancy rate of 2 persons per cottage. Given that each cottage contains one-bedroom, average occupancy rates higher than 2 persons per cottage are not unlikely. The per-person water use multiplied by the assumed occupancy results in an estimated indoor water demand of 110 gallons per dwelling unit per day, or 6.9 acre-feet per year in total for the employee housing cottages. This estimate has been conservatively rounded up to 7 acre-feet per year for the purposes of this WSA.

The 56 rental cottages function essentially as detached hotel rooms. Therefore, the hotel room water demand factor used for the Proposed Project's hotels was applied to the rental cottages, which equates to 115 gallons per day per occupied hotel. After adjusting by the assumed hotel room occupancy factor of 80 percent, this results in an estimated annual water use of 92 gallons per day or 5.8 acre-feet per year in total for the rental cottages. This estimate has been rounded up to 6 acre-feet per year for the purposes of this WSA.

The indoor water use of the two categories of cottages (employee housing and rental) is summarized in Table 4. Total indoor water use for all 112 cottages is conservatively estimated to be 13 acre-feet per year.

Table 4 – Cottage Indoor Water Use

Item	Quantity	Use Factor (gal/day/unit)	Occupancy Factor	Total Water Use		Unit Demand (acre-feet/ connection/year)
				(gal/year)	(acre-feet/year)	
Employee Cottages	56	110	100%	2,248,400	7	0.13
Rental Cottages	56	115	80%	1,880,480	6	0.11
Total	**112**				**13**	**0.12**

Summary of Project Development Area Indoor Water Demands

As described above, the *Project Development Area* includes two 150-room hotels; 25,600 SqFt of retail space; two restaurants, an event venue, and a museum; and 112 cottages. The indoor water demands associated with these facilities are summarized in Table 5. In total, 46 acre-feet per year of indoor water demand is expected from the *Project Development Area*.

Table 5 – Summary of Hotel/Civic Center Indoor Water Demands

Item	Quantity	AF/year
Hotel	300 rooms	31
Retail	25,600 SqFt	1
Restaurant, Event Venue & Museum	21,000 SqFt	1
Cottages	112 units	13
	Total	**46**

Outdoor Water Use

The amenities that generate demand for outdoor water use associated with the *Project Development Area* include landscape irrigation, as well as swimming pools and water features.

Landscape Irrigation

Outdoor water use for landscape irrigation is primarily a function of plant types and the extent of landscaped area. In the Project Development Area, an estimated 574,464 SqFt of area is proposed to be landscaped,[19] which includes the landscaping of both the Hotel/Event Center and the Cottages. Outdoor water demands for this portion of the Proposed Project are calculated based on the regulations and calculation methodologies contained in MWELO. The MWELO determines the Maximum Applied Water Allowance ("MAWA") where the maximum allowable water use is determined as 55 percent of the reference evapotranspiration for the area, resulting in the following equation:

> *MAWA = (ETo) (0.62) (0.55 x LA), where ETo is the reference evapotranspiration in inches per year; LA is the landscape area in square feet; and 0.62 is a conversion factor from inches to gallons. The resulting value is in "gallons per year"*

A primary factor in this calculation is evapotranspiration ("ET"). The methodology directs the use of ET from a reference crop, such as maintained grass – a value referred to as ETo. For the Proposed Project, the average ETo is 51.1 inches per year (or approx. 4.3 feet per year) and the landscape area is 574,464 SqFt.[20] This results in a MAWA value of 8,188,473 gallons/year, or 25.1 AFY.

The MWELO requires that estimated total water use (ETWU) for the project's irrigated landscaping be less than the MAWA value. The Proposed Project description provides specific landscaping plans that go beyond the efficiency standards set by the MAWA equation above. This WSA uses individual calculations for ETWU organized by hydrozone, with each hydrozone composed of plants clustered together with similar water, sun, and soil requirements. The hydrozones in the proposed project are: shrubs (low water use), trees (medium water use), and turf (high water use).

[19] Fuhrman Leamy Land Group (2023) *Maximum Allowed Water Allowance & Estimated Total Water Use*

[20] ETo is consistent with California Irrigation Management Information System (CIMIS) data available for the region. ETo was recorded at the Fair Oaks station (#113).

Table 6 – Landscaping Plant Factors

Hydrozone	Plant Factor
Shrubs - Low	0.3
Trees - Medium	0.5
Bio - Medium	0.5
Turf - High	0.8

The Estimated Total Water Use (ETWU) of the development was calculated using the following formula:

> *ETWU = (ETo - P_{eff}) (PF/IE) (0.62) (LA) / (325,851)*
> *Where: ETo is the reference evapotranspiration of 51.1 inches per year; P_{eff} is effective precipitation, conservatively assumed to be 0 inches per year; 0.62 is a conversion factor from inches to gallons; PF is Plant Factor as a fraction of ETo; IE is irrigation efficiency as a fraction of water applied; LA is the landscape area in square feet; and 325,851 is a conversion factor from gallons to acre-feet. The resulting value is in "acre-feet per year"*

Using the specific values provided in the Proposed Project applicant's landscaping plans,[21] the ETWU of the project study area's landscaping was calculated. These values are presented in Table 7.

Table 7 – Calculation of Estimated Total Water Use for Project Development Area Landscaping

Hydrozone	Landscape Area (SqFt)			Plant Factor	Irrigation Efficiency (IE)	ETWU	
	Hotel/Civic	Cottages	Total			(gal/yr)	(AF/yr)
Shrubs - Low	275,315	180,712	456,027	0.3	0.81	5,350,007	16.4
Shrubs - Medium	30,590	60,238	90,828	0.5	0.81	1,775,957	5.5
Bio - Medium	22,429	2,189	24,618	0.5	0.75	519,863	1.6
Turf - High	-	2,991	2,991	0.8	0.75	101,058	0.3
Total	**328,334**	**246,130**	**574,464**			**7,746,886**	**23.8**

As demonstrated in Table 7, the ETWU for the *Project Development Area* is 23.8 acre-feet per year, which is less than the MAWA value of 25.1 acre-feet per year. Therefore, the proposed landscaping plan complies with MWELO regulations.

[21] Detailed landscaping plans were provided by the project applicant.

Swimming Pools and Water Features

The *Project Development Area* includes three swimming pools: one in the courtyard of the hotel/civic center, and two more swimming pools in the cottages area. In addition to these pools, the *Project Development Area* also includes six water features:

- Recirculating Stream
- Project Monument Sign with Water
- Cottage Pond Water Feature
- Themed Miner Trough & Stock Pond
- Cottage Upper Pond and Waterfall
- Hotel Cascading Step Fountains

Because the exact sizes of these various water features are not yet specified by the project applicant, conservatively high assumptions are made for the size of each water feature. To estimate the evaporative water use of each of these water features, the reference evapotranspiration (ETo) of 51.1 inches per year was applied. The resulting calculations of water use are presented in Table 8, below. In total, the nine water features (three pools, six decorative water features) are expected to consume 1.6 acre-feet per year. Because of the uncertainty about the exact size of these water features, this WSA conservatively rounds up this total water use to 2 acre-feet per year.

Table 8 – Swimming Pool and Water Feature Water Use

Item	Estimated Size (SqFt)	ET (gal/yr)	ET (AF/yr)
Hotel Pool	1,000	31,682	0.1
Cottage Pool 1	1,000	31,682	0.1
Cottage Pool 2	1,000	31,682	0.1
Recirculating Stream	1,000	31,682	0.1
Project Monument Sign with Water	100	3,168	< 0.1
Cottage Pond Water feature	10,000	316,820	1.0
Themed Miner Trough & Stock Pond	1,000	31,682	0.1
Cottage Upper Pond and Waterfall	200	6,336	< 0.1
Hotel Cascading Step Water Features	1,000	31,682	0.1
Total	**16,300**	**516,417**	**1.6**
		Conservatively Rounded Total	**2**

Other Outdoor Amenities Not Expected to Generate Outdoor Water Demand

The *Project Development Area* includes additional outdoor amenities composed either of natural vegetation or hardscape which are not expected to generate water demand.

Adjacent to the cottages, there is a 4.4-acre open space preserve centered on an intermittent drainage, protected by 25-foot-wide conservation easements. There will be no irrigated landscaping within this area.

Throughout the *Project Development Area*, there are various hardscape features including roads, parking lots, bike paths, patios, and terraces. None of these paved features will generate water demand.

Summary of Project Development Area Water Demands

Using the methodology described above, the total water use of the *Project Development Area* is conservatively estimated as 72 acre-feet per year. These values are summarized in Table 9, below.

Table 9 – Summary of Project Development Area Water Demands

Item	Quantity	AF/year
Indoor		
Hotel	300 rooms	31
Retail	25,600 SqFt	1
Restaurant, Event Venue & Museum	21,000 SqFt	1
Cottages	112 units	13
Outdoor		
Landscaping	574,464 SqFt	24
Water Features	16,300 SqFt	2
	Total	**72**

Program Study Area Demand Factors

The Proposed Project's second major component is the 30.2-acre *Program Study Area*, which may include a mix of uses such as hotels, senior housing units, medical facilities, townhomes and cottages, and other uses allowed by County zoning. While a range of possible configurations are ultimately possible for this portion of the overall Proposed Project, the project applicant has provided the land uses presented in Table 10 for the purposes of environmental impact analysis.

Table 10 – Summary of Program Study Area Land Uses

Land Use		Gross Area (acres)	Commercial Bldg. Area (SqFt)	Residential Dwelling Units (DUs)	Density Range (DUs/acre)
Multi-Family Residential		15.1		352	12-24
Commercial	Mixed-Use Senior Housing	5.0	10,000	150	22-30
	Mixed-Use Commercial & Condos	6.9	80,000	200	22-30
Open Space		3.2			
Total		**30.2**	**90,000**	**702**	

Similar to the analytical approach used for the *Project Development Area*, the indoor and outdoor water demands of the *Program Study Area* were conservatively estimated.

Indoor water use

The indoor water use of the *Program Study Area* reflects demands from both the residential and non-residential components of the mixed-use developments.

The residential elements of the *Program Study Area* would be built in accordance with all applicable building codes and efficiency regulations including the Cal Green Code and UWUO, discussed previously. Indoor demands are therefore estimated using an assumed value of 55 gallons-per person per day, multiplied by the assumed occupancy rates of the various housing types.

For the 352 multi-family residential units, the average occupancy rate for the El Dorado Hills region used in the 2020 UWMP was used,[22, 23] which equates to 2.95 persons per dwelling unit.

The Mixed-Use Commercial portion of the *Program Study Area* includes both senior housing and conventional apartments/condos. For the 150 proposed senior housing units, a lower occupancy rate of 2 persons per dwelling unit was assumed, because larger families are typically restricted from living together in senior housing facilities. The 2020 UWMP occupancy rate for the EDH region of 2.95 persons per dwelling unit[24] was used for the 200 apartments/condos within the mixed-use commercial area.

[22] El Dorado Irrigation District (2021). 2020 Urban Water Management Plan.

[23] The most recent census data indicates that EDH has an occupancy rate of 2.88 persons per household. For consistency with the EID 2020 UWMP and as a conservative assumption, the higher rate of 2.95 persons per household was used. Census data available at: https://www.census.gov/quickfacts/eldoradohillscdpcalifornia

[24] El Dorado Irrigation District (2021).

Table 11 – Residential Indoor Water Use

Land Use	Number of Dwelling Units	Occupancy Rate	Water Use per Unit (acre-feet)	Total Water Use (acre-feet/year)
Multi-Family Residential	352	2.95	0.18	64
Mixed-Use Senior Housing	150	2.00	0.12	18
Mixed-Use Condos	200	2.95	0.18	36
Total	**702**			**119**

The non-residential indoor water demand of the *Program Study Area* will be from the proposed 90,000 SqFt of commercial building area, spread across 11.9 acres.

While the specific commercial activities are unknown at this time, potential uses include medical services, restaurants, retail, and offices. The non-residential unit water demands for these commercial land uses are highly dependent on the actual businesses and activities on each parcel. For example, inpatient health care water usage can be as high as 50 gallons per SqFt annually, while warehouse and storage water use is as low as 3 gallons per SqFt annually.[25] As a conservative assumption, a water use factor of 35 gallons per SqFt annually is assumed to reflect this spectrum of possible commercial activities on an average basis across the entire *Program Study Area*. This results in an estimated indoor water demand of 10 acre-feet per year, as presented in Table 12.

Table 12 – Non-residential Indoor Water Use

Commercial Building Area (SqFt)	Demand Factor (gal/yr/SqFt)	Demand (gal/year)	Demand (AF/yr)
90,000	35	3,150,000	10

Outdoor Water Use

Outdoor water use in the *Program Study Area* will be required to comply with MWELO, with the maximum legally permissible water use defined by the MAWA equation as described above. Therefore, outdoor water use can be estimated based on the extent of irrigated landscape area in each land use category.

For the proposed 15.1 acres of Multi-Family Residential, it is assumed that the 352 dwelling units will include a variety of attached multi-family apartment buildings, with parking and drive aisles. This dwelling unit type is typically associated with community controlled outdoor spaces so the average outdoor demands are quite low per unit. It is assumed that 15 percent of the gross area in this land use category will be landscaped common area, with the remainder consisting of building footprint, street, walkways, and other hardscaped areas. This WSA therefore estimates 2.3 acres of irrigated area for the Multi-Family Residential category. Using

[25] EIA (2017).

the MAWA equation, an annual outdoor water demand of 4.5 acre-feet/year is estimated for this category.

For the proposed 11.9 acres of Mixed-Use Commercial development (5.0 acres of Mixed-Use Senior Housing and 6.9 acres of Mixed-Use Commercial with apartments and condos), it is assumed that the majority of the gross area in these land use categories will be taken up by buildings, parking, and other hardscape. Therefore, this WSA estimates that 10 percent of the gross area will be irrigated landscaping for the 11.9 acres of Mixed-Use Commercial development. This results in an estimated 0.5 acres of irrigated landscaping for the Mixed-Use Senior Housing and 0.7 acres for the Mixed-Use Commercial with apartments and condos. Using the MAWA equation, an annual outdoor water demand of 1.0 acre-feet per year and 1.3 acre-feet per year is estimated for these two Mixed-Use developments, respectively.

The *Program Study Area* includes 3.2 acres of Open Space that will not be irrigated and therefore is not expected to generate water demand.

The calculations of outdoor water use in the *Program Study Area* are summarized in Table 13. In total, 6.6 acre-feet of outdoor water demand is expected from this portion of the Proposed Project, which has been conservatively rounded up to 7 acre-feet/year.

Table 13 – Program Study Area Outdoor Water Use

Land Use Category		Total Area (acres)	% of Total Area Irrigated	Total Irrigated Area (acres)	Total Demand (AF/yr)
Multi-Family Residential		15.1	15%	2.3	4.3
Commercial	Mixed-Use Senior Housing	5.0	10%	0.5	1
	Mixed-Use Commercial & Condos	6.9	10%	0.7	1.3
Open Space		3.2	0%	0	0
Total		**30.2**		**3.5**	**7**

Summary of Program Study Area Water Demands

Using the methodology described above, the total water use of the *Program Study Area* is conservatively estimated as 135 acre-feet per year. These values are summarized in Table 14, below.

Table 14 – Summary of Program Study Area Water Demands

Land Use Category		Total Area (acres)	Indoor Residential Demand (AF/yr)	Indoor Non-Residential Demand (AF/yr)	Outdoor Demand (AF/yr)	Total Demand (AF/yr)
Multi-Family Residential		15.1	64	0	4.3	68
Commercial	Mixed-Use Senior Housing	5.0	18	1	1	21
	Mixed-Use Commercial & Condos	6.9	36	9	1.3	46
Open Space		3.2	0	0	0	0
Total		**30.2**	**119**	**10**	**7**	**135**

Summary of Proposed Project Water Demands

This WSA is required to consider the potential water demands from the entire Proposed Project, which includes both the *Project Development Area* (composed of hotels, an event center, and cottages) and the *Program Study Area* (composed of various multi-family and mixed-use commercial land uses). Across the entire 60.5 acres of development, the Proposed Project is expected to require 207 acre-feet per year of water demand, as summarized in Table 15.

Table 15 – Summary of Proposed Project Water Demands

Planning Area	Total Water Demand (AF/yr)
Project Development Area	72
Program Study Area	135
Total	**207**

Section 3 – Representation in 2020 UWMP

This section evaluates whether the Proposed Project was likely represented in the 2020 UWMP[26] as part of EID's forecasted growth, and thus whether this WSA can use the water system reliability assessment included in the 2020 UWMP to determine sufficiency under Water Code Section 10910 et seq. Specifically, Water Code Section 10910 provides that a previously adopted UWMP can be used to support key elements of a WSA:

> *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment… [§10910(c)(2)]*

Comparison to Predicted Growth in the 2020 UWMP

The first step is to evaluate if growth in the 2020 UWMP included the Proposed Project, directly or indirectly.

As detailed in Chapter 2 of the 2020 UWMP, EID identified several categories of growth that would result in increased demand on their water supplies: (1) Facility Improvement Letters (FILs) reflecting development projects known to EID, and (2) additional "Future Beyond FILs" growth beyond the current FILs on existing vacant parcels that are greater than 10 acres. The Proposed Project is located within the area covered by the Bass Lake Hills Specific Plan[27], which is portrayed by the 2020 UWMP as a "known FIL", but the Town & Country Village project was not listed as its own specific FIL. Based on this information, the 2020 UWMP has clearly identified the Proposed Project site as developable, but the UWMP has not considered the specific details of the Proposed Project in its growth projection. Therefore, the Proposed Project must be compared to the additional "Future Beyond FILs" growth contemplated by the UWMP.

The Proposed Project is located in the El Dorado Hills (EDH) Region,[28] which the 2020 UWMP estimates could add at ultimate buildout over 25,000 Equivalent Dwelling Units (EDU), defined as the number of residential "dwelling units" that each project would reflect regardless of whether the project includes residential or non-residential land uses. Approximately 45 percent of 25,000 EDUs at buildout are represented by existing FILs, and the remaining EDUs are accounted for by vacant parcels over 10 acres in size for which EID does not currently have a FIL.

However, the 2020 UWMP does not plan for all EDUs possible at buildout to be built by 2045. Rather, slower growth is assumed: based on the annual growth rate of slightly over 1 percent,

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[26] El Dorado Irrigation District (2021).

[27] County of El Dorado (1995). Bass Lake Hills Specific Plan & Ammendments. Retrieved from: https://edhapac.org/documents/bass-lake-hills-specific-plan/

[28] EID divides its service area into three geographic regions based on water use characteristics and infrastructure. The El Dorado Hills Region is defined as including the District's Service Zones 1, 2 and 4 which represent the communities of Bass Lake, El Dorado Hills and Cameron Park. Please note that this definition of the El Dorado Hills Region is different than that used by the El Dorado County General Plan.

the 2020 UWMP conservatively estimates 7,054 new residential units will be built from 2020 through 2045 in the EDH region, with 86 percent of these expected to be Single-Family Homes and the remainder multifamily. Based on the existing ratio of residential to non-residential connections, an additional 375 non-residential connections were assumed to be added in the EDH region by 2045.

The Proposed Project is a mixed-use development which includes 814 multi-family dwelling units, or approximately 11.5 percent of the total new homes EID forecasts to be constructed by 2045. The Proposed Project also includes 2 hotels, 2 restaurants, an event venue, a museum, and 90,000 SqFt of additional commercial space, which can be easily accommodated within the 375 new non-residential connections expected by 2045. Therefore, the Proposed Project is within the predicted growth considered by the 2020 UWMP.

Per the 2020 UWMP, the growth expected in the EDH is summarized in the tables below.

Table 16 - Expected New Residential Connections in EDH Region per BAE Study (2020 UWMP Table 2-3)

		2025	2030	2035	2040	2045
New Residential Units		1,285	2,683	4,068	5,506	7,054
% Single-family	86%	1,103	2,303	3,492	4,727	6,056
% Multi-family	14%	182	380	576	779	998

Table 17 - Expected Total Connections in EDH Region (2020 UWMP Table 2-4)

Customer Class	2025	2030	2035	2040	2045
Single Family Residential	17,786	20,089	21,278	22,513	23,842
Single Family Residential - Dual	5,244	5,244	5,244	5,244	5,244
Multi-Family Residential	292	324	340	357	375
Commercial / Industrial	575	675	725	775	825
Commercial Landscape	277	291	298	305	312
Recreational Turf Services	59	65	68	71	74
Small Farm Irrigation	45	45	45	45	45
Agricultural Metered Irrigation	3	3	3	3	3
Total Connections	24,281	26,736	28,002	29,313	30,720

Comparison to Predicted Demand in the 2020 UWMP

Second, to allow the 2020 UWMP's water system reliability analysis to support this WSA, the demand for future development evaluated in the 2020 UWMP would need to be consistent with the detailed demand analysis presented in Section 2 of this WSA.

As presented in the 2020 UWMP, by 2045 growth in the EDH region is expected to add a total of 3,170 acre-feet of new water demand to EID's system across all new connections, regardless of connection type. Most of this new demand was projected to come from Single-Family homes. The proposed Project is a mixed-use development primarily composed of commercial

and multi-family residential land uses, which will provide more dwelling units with lower water demand than would have occurred if the 814 dwelling units proposed had been built instead as single-family homes. For example, the UWMP projects a demand of 0.44 acre-feet per connection per year for new Single-Family homes in the EDH region[29], whereas the multi-family residential units in the Proposed Project have a projected demand ranging from 0.11 - 0.18 acre-feet per connection per year.[30]

Overall, the Proposed Project will result in about 11.5 percent of the new dwelling units anticipated to be added in the EDH region by 2045 in the 2020 UWMP, generating approximately 207 acre-feet per year of demand, or approximately 6.4 percent of the forecasted future demand from new connections in the EDH region. Therefore, the Proposed Project provides a portion of the residential and non-residential growth projected by the 2020 UWMP while generating lower water demand than was forecasted by the 2020 UWMP.

Thus, the Proposed Project's forecast water demand would not increase the total demand forecast in the 2020 UWMP to assess reliability, and, consistent with Water Code §10910(c)(2), the "projected water demand associated with the proposed project was accounted for" in EID's 2020 UWMP and the conclusions of water system reliability from the 2020 UWMP can be used to represent water supply sufficiency for the purposes of this WSA.

The 2020 UWMP estimated total water service area demand to be approximately 43,320 acre-feet annually by 2045, as shown in Table 18.

[29] UWMP Table 4-10

[30] See Table 4 & Table 11 of this WSA

Table 18 - Forecast Future EID Water Use (2020 UWMP Table 4-11; values in acre-feet per year)

Land-class		2025	2030	2035	2040	2045
Existing Potable Uses	Single Family	14,400	14,400	14,400	14,400	14,400
	Single Fam. (dual potable)	840	840	840	840	840
	Multi-family	1,520	1,520	1,520	1,520	1,520
	Commercial (all)	2,320	2,320	2,320	2,320	2,320
	Recreational Turf	990	990	990	990	990
	City of Placerville	1,150	1,150	1,150	1,150	1,150
	Subtotal	21,220	21,220	21,220	21,220	21,220
New Customers	EDH Region	580	1,210	1,830	2,480	3,170
	Western Region	100	180	260	340	420
	Eastern Region	200	360	530	700	870
	City of Placerville	10	40	70	140	140
	Subtotal	890	1,790	2,690	3,660	4,600
Total Municipal		22,110	23,010	23,910	24,880	25,820
Other	Other Authorized Uses	3,300	3,300	3,300	3,300	3,300
	Agriculture (potable)	5,210	5,360	5,510	5,660	5,810
	Distribution System Loss	4,120	3,860	3,960	4,050	4,150
Total Potable Demand		34,740	35,530	36,680	37,890	39,080
Recycled	Single Family - Dual (landscape)	2,450	2,450	2,450	2,450	2,450
	Commercial	990	990	990	990	990
	Recreational Turf	490	490	490	490	490
	Distribution System Loss	310	310	310	310	310
	Total Recycled Demand	4,240	4,240	4,240	4,240	4,240
Total District Demand		38,980	39,770	40,920	42,130	43,320

EID Water Supplies and Availability

The 2020 UWMP completed a very detailed analysis of EID's treated water supplies, which are derived from a number of rights and entitlements. Table 19 is the result of that analysis and the basis from the 2020 UWMP's Assessment of water system reliability.

Table 19 – EID Water Supply Summary 2020 – 2045 (2020 UWMP Table 3-5; values in acre-feet)

Water Right or Entitlement	Maximum Water Assets Available	Normal Year	Single Dry Year	Multiple Dry Years				
				Year 1	Year 2	Year 3	Year4	Year 5
Existing Supplies								
Ditches / Weber Reservoir Rights (License 2184 and Pre-1914 Water Rights)	4,560	4,560	3,000	3,000	3,000	3,000	3,000	3,000
Sly Park Reservoir (Licenses 11835 and 11836)	33,400	23,000	20,920	20,920	17,000	15,500	15,500	15,500
CVP Contract (Contract 14-06-200-1375A-LTR1-P)	7,550	7,550	3,775	3,775	3,775	1,235	1,235	1,235
Project 184 (Pre-1914 at Forebay)	15,080	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Permit 21112 (Project 184 Warren Act Contract)	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000
Outingdale/ Middle Fork Consumnes (Permit 4071)	104	104	104	104	13	13	13	13
Recycled Water (non-potable)	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Subtotal Existing	81,194	70,794	63,379	63,379	59,368	55,328	55,328	55,328
Planned Supplies								
CVP Fazio Water entitlement	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Subtotal Planned	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Total	88,694	78,294	67,129	67,129	63,118	56,563	56,563	56,563

EID Water System Reliability

As detailed in Chapter 5 of the 2020 UWMP, EID compared the supply availability to the forecast future demand through 2045 for normal, single dry, and multiple dry years. Because this analysis extended to 2045, it provides the analysis that incorporates the planning horizon required for this WSA, allowing the 2020 UWMP's water system reliability to be used to assess water supply availability for purposes of the Proposed Project.

Table 20 and Table 21 present the results of the 2020 UWMP's normal, single-dry, and multiple dry year reliability analysis. As represented under all conditions, the 2020 UWMP indicates EID will have sufficient water supplies to adequately meet all of the forecast water demand through 2045.

Table 20 – Normal and Single Dry Year Water Supply and Demand through 2045 (2020 UWMP Table 5-2; values in acre-feet)

Normal Year	2025	2030	2035	2040	2045
Supply	70,800	70,800	78,300	78,300	78,300
Demand	38,980	39,770	40,920	42,130	43,320
Difference	31,820	31,030	37,380	36,170	34,980

Single Dry Year	2025	2030	2035	2040	2045
Supply	63,400	63,400	67,100	67,100	67,100
Demand	40,930	41,760	42,970	44,240	45,490
Difference	22,470	21,640	24,130	22,860	21,610

Table 21 – Five Consecutive Dry Years Water Supply and Demand through 2045 (2020 UWMP Table 5-3; values in acre-feet)

		2025	2030	2035	2040	2045
Year 1	Supply	63,400	63,400	63,400	63,400	63,400
	Demand	40,930	41,760	42,970	44,240	45,490
	Difference	22,470	21,640	20,430	19,160	17,910
Year 2	Supply	59,400	59,400	63,100	63,100	63,100
	Demand	41,100	42,000	43,220	44,490	45,490
	Difference	18,300	17,400	19,880	18,610	17,610
Year 3	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,270	42,240	43,470	44,740	45,490
	Difference	14,030	13,060	13,130	11,860	11,110
Year 4	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,440	42,480	43,720	44,990	45,490
	Difference	13,860	12,820	12,880	11,610	11,110
Year 5	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,610	42,720	43,970	45,240	45,490
	Difference	13,690	12,580	12,630	11,360	11,110

While EID has historically had reliable water supplies to meet its customer demands during droughts and the District forecasts continued system reliability through 2045, it should be noted that EID has implemented its Drought Action Plan to reduce customer demand a number times in recent years. These drought restrictions have occurred for three reasons.

First, the Governor has declared statewide drought emergencies, most recently in 2021, ordering the SWRCB to adopt emergency regulations requiring urban water suppliers (such as EID) to implement water shortage response actions. EID has complied with state orders, despite having water supplies that were sufficient to meet its customers' demands throughout recent droughts. Second, EID implemented temporary restrictions in the immediate aftermath of the 2021 Caldor Fire, which damaged the El Dorado Canal and impacted source water quality. The damage to the El Dorado Canal was repaired less than a year after the Caldor Fire occurred, and

the temporary restrictions were lifted. Lastly, EID has experienced shortages in the Outingdale Service Area, which is a small satellite system not connected to the main EID distribution system. The history of supply shortages in the Outingdale Service Area during droughts reflect less reliable water supplies for this satellite system specifically, but do not indicate unreliable water supplies for EID as a whole.

Therefore, none of the events in which EID implemented its Drought Action Plan in recent years were caused by a water supply shortage for EID's main system, and therefore do not conflict with the reliability conclusions presented above.

Section 4 – Sufficiency Conclusion

As detailed in the 2020 UWMP, EID has sufficient water supplies to meet future demands in all conditions. Specifically, EID concludes sufficient supplies through 2045 for all existing and planned uses as detailed in Chapter 5 of the 2020 UWMP.

Therefore, pursuant to Water Code Section 10910 et seq, EID will have sufficient water supply to meet the Proposed Project's estimated build-out water demand of 207 acre-feet per year.

Sensitivity Analysis

This WSA has provided evidence in Section 3 to demonstrate that the Proposed Project is included within the future growth and future water demand anticipated by EID's 2020 UWMP.

A sensitivity analysis was conducted to evaluate the availability of water supplies in the event that the Proposed Project's 207 acre-feet per year of water demand (see Section 2) was in addition to EID's projected future water demands presented in Section 3. As shown in Tables 20 and 21, EID projects that its water supplies will exceed its water demands by over 11,000 acre-feet per year in all scenarios considered by the 2020 UWMP. Therefore, EID is projected to maintain a supply which exceeds its projected demands by greater than 11,000 acre-feet in normal water years, single dry water years, and multi-year droughts from 2025 – 2045. Based on this evidence, even if the Proposed Project's 207 acre-feet per year of water demand was not included in EID's future demand growth anticipated by the 2020 UWMP, EID would still have sufficient water supplies to serve the Proposed Project.

Consider adoption of a Water Supply Assessment for the Town & County Village El Dorado project

October 10, 2023

El Dorado Irrigation District

Previous Board Actions

- February 8, 2021 - Board adopted the Water Supply Assessment for the Creekside Village Specific Plan.
- June 28, 2021 – Board adopted Resolution No. 2021-007, approving the 2020 Urban Water Management Plan and Water Shortage Contingency Plan.
- October 24, 2022 – Board received and filed the 2022 Water Supply and Demand Report.

Summary Of Issue

- El Dorado County requested the District prepare a Water Supply Assessment (WSA) for the proposed Town & County Village El Dorado project

- Per Water Supply Assessment Law ("WSA Law") codified at Water Code section 10910, a WSA is required for proposed developments with more than 500 residential units

Consultant Selection

- Proposals requested from Surface Water Hydrology consultants on the On-Call list
- Selected Zanjero (formerly Tully & Young) to prepare the WSA
- Zanjero has successfully completed WSA's for the District in the past and also prepared the 2015 and 2020 Urban Water Management Plans

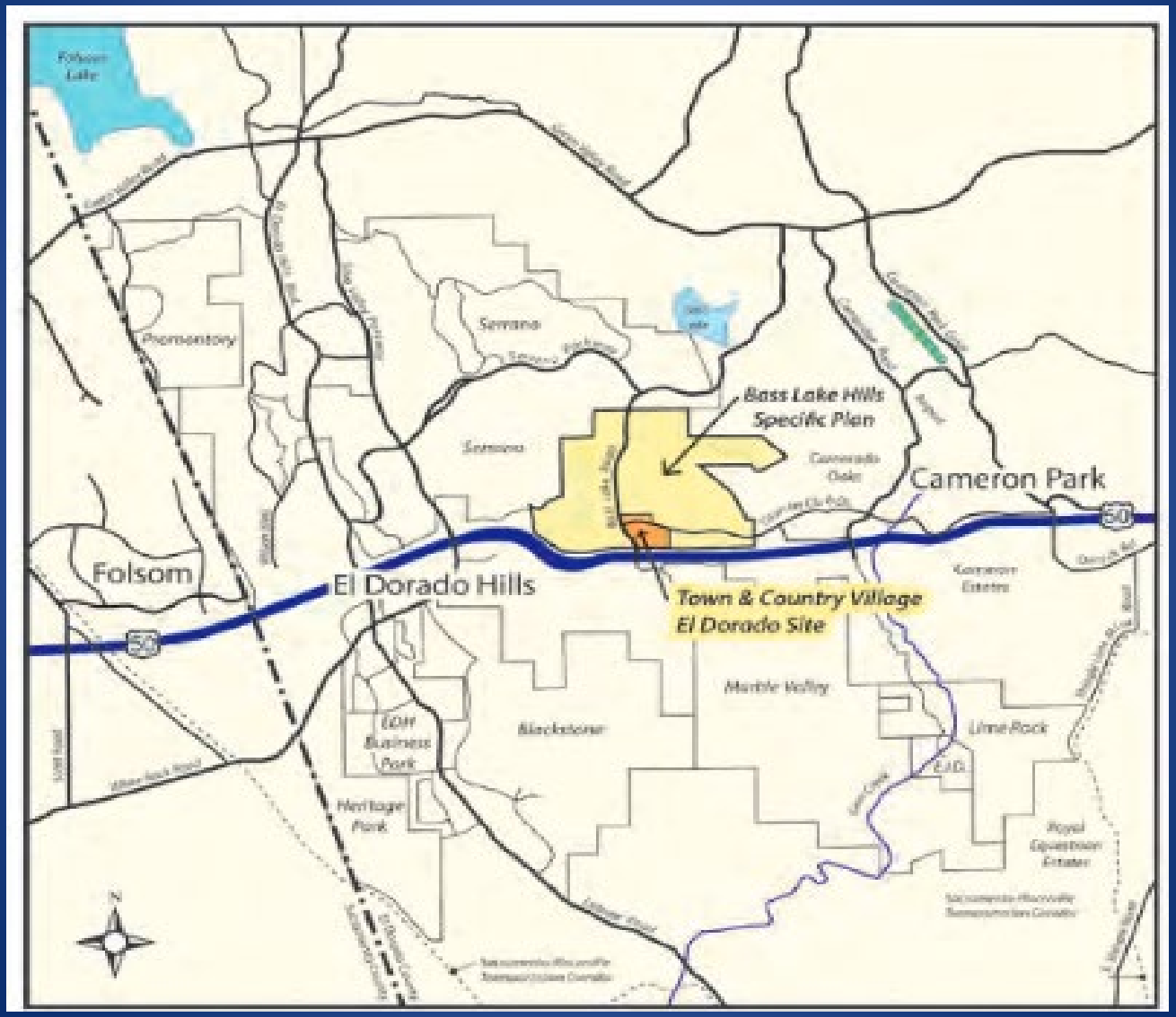
Funding

- All costs paid for by the applicant:
  - Zanjero cost
  - District staff time
- Time billed on a time-and-material basis against the deposit provided by the applicant
- No District funding is required as part of this action

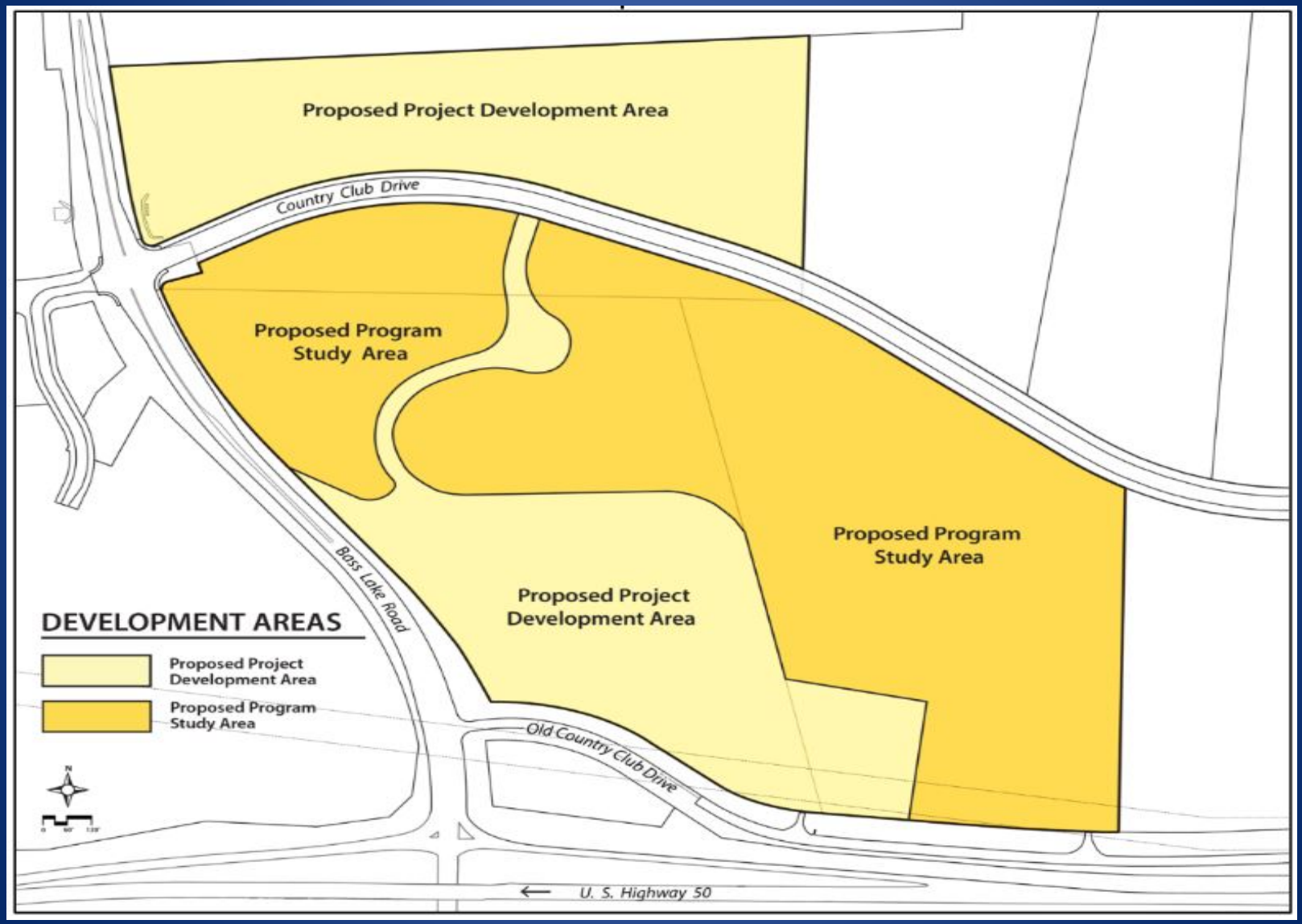
Proposed Town & County Village Project

- Approximately 60.5 acres
- Located north of Hwy 50 at Bass Lake Road
- Proposed Project Development Area
  - Two hotels, restaurants, event center, museum
  - 112 residential cottages
- Proposed Program Study Area
  - Not specifically defined at this time
  - Possible hotels, medical, condos, multi-family and other uses allowed by the County

Town & County Village Location



Town & County Village Site Plan



Water Supply Assessment

- Water Code Section 10910 *et seq* requires the water supplier to make a determination of sufficient water supply for certain projects
- The proposed Town & County Village El Dorado project triggers the requirement
- The District is the proposed supplier and required to complete and adopt the WSA
- The adopted WSA will become part of the County's CEQA analysis and documentation

WSA Analysis: Approach

"If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment…"[§10910(c)(2)]

- Develop specific water use forecast for the project based on project details
- Evaluate consistency with predicted growth in the 2020 UWMP
- Determine if the District can meet the demands in all conditions

Project Development Area Forecast – AF/Year

Item	Quantity	AF/year
Indoor		
Hotel	300 rooms	31
Retail	25,600 SqFt	1
Restaurant, Event Venue & Museum	21,000 SqFt	1
Cottages	112 units	13
Outdoor		
Landscaping	574,464 SqFt	24
Water Features	16,300 SqFt	2
	Total	**72**

Program Development Area Forecast AF/Year

Land Use Category		Total Area (acres)	Indoor Residential Demand (AF/yr)	Indoor Non-Residential Demand (AF/yr)	Outdoor Demand (AF/yr)	Total Demand (AF/yr)
Multi-Family Residential		15.1	64	0	4.3	68
Commercial	Mixed-Use Senior Housing	5.0	18	1	1	21
	Mixed-Use Commercial & Condos	6.9	36	9	1.3	46
Open Space		3.2	0	0	0	0
Total		**30.2**	**119**	**10**	**7**	**135**

Compare to 2020 UWMP Growth and Demand Forecast

- Total estimated project demands – 207 AF/yr
- 2020 UWMP forecast ~1% growth rate in the El Dorado Hills region over next 25 years
  - 7,054 residential units, 375 non residential units
  - Total additional demand in EDH – 3,170 AF/yr
- Town & Country Village El Dorado
  - Consistent with assumed 1% growth
  - Represents 6.4% of the new demand by 2045 in El Dorado Hills

2020 UWMP Water System Reliability Analysis and Conclusions

- 2020 UWMP – Chapter 7 reliability analysis concluded the District has sufficient water to meet all needs under normal, single-dry and multi-dry conditions
  - See Tables 5-1 through 5-3 in 2020 UWMP
  - Analysis projected through 2045, so within the 20-year period of the WSA analysis

Town & Country El Dorado WSA Conclusion

- As detailed in the 2020 UWMP, the District has sufficient supplies through 2045 for all existing and planned uses
- The Project is part of ~1% growth anticipated in El Dorado Hills region in 2020 UWMP
- Therefore, pursuant to Water Code Section 10910, the District will have sufficient water supply to meet the Town & County Village El Dorado's estimated build-out water demand of 207 acre-feet per year

Board Options

- **Option 1:** Adopt the Water Supply Assessment for the proposed Town & County Village El Dorado project

- **Option 2:** Take other action as directed by the Board

- **Option 3:** Take no action

Recommendation

- Option 1

Questions