AGENDA
REGULAR MEETING OF THE BOARD OF DIRECTORS
District Board Room, 2890 Mosquito Road, Placerville, California
July 22, 2019 — 9:00 A.M.

Board of Directors

<table>
<thead>
<tr>
<th>President</th>
<th>Vice President</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Day—Division 5</td>
<td>George Osborne—Division 1</td>
</tr>
<tr>
<td>Pat Dwyer—Division 2</td>
<td>Michael Raffety—Division 3</td>
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<td>Director</td>
<td>Director</td>
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<td>Pat Dwyer—Division 2</td>
<td>Michael Raffety—Division 3</td>
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<td>Director</td>
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<td>Pat Dwyer—Division 2</td>
<td>Michael Raffety—Division 3</td>
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<td>Director</td>
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Executive Staff

<table>
<thead>
<tr>
<th>General Manager</th>
<th>General Counsel</th>
<th>Clerk to the Board</th>
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<tbody>
<tr>
<td>Jim Abercrombie</td>
<td>Brian D. Poulsen, Jr.</td>
<td>Jennifer Sullivan</td>
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<tr>
<td>Communications</td>
<td>Engineering</td>
<td>Mark Price</td>
</tr>
<tr>
<td>Jose Perez</td>
<td>Tim Ranstrom</td>
<td>Dan Corcoran</td>
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<tr>
<td>Human Resources</td>
<td>Information Technology</td>
<td>Operations</td>
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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.

PUBLIC RECORDS DISTRIBUTED LESS THAN 72 HOURS BEFORE A MEETING: Any writing that is a public record and is distributed to all or a majority of the Board of Directors less than 72 hours before a meeting shall be available for immediate public inspection in the office of the Clerk to the Board at the address shown above. Public records distributed during the meeting shall be made available at the meeting.

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.
CALL TO ORDER
  Roll Call
  Pledge of Allegiance
  Moment of Silence

ADOPT AGENDA

COMMUNICATIONS
  General Manager’s Employee Recognition

PUBLIC COMMENT

COMMUNICATIONS
  General Manager
  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. Finance (Pasquarello)
     Ratification of EID General Warrant Registers for the periods ending June 18, June 25, July 2 and July 9, 2019, and Board and Employee Expense Reimbursements for these periods.

     Option 1: Ratify the EID General Warrant Registers as submitted to comply with Section 24600 of the Water Code of the State of California. Receive and file Board and Employee Expense Reimbursements.
     Option 2: Take other action as directed by the Board.
     Option 3: Take no action.

     Recommended Action: Option 1.

  2. Clerk to the Board (Sullivan)
     Approval of the minutes of the June 24, 2019 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.
3. **Engineering (Brink)**
   Consideration to authorize payment to El Dorado County in the amount of $63,386.58 for the District’s portion of Local Agency Formation Commission (LAFCO) 2019/2020 Net Operating Expenses.

   Option 1: Authorize payment to El Dorado County in the amount of $63,386.58 for the District’s portion of LAFCO 2019/2020 Net Operating Expenses.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   **Recommended Action:** Option 1.

4. **Engineering (Carrington)**
   Consideration to award a contract to Water Works Engineers, LLC in the not-to-exceed amount of $92,920 for professional modeling services of the El Dorado Hills Collection System and authorize funding of $132,920 for the El Dorado Hills Collection System Wastewater Modeling Project, Project No. 15036.02.

   Option 1: Award a contract to Water Works Engineers, LLC in the not-to-exceed amount of $92,920 for professional modeling services of the El Dorado Hills Collection System and authorize funding of $132,920 for the El Dorado Hills Collection System Wastewater Modeling Project, Project No.15036.02.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   **Recommended Action:** Option 1.

5. **Human Resources (Perez)**
   Consideration of acceptance of the negotiated Memorandum of Understanding between the El Dorado Irrigation District and the El Dorado Irrigation District Managers and Supervisors Employee Association for the term of January 1, 2019 to December 31, 2021.

   Option 1: Accept the negotiated Memorandum of Understanding between the El Dorado Irrigation District and the El Dorado Irrigation District Managers and Supervisors Employee Association for the term of January 1, 2019 to December 31, 2021.
   Option 2: Take other action as directed by the Board.
   Option 3: Take no action.

   **Recommended Action:** Option 1.

**END OF CONSENT CALENDAR**
6. Engineering (Venable)
   Consideration to adopt a Mitigated Negative Declaration for the El Dorado Irrigation District Vegetation Management Project, Project Nos. Grant12.01, Grant13.01 and Grant14.01.

Option 1:  ▪ Adopt the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
         ▪ Make the following findings pursuant to the California Environmental Quality Act:
           o Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
           o The Mitigated Negative Declaration reflects EID’s independent judgment and analysis.
           o The revised mitigation measure (BIO-2) is equivalent to or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.
           o Specify that documents or other material, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at El Dorado Irrigation District Headquarters.
         ▪ Approve the Project in accordance with the California Environmental Quality Act.

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

Recommended Action:  Option 1.

INFORMATION ITEMS

7. Operations / Engineering (Corcoran/Mueller)
   Update regarding preparation for Pacific Gas and Electric Company Public Safety Power Shutoff program power outages.

Recommended Action:  None – Information only.

8. Operations (Peterson)
   Overview of Lead Sampling of Drinking Water in California Schools.

Recommended Action:  None – Information only.
ACTION ITEMS

9. Engineering (Mutschler)
Consideration to award contracts to BOSCO Construction in the not-to-exceed amount of $149,000 for placement of shotcrete, Jensen Precast in the not-to-exceed amount of $62,422 for purchase of Redi-Rock retaining wall material, and Gannett Fleming (SAGE) in the not-to-exceed amount of $89,583 for construction engineering services; and authorize funding of $1,475,479 for the Flume 47C Replacement, Project No. 17026.

Option 1: Award contracts to BOSCO Construction in the not-to-exceed amount of $149,000 for placement of shotcrete, Jensen Precast in the not-to-exceed amount of $62,422 for purchase of Redi-Rock retaining wall material, and Gannett Fleming (SAGE) in the not-to-exceed amount of $89,583 for construction engineering services; and authorize funding of $1,475,479 for the Flume 47C Replacement, Project No. 17026.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

10. Engineering (Money)
Consideration to award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades Project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008.

Option 1: Award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades Project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.

11. Engineering / Operations (Carrington/ Crane)
Consideration to approve the Sewer System Management Plan Update.

Option 1: Approve the Sewer System Management Plan update.
Option 2: Take other action as directed by the Board.
Option 3: Take no action.

Recommended Action: Option 1.
CLOSED SESSION

A. Conference with General Counsel – Anticipated Litigation (Poulsen)
   Initiation of litigation pursuant to Government Code Section 54956.9(d)(4):
   (one potential case)

B. Conference with General Counsel – Existing Litigation (Leeper)
   Government Code Section 54956.9(d)(1)
   *(Save the El Dorado Canal v. El Dorado Irrigation District, El Dorado County Superior Court
   Case No. PC20190260)*

REVIEW OF ASSIGNMENTS

ADJOURNMENT

TENTATIVELY SCHEDULED ITEMS FOR FUTURE MEETINGS

Engineering
- Solar construction and power provider contract, Public Hearing, August 12 (Money)
- Adopt a Mitigated Negative Declaration for the Caples Lake Campground and Silver Lake East
  Campground Improvements, Public Hearing, August 12 (Venable)
- Construction contract for Caples Lake Campground and Silver Lake East Campground
  Improvements, Action, August 12 (Delongchamp)
- Construction contract for EDM #1 and EDM #2 Intertie project at Reservoir 3, Action, August 12
- Construction contract for various pressure reducing station rehabilitations, Action, August 26
- Design contract funding for wastewater collections relocation, Action, August 26 (Dawson/
  Delongchamp/Carrington)
- Recycled water system and Board Policy 7010, Information, August (Brink)
- 2019 Water Supply and Demand Report, Information, August (Brink)

Finance
- June 30, 2019 financial update, Information, August 26 (Price)

Information Technology
- Implement live audio-video streaming of Board meetings, Action, August 12 (Ranstrom)

Operations/Engineering
- Approach to Drinking Water Pipeline Replacement Program, Information, August 12
  (Odzakovic/Dawson)
EL DORADO IRRIGATION DISTRICT
July 22, 2019
General Manager Communications

Awards and Recognitions
a) Welcome to the District, Christine St. Lawrence. Christine has been hired to the position of Buyer in the Finance Department.

b) The District received a call from Maria Ipsaro in appreciation of the wonderful service and meaningful information provided by Jorge Lopez, construction and maintenance worker during a recent service call. Nice work, Jorge!

Staff Reports and Updates
a) Meter Reading Program – Summary by Jenny Downey and Peter Heape
General Manager Communications  
July 22, 2019

Meter Reading Program

The District currently has over 45,000 meters within a 220-square-mile service area that need to be read every two months for billing. Meters are read with 99% accuracy using Sensus software and devices in a variety of ways: manual, automatic meter reading (AMR), and AMI or FlexNet.

Meter information is uploaded by cycle and route into the five meter technicians’ hand held devices or laptop. Meter reading cycles and routes are organized geographically for efficiency to keep operating costs down. The handheld devices have a built in setting that will alert the meter technician when a manual read is considerably higher than the previous reading or when it is negative usage so the technician can confirm the reading they entered and make any changes if needed.

AMR meters use communication technology to read meters without having to access the meter, which is located in a meter box in the ground. AMR is becoming the standard for utilities around the country. Over 20,000 of our customers’ meters use AMR technology.

Water meters with AMR technology include a small radio transmitter powered by a battery that is connected to the water meter by a cable. The signal the water meter transmits produces a low frequency radio wave that is many times lower than many other everyday items found in homes, such as cell phones, baby monitors, and wireless routers and is extremely efficient. The radio device collects a reading from the meter and transmits the reading to a receiving device located in an EID service vehicle. An EID technician drives through the neighborhoods to get the read without having to stop, locate the meter box, uncover it, clear debris and physically read the meter. The efficiencies gained by this technology are significant.

Two of our satellite service areas, Strawberry and Outingdale, have meters read through our FlexNet system. The reads are transmitted hourly and stored in the online system to access when needed for billing. A report is generated weekly that will alert staff to unusually high or constant usage. This triggers staff to make contact with the customer to investigate if there is a potential leak and to alert them of this possibility.

Once all meters are read in the cycle, the current reading and any notes collected in the handheld and laptop is then uploaded to EID’s Hansen customer care and data management system. The usage is then reviewed by our utility billing staff for accuracy and any unusual consumption levels. After review the data is then used to generate utility bills.

As meters fail or are in difficult areas to access we upgrade them to the AMR system. All new installations include AMR meters. In 2018, staff investigated 1,771 potentially stuck or under registering meters. Of those, 1,315 were found to be stuck and were repaired on site or upgraded. So far in the first half of 2019 staff have investigated 885 meters with 488 found to be stuck which were repaired or upgraded. We currently have approximately 480 open stuck requests that need to be investigated.
EL DORADO IRRIGATION DISTRICT

Subject: Ratification of EID General Warrant Registers for the periods ending June 18, June 25, July 2, and July 9, 2019, and Board and Employee Expense Reimbursements for these periods.

Previous Board Action
The Board ratifies the District’s General Warrant Registers on a weekly basis, excluding certain holiday weeks.

Board Policies (BP), Administrative Regulations (AR) and Board Authority
Section 24600 of the Water Code provides that no claim is to be paid unless allowed by the Board.

Summary of Issue
The District’s practice has also been to notify the Board of proposed payments by email and have the Board ratify the Warrant Registers. Copies of the Warrant Registers are sent to the Board of Directors on the Friday preceding the Warrant Register’s date. If no comment or request to withhold payment is received from any Director by 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 Manager, the Director of Finance and the General Manager or their designee.

<table>
<thead>
<tr>
<th>Register Date</th>
<th>Check Numbers</th>
<th>Amount</th>
</tr>
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<tr>
<td>June 18, 2019</td>
<td>675085 – 675212</td>
<td>$431,170.43</td>
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<tr>
<td>June 25, 2019</td>
<td>675213 – 675326</td>
<td>$1,066,314.87</td>
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<td>July 2, 2019</td>
<td>675327 – 675465</td>
<td>$473,712.81</td>
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<tr>
<td>July 9, 2019</td>
<td>675466 – 675588</td>
<td>$793,126.38</td>
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Current Board/Employee Expense Payments and Reimbursement Information
Board Expenses and Reimbursements have been reviewed and approved by the Clerk to the Board, Finance Manager 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 as submitted to comply with Section 24600 of the Water Code of the State of California. Receive and file Board and Employee Expense Reimbursements.

**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: Board Expenses/Reimbursements  
Attachment C: Employee Expenses/Reimbursements totaling $100 or more

_________________________  
Tony Pasquarello  
Finance Manager

_________________________  
Mark Price  
Finance Director

_________________________  
Jennifer Sullivan  
Clerk to the Board

_________________________  
Jim Abercrombie  
General Manager
Executive Summary for June 18, 2019 -- $431,170.43:

This summary highlights significant disbursements made by major business activity:

**Development Services (Fund 105)**

- $19,244—Starfield Vineyards, LLC for a refund on a deposit payment

**General District Operations (Fund 110)**

- $4,261—All Star Rents, Inc. for boom lift rental
- $21,263—AT&T for phone service
- $7,874—Hunt & Sons, Inc. for motor oil and fuel deliveries at various locations
- $4,374—Sierra Security & Fire for Jan-Jun 2019 alarm monitoring
- $19,593—Vertiv Services, Inc. for annual server cabinet air conditioner maintenance

**Engineering Operations (Fund 210)** none to report

**Water Operations (Fund 310)**

- $26,793—Aqua Tech Company for tank cover cleaning services
- $5,888—Dell Marketing, LP for three laptop computers with cases
- $3,140—Industrial Water Solutions for CV speed controls

**Wastewater Operations (Fund 410)**

- $15,895—CLS Labs for regulatory lab testing
- $5,888—Dell Marketing, LP for three laptop computers with cases
- $4,300—Gordon Mott Roofing Company, Inc. for rain gutter replacement

**Recycled Water Operations (Fund 510)** none to report

**Hydroelectric Operations (Fund 610)**

- $7,500—E & M Electric & Machinery, Inc. for application server training
- $3,281—Grainger for filter elements, pump, and torque set
- $6,162—PJ Helicopters, Inc. for helicopter services
- $3,575—Reed Smith, LLP for outside legal services
- $3,280—Williams Form Engineering Corporation for galvanized nuts and bolts

**Recreation Operations (Fund 710)**

- $4,536—California Conservation Corps for wildfire fuel reduction labor
Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $4,245 — Area West Engineers, Inc. for topographical surveys – Wastewater Collection Facility Relocation (Project #17034.01)
- $47,876 — Ascent Environmental, Inc. for technical assistance – Modification of Water Right Permit 21112 (Project #16003.01)
- $85,812 — Bay City Electric Works for generators:
  >Project #18048.04 – Wastewater Generator Program - North Canyon ($42,848)
  >Project #18048.03 – Wastewater Generator Program - Ridgeview ($42,964)
- $45,084 — Campbell Scientific, Inc. for USGS SCADA panels – Project 184 SCADA Hardware (Project #18013.01)
- $6,910 — Dudek for environmental engineering services – FERC:C38.4B Caples Lake Stabilization (Project #06076H.01)
Executive Summary for June 25, 2019 -- $1,066,314.87:

This summary highlights significant disbursements made by major business activity:

**General District Operations (Fund 110)**
- $16,659—Hunt & Sons, Inc. for card lock fuels and fuel deliveries at various locations
- $3,649—Les Schwab Tire Centers of California, Inc. for tires
- $3,845—Liebert Cassidy Whitmore for ERC membership renewal
- $20,686—Mountain Counties Water Resource Association for annual membership dues
- $12,574—PG&E for electric service
- $3,950—The Sherwin-Williams Company for paint

**Engineering Operations (Fund 210)**
- $8,000—C & M Backflow Testing and Repair, Inc. for dual plumbed lot inspections
- $3,081—Far Western Anthropological Research Group, Inc. for on-call cultural studies
- $12,980—Plumbing Service Company for residential inspections

**Water Operations (Fund 310)**
- $10,030—Aqua Tech Company for Reservoir C cover repairs and tank cleaning services
- $155,960—Doug Veerkamp General Engineering, Inc. for April patching and paving services
- $5,700—Flowline Contractors, Inc. for direction drilling
- $182,073—PG&E for electric service

**Wastewater Operations (Fund 410)**
- $3,482—CLS Labs for regulatory lab testing
- $41,425—Hach Company for annual equipment calibration service
- $372,222—PG&E for electric service

**Recycled Water Operations (Fund 510)**
- $16,109—PG&E for electric service

**Hydroelectric Operations (Fund 610)**
- $5,815—PG&E for electric service

**Recreation Operations (Fund 710)** none to report
Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $11,710—A T.E.E.M. Electrical Engineering, Inc. for engineering services:
  - Project #18048.02 – Critical Water Facility Generators-Sportsman ($1,000)
  - Project #18048.03 – Critical Water Facility Generators-Ridgeview ($1,000)
  - Project #18048.04 – Critical Water Facility Generators-North Canyon ($1,000)
  - Project #18048.05 – Critical Water Facility Generators-Moose Hall ($1,000)
  - Project #18048.06 – Critical Water Facility Generators-Monte Vista ($5,710)
  - Project #18048.07 – Critical Water Facility Generators-Gold Ridge ($1,000)
  - Project #18048.08 – Critical Water Facility Generators-Reservoir 2 ($1,000)

- $13,953—Black & Veatch Corporation for preparation and design services – EDHWWTP Waste-Activated Sludge Dissolved Air Floatation Thickening Unit Rehabilitation (Project #18035.01)

- $48,783—Frisch Engineering, Inc. for design services:
  - Project #18065.01 – EDHWTP Automation Rehabilitation ($22,653)
  - Project #18003.01 – Wastewater Communications Upgrade Project ($26,130)

- $16,447—Gannett Fleming, Inc. for engineering services – FERC:C50.8 Pacific Crest (Project #06081H.01)

- $13,693—HydroScience Engineers, Inc. for engineering design services:
  - Project #16008.01 – South Pointe Lift Station Upgrade ($1,635)
  - Project #16040.01 – Carson Creek 2 and Business Park 3 Lift Stations Abandonment ($11,258)
  - Project #18015.01 – EDHWWTP Odor Control ($800)

- $10,346—Luhdorff and Scalmanni Consulting Engineers, Inc. for engineering design services – Outingdale Water Intake Replacement (Project #16048.01)
Executive Summary for July 2, 2019 -- $473,712.81:

This summary highlights significant disbursements made by major business activity:

**General District Operations (Fund 110)**

- $4,025—C & H Motor Parts, Inc. for miscellaneous vehicle maintenance supplies
- $5,908—Diesel Emissions Service for a blower, glow plug, and multiple light controller
- $15,486—Hunt & Sons, Inc. for card lock fuels and fuel deliveries at various locations
- $4,190—Kronos SAASHR, Inc. for February and May timekeeping services
- $7,990—Lucy & Company for team building workshops
- $13,095—Pace Supply Corporation for warehouse inventory
- $7,529—Pitney Bowes, Inc. for a postage machine
- $9,500—Reeb Government Relations, LLC for July 2019 retainer
- $46,679—Syblon Reid for retention release

**Engineering Operations (Fund 210)**

- $7,810—Aecom Technical Services, Inc. for on-call environmental services

**Water Operations (Fund 310)**

- $19,159—Aqua Tech Company for tank inspection and cleaning services
- $7,190—CLS Labs for regulatory lab testing
- $3,677—Grainger for miscellaneous operating and repair supplies
- $47,618—U.S. Bureau of Reclamation for Sly Park restoration fees and Folsom water deliveries
- $5,425—Univar USA, Inc. for caustic soda at Reservoir A
- $5,175—Water Quality & Treatment Solutions, Inc. for water system disinfection analysis

**Wastewater Operations (Fund 410)**

- $6,077—Polydyne, Inc. for clarifloc at DCWWTP
- $10,308—Suez Treatment Solutions, Inc. for ballast assemblies and UV photocells

**Recycled Water Operations (Fund 510)**

- $3,383—Olin Chlor Alkali Products for sodium hypochlorite at EDHWWTP
- $19,145—Univar USA, Inc. for caustic soda at EDHWWTP

**Hydroelectric Operations (Fund 610)**

- $3,625—A & P Helicopters, Inc. for flight to Lake Aloha
- $8,001—Ballard Marine Construction, Inc. for underwater valve inspection and repairs
- $3,244—BZ Service Station Maintenance, Inc. for overfill and suction pump parts and repairs

**Recreation Operations (Fund 710)**

- $16,419—Blue Ribbon Personnel Services for temporary labor at Sly Park Recreation
Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $21,326—Aecom Technical Services, Inc. for on-call environmental services:
  > Project #16030.02 – EDHWWT Solar Assessment and Design ($3,176)
  > Project #16030.03 – DCWWTP Solar Assessment and Design ($18,150)
- $3,692—Burleson Consulting, Inc. for biological monitoring services – Forebay Dam Modifications (Project #17013.01)
- $27,927—GEI Consultants, Inc. for engineering services:
  > Project #07008H.01 – FERC:C51.8 Silver Lake Campground ($13,963)
  > Project #15016.01 – FERC:C50.2 Caples Lake Campground ($13,964)
- $3,788—Geocon Consultants, Inc. for geotechnical services – Outingdale Water Intake Replacement (Project #16048.01)
- $9,457—Joe Vicini, Inc. for asphalt overlay gravel and paving at Dolomite reservoir – Pump Station Upgrades (Project #15021.01)
- $3,016—North Star Electric for conduit and wiring installation – Critical Water Facility Generators (Project #18048.01)
- $42,759—Xylem Water Solutions USA, Inc. for a pump – 2017 Wastewater Equipment Replacement Program (Project #17009.01)
Executive Summary for July 9, 2019 -- $793,126.38:

This summary highlights significant disbursements made by major business activity:

**General District Operations (Fund 110)**

- $3,181—C & H Motor Parts, Inc. for vehicle repair parts and 4-cycle fuel
- $26,519—CDW Government for disaster recovery software maintenance
- $5,494—Forensic Analytical Consulting Services for asbestos exposure assessment
- $49,248—Golden State Flow Measurement, Inc. for five handheld meter readers
- $9,488—Hunt & Sons, Inc. for fuel deliveries at various locations
- $5,005—Occupational Safety for annual safety training

**Engineering Operations (Fund 210)**

- $3,629—Central Valley Clean Water Association for membership dues

**Water Operations (Fund 310)**

- $14,973—A-1 Advantage Asphalt, Inc. for concrete patching at various locations
- $9,314—Frank A. Olsen Company for valve repair and maintenance parts
- $5,452—Grainger for two portable generators
- $4,588—Industrial Water Solutions for a pressure reducing valve
- $22,450—NTU Technologies, Inc. for polymer at Reservoir 1
- $3,260—Olin Chlor Alkali Products for sodium hypochlorite at Reservoir A
- $3,218—Sierra Site Services for a toilet/shower trailer rental
- $3,584—Univar USA, Inc. for caustic soda at EDHWTP

**Wastewater Operations (Fund 410)**

- $4,186—Aqua-Aerobic System, Inc. for an aerator power section
- $35,563—Denali Water Solutions, LLC for sludge hauling and disposal at DCWWTP and EDHWWTP
- $10,623—Flo-Line Technology, Inc. for two submersible pumps
- $26,224—Hach Company for annual equipment calibration and service
- $3,264—Industrial Electrical Company for pump repair parts and labor
- $5,640—Statewide Traffic Safety & Signs, Inc. for traffic control and plan services

**Recycled Water Operations (Fund 510)**

- $3,708—Frank A. Olsen Company for a pressure reducing valve

**Hydroelectric Operations (Fund 610)**

- $20,168—GEI Consultants, Inc. for engineering services
- $4,927—Kisters North America for annual software maintenance
Recreation Operations (Fund 710)

- $16,064—Blue Ribbon Personnel Services for temporary labor at Sly Park Recreation
- $8,765—Doug Veerkamp General Engineering, Inc. for road repairs at Liberty Tree
- $6,738—El Dorado Disposal Service, Inc. for garbage disposal
- $5,160—Sierra Site Services for septic pumping service

Capital Improvement Projects (Construction Funds 140, 340, 440, 540, 640 and 740)

- $4,885—Ascent Environmental, Inc. for technical assistance – Permit 21112 Change in Point of Diversion (Project #16003.01)
- $15,522—Dudek for on-call environmental services:
  > Project #17034.01 – Wastewater Collection Facility Relocation ($11,644)
  > Project #11004.01 – Lake Aloha Dam Regulatory Improvements ($3,878)
- $26,287—Evoqua Water Technologies, LLC for 20 seal kits and accessories – Water System Upgrades (Project #16034.01)
- $143,981—GEI Consultants, Inc. for engineering services:
  > Project #17013.01 – Forebay Dam Modifications ($94,072)
  > Project #16044.01 – Pacific Tunnel Portal Rehabilitation ($49,909)
- $4,301— GHD, Inc. for engineering services:
  > Project #19007.01 – El Dorado Main #1 and #2 Intertie ($3,589)
  > Project #STUDY04.01 – Flume Assessment ($712)
- $4,856—HD Supply Construction & Industrial–White Cap for erosion control material – 4 Beat Access Road Phase 2 (Project #19017.01)
- $5,094—Joe Vicini, Inc. for excavating and paving – Chrome Ridge/Pleasant Valley (Project #18004.01)
- $3,186—Rexel USA, Inc. for terminal monitors – Union Mine Pump Station/Dolomite/EDH Water Treatment Plant Programmable Logic Controller Replacement (Project #18012.01)
- $13,151—Seco Controls, LLC for a flowmeter – El Dorado Main #1 Pressure Reducing Station #5 Upgrade (Project #17016.01)
- $138,983—Shimmick Construction Company, Inc. for construction services ($146,298) – Forebay Dam Modifications (Project #17013.01). Retention held $7,315
- $3,390—Somach Simmons & Dunn for outside legal services:
  > Project #11032.01 – Main Ditch-Forebay to Reservoir 1 ($1,452)
  > Project #19016.01 – Main Ditch Litigation ($1,938)
- $45,135—Tesco Controls, Inc. for MCC buckets for pumps – El Dorado Lift Variable Frequency Drive (Project #18059.01)
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<th>DESCRIPTION</th>
<th>Lori Anzini</th>
<th>Alan Day</th>
<th>Pat Dwyer</th>
<th>George Osborne</th>
<th>Michael Raffety</th>
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<td>Nicole Graham</td>
<td>Cross-connection and Water Treatment Plant Operator Certifications</td>
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<td>Dianne Matteson</td>
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<td>Brian Mueller</td>
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$3,127.92
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.

PUBLIC RECORDS DISTRIBUTED LESS THAN 72 HOURS BEFORE A MEETING: Any writing that is a public record and is distributed to all or a majority of the Board of Directors less than 72 hours before a meeting shall be available for immediate public inspection in the office of the Clerk to the Board at the address shown above. Public records distributed during the meeting shall be made available at the meeting.

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.
CALL TO ORDER
President Day called the meeting to order at 9:00 A.M.

Roll Call
Board
Present: Directors Osborne, Raffety, Anzini and Day
Absent: Director Dwyer (arrived at 9:55 A.M.)

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

Pledge of Allegiance and Moment of Silence
President Day led the Pledge of Allegiance.

ADOPT AGENDA
ACTION: Agenda was adopted.

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

COMMUNICATIONS
General Manager’s Employee Recognition
a) Welcome to the District, Joe Leon. Joe has been hired to the position of Construction and Maintenance Worker in the Operations Department.
b) Welcome to the District, Keith Johnson. Keith has been hired to the position of Construction and Maintenance Worker in the Operations Department.
c) Welcome to the District, Kevin Vandelinder. Kevin has been hired to the position of Construction and Maintenance Worker in the Operations Department.
d) The District received an email from Lynn Kroppin in appreciation of our “exemplary staff” at Sly Park. She stated that her family was greeted with a smile when they arrived and “always encountered friendly, knowledgeable, smiling, hard-working staff” throughout their stay. Outstanding job!

PUBLIC COMMENT
None

COMMUNICATIONS
General Manager
a) Customer Utility Bill Enhancements – Summary by Jenny Downey and Renee Barragan

Clerk to the Board
None

Board of Directors
Director Anzini reported on her attendance at the June 12 El Dorado County Water Agency Meeting.
APPROVE CONSENT CALENDAR

ACTION: Consent Calendar was approved.

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

CONSENT CALENDAR

1. Finance (Pasquarello)
   Ratification of EID General Warrant Registers for the periods ending June 4 and June 11, 2019, and Board and Employee Expense Reimbursements for these periods.

   ACTION: Option 1: Ratified the EID General Warrant Registers as submitted to comply with Section 24600 of the Water Code of the State of California. Received and filed Board and Employee Expense Reimbursements.

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

2. Clerk to the Board (Sullivan)
   Approval of the minutes of the June 10, 2019 regular meeting of the Board of Directors.

   ACTION: Option 1: Approved as submitted.

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

3. Operations (Crane/Odzakovic)
   Consideration to award contracts to Univar USA Inc. and Olin Chlor Alkali Products to supply as-needed liquid sodium hydroxide and liquid sodium hypochlorite for water and wastewater treatment for one year at not-to-exceed amounts of $267,789 to Univar USA and $166,275 to Olin Chlor Alkali Products for a combined total of $434,064.

   ACTION: Option 1: Awarded contracts to Univar USA Inc. and Olin Chlor Alkali Products to supply as-needed liquid sodium hydroxide and liquid sodium hypochlorite for water and wastewater treatment for one year at not-to-exceed amounts of $267,789 to Univar USA and $166,275 to Olin Chlor Alkali Products for a combined total of $434,064.

   MOTION PASSED
   Ayes: Directors Osborne, Raffety, Anzini and Day
   Absent: Director Dwyer
4. **Safety / Security /Operations (Kilburg/Odzakovic)**
   Consideration to adopt a resolution authorizing the submittal of grant applications to the California Governor’s Office of Emergency Services for federal and/or state financial assistance during Presidentially-declared disasters and authorize the General Manager to submit any necessary accompanying local matching fund commitment letters therewith.

   **ACTION:** Option 1: Adopted Resolution No. 2019-012, authorizing the submittal of grant applications to the California Governor’s Office of Emergency Services for federal and/or state financial assistance during Presidentially-declared disasters and authorize the General Manager to submit any necessary accompanying local matching fund commitment letters therewith.

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

5. **Engineering (Wilson)**
   Consideration to award a contract to A T.E.E.M. Electrical Engineering Inc. in the not-to-exceed amount of $66,994 for the electrical design for a third pump at the Valley View pump station and authorize funding of $86,994 for the Valley View Pump #3, Project No. 19010.01.

   **ACTION:** Option 1: Awarded a contract to A T.E.E.M. Electrical Engineering Inc. in the not-to-exceed amount of $66,994 for the electrical design for a third pump at the Valley View pump station and authorized funding of $86,994 for the Valley View Pump #3, Project No. 19010.01.

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

**END OF CONSENT CALENDAR**

**PUBLIC HEARINGS**

6. **Engineering / Operations (Graham/Odzakovic) — 9:00 A.M.**
   Consideration to adopt the 2019 Triennial Public Health Goal Report for Drinking Water in the Main Water System.

   Public Hearing opened at 9:09 A.M.

   **Public Comment:** Jim Abram

   **ACTION:** Option 1: Adopted the 2019 Triennial Public Health Goal Report for Drinking Water in the Main Water System.

   **MOTION PASSED**
   Ayes: Directors Raffety, Anzini, Osborne and Day
   Absent: Director Dwyer
7. **Engineering (Deason) — 9:00 A.M.**
Consideration to adopt a mitigated negative declaration for the El Dorado Hills Wastewater Treatment Plant solar expansion, Project No. 16030.02.

Public Hearing opened at 9:38 A.M.

**ACTION:** Option 1:
- Adopted the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
- Made the following findings pursuant to the California Environmental Quality Act:
  - Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
  - The Mitigated Negative Declaration reflects EID’s independent judgment and analysis.
  - Specified that documents or other material, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at El Dorado Irrigation District Headquarters.
- Approved the Project in accordance with CEQA

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

*Director Dwyer arrived at the meeting at 9:55 A.M. and participated in the discussion and vote on Public Hearing Item No. 8 and was present for the remainder of the meeting.*

8. **Engineering (Baron) — 9:30 A.M.**
Consideration to adopt a mitigated negative declaration for the Deer Creek Wastewater Treatment Plant solar installation, Project No. 16030.03.

Public Hearing opened at 9:48 A.M.

**ACTION:** Option 1:
- Adopted the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
- Made the following findings pursuant to the California Environmental Quality Act:
  - Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
  - The Mitigated Negative Declaration reflects EID’s independent judgment and analysis.
  - Specified that documents or other material, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at El Dorado Irrigation District Headquarters.
- Approved the Project in accordance with CEQA

**MOTION PASSED**
Ayes: Directors Raffety, Anzini, Osborne, Dwyer and Day
ACTION ITEMS

9. Board of Directors
   Consideration to adopt a Board code of conduct.

   **ACTION:** Option 1: Adopted Board code of conduct, and directed staff to bring it back to the Board periodically for review.

   **MOTION PASSED**
   Ayes: Directors Raffety, Dwyer, Osborne, Anzini and Day

10. Finance (Pasquarello)
    Consideration to receive and file the 2018 annual audit and 2018 report on applying agreed-upon procedures related to the appropriations limit.

    **ACTION:** Option 1: Received and filed the 2018 annual audit and 2018 report on applying agreed-upon procedures related to the appropriations limit.

    **MOTION PASSED**
    Ayes: Directors Osborne, Raffety, Dwyer, Anzini and Day

11. Engineering (Wilson)
    Consideration to award a contract to Carollo Engineers in the not-to-exceed amount of $299,863 for the condition assessments of El Dorado Hills Water Treatment Plant, Reservoir 1 Water Treatment Plant, Reservoir A Water Treatment Plant, and Strawberry Water Treatment Plant, and authorize funding of $424,863 for the Water Treatment Plant Assessments, Project Nos. STUDY 03.01-3.04.

    **ACTION:** Option 1: Awarded a contract to Carollo Engineers in the not-to-exceed amount of $299,863 for the condition assessment of El Dorado Hills Water Treatment Plant, Reservoir 1 Water Treatment Plant, Reservoir A Water Treatment Plant, and Strawberry Water Treatment Plant, and authorized funding of $424,863 for the Water Treatment Plant Assessments, Project Nos. STUDY 03.01-3.04.

    **MOTION PASSED**
    Ayes: Directors Raffety, Osborne, Dwyer, Anzini and Day
12. Engineering (Carrington)

Consideration to award contracts to Sierra Mountain Construction Inc. in the not-to-exceed amount of $2,245,480 for construction of the Town Center Force Main Replacement Project Phase 3, Inferrera Construction Management Group, Inc. (ICM) in the not-to-exceed amount of $98,010 for inspection services, and authorize funding of $2,607,376 for the Town Center Force Main Replacement Project Phase 3, Project No. 19004.01.

ACTION: Option 1: Awarded contracts to Sierra Mountain Construction Inc. in the not-to-exceed amount of $2,245,480 for construction of the Town Center Force Main Replacement Project, Phase 3, Inferrera Construction Management Group, Inc. (ICM) in the not-to-exceed amount of $98,010 for inspection services, and authorize funding of $2,607,376 for the Town Center Force Main Replacement Project Phase 3, Project No. 19004.01.

MOTION PASSED
Ayes: Directors Raffety, Anzini, Osborne, Dwyer and Day

REVIEW OF ASSIGNMENTS
Director Raffety requested that staff provide information on installing solar panels at the District’s water treatment plants.

ADJOURNMENT
President Day adjourned the meeting at 11:40 A.M.

__________________________
Alan Day
Board President
EL DORADO IRRIGATION DISTRICT

ATTEST

__________________________________________
Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

Approved: ________________________________
EL DORADO IRRIGATION DISTRICT

Subject: Consideration to authorize payment to El Dorado County in the amount of $63,386.58 for the District’s portion of Local Agency Formation Commission (LAFCO) 2019/2020 Net Operating Expenses.

Previous Board Action
The Board annually authorizes payments for LAFCO Net Operating Expenses.

December 10, 2018 – Board approved the 2019-2020 Operating Budget which included funding for LAFCO annual fees

Board Policies (BP), Administrative Regulations (AR) and Board Authority
BP 3060 Contracts and Procurement
AR 3061.04 Procurement and Contracts

Summary of Issue
This request is for Board consideration to approve the annual payment to LAFCO in the amount of $63,386.58. The 2019 Operating Budget includes $70,000 for LAFCO fees, which was the estimated fee for the fiscal year.

Background/Discussion
Pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, and Government Code §56381, the El Dorado County Auditor has apportioned the fiscal year 2019/2020 net operating expenses of the El Dorado County LAFCO. On February 27, 2019, LAFCO approved the final El Dorado County LAFCO budget for fiscal year 2019/2020. A copy of LAFCO’s approved budget is attached as Attachment A. Under California State Law, LAFCO is partially funded by three categories of agencies: the county, cities and special districts. In counties where there is city and independent special district representation on the Commission, the county, cities, and independent special districts shall each provide a one-third share of the Commission's operational costs. The amount due is calculated as required by Government Code §56381. This code is attached as Attachment B.

The District’s share of this cost is $63,386.58 for 2019. The cost is calculated as a proportion of EID’s total revenues as a percentage of the combined total special district revenues in the county. The invoice is attached as Attachment C.

Supporting documentation used to validate the revenue used in calculating the District’s share of LAFCO’s fiscal year 2019/2020 approved operating budget are attached as Attachment D. The payments made to LAFCO in 2011 – 2013, and 2017 were less than $50,000, and therefore not subject to Board action.
**Board Options**

**Option 1:** Authorize payment to El Dorado County in the amount of $63,386.58 for the District’s portion of LAFCO 2019/2020 Net Operating Expenses.

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

**Option 3:** Take no action.

**Recommendation**

Option 1

**Attachments**

Attachment A: LAFCO fiscal year 2019/2020 approved operating budget  
Attachment B: Government Code §56381  
Attachment C: 2019/2020 Invoice from El Dorado County Auditor-Controller  
Attachment D: Data for LAFCO Fee Calculations

___________________________  
Mike Brink  
Supervising Civil Engineer

_____________________________  
Brian Mueller  
Engineering Director

_____________________________  
Mark Price  
Finance Director

_____________________________  
Elizabeth Leeper  
Deputy General Counsel

_____________________________  
Jim Abercrombie  
General Manager
WHEREAS, Government Code §56381 specifies that, following a noticed public hearing, the Commission shall adopt annually a proposed budget by May 1, 2019 and a final budget by June 15, 2019; and

WHEREAS, on January 23, 2019, following a noticed public hearing, the Commission considered its budget priorities, a work plan and a draft proposed budget to fulfill the purposes and programs of the Cortese-Knox-Hertzberg Act of 2000, commencing with Government Code §56000 et seq.; and

WHEREAS, the proposed budget and work plan was adopted on January 23, 2019, and transmitted to all parties specified in Government Code §56381(a); and

WHEREAS, a hearing was set for February 27, 2019 for the Commission to receive comment from the agencies and the public on the proposed budget; and

WHEREAS, the Executive Officer has given notice of hearing in the form and manner specified in law for the adoption of the final budget; and

WHEREAS, on February 27, 2019, at the time and place specified in the Notice, the Commission heard, discussed and considered all oral and written testimony submitted on the budget, including but not limited to, the approved budget priorities and work plan for Fiscal Year 2019-20 and the Executive Officer's report and recommendation.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED that the El Dorado Local Agency Formation Commission approves and adopts the final budget for Fiscal Year 2019-20 as shown in Exhibit A, attached hereto and incorporated herein, and does further order and directs the following:

Section 1. The Executive Officer shall transmit the final budget to the County Auditor and all parties specified in Government Code §56381(a) as promptly as feasible.

Section 2. The El Dorado County Board of Supervisors shall transmit funds in the amount of $94,137 to the Commission on July 1, 2019, sufficient to cover the first two months of operations as specified in Government Code §56381(c).

Section 3. The County Auditor shall apportion the budget as specified in Government Code §56381(b) and request payment from the County and each city and each independent special district no later than July 1, 2019 as specified in Government Code §56381(c).
# Proposed Budget

## Proposed FY 2019-20 LAFCO Budget

### Revenues

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<td>Payroll Tax - SUI/ETT</td>
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### Operating Expense

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S:\LAFCO Commission Meetings\2019\2 Feb 27 2019\Item 9 Staff Memo Attachment B (FY2019-20 Budget)
(a) The commission shall adopt annually, following noticed public hearings, a proposed budget by May 1 and final budget by June 15. At a minimum, the proposed and final budget shall be equal to the budget adopted for the previous fiscal year unless the commission finds that reduced staffing or program costs will nevertheless allow the commission to fulfill the purposes and programs of this chapter. The commission shall transmit its proposed and final budgets to the board of supervisors, to each city, and to each independent special district.

(b) After public hearings, consideration of comments, and adoption of a final budget by the commission pursuant to subdivision (a), the auditor shall apportion the net operating expenses of a commission in the following manner:

(1) (A) In counties in which there is city and independent special district representation on the commission, the county, cities, and independent special districts shall each provide a one-third share of the commission's operational costs.

(B) The cities' share shall be apportioned in proportion to each city's total revenues, as reported in the most recent edition of the Cities Annual Report published by the Controller, as a percent of the combined city revenues within a county, or by an alternative method approved by a majority of cities representing the majority of the combined cities' populations.

(C) The independent special districts' share shall be apportioned in proportion to each district's total revenues as a percentage of the combined total district revenues within a county. Except as provided in subparagraph (D), an independent special district's total revenue shall be calculated for nonenterprise activities as total revenues for general purpose transactions less intergovernmental revenue and for enterprise activities as total operating and nonoperating revenues less intergovernmental revenue, as reported in the most recent edition of the "Special Districts Annual Report" published by the Controller, or by an alternative method approved by a majority of the agencies, representing a majority of their combined populations. For the purposes of fulfilling the requirement of this section, a multicounty independent special district shall be required to pay its apportionment in its principal county. It is the intent of the Legislature that no single
district or class or type of district shall bear a disproportionate amount of the district share of costs.

(D) (i) For purposes of apportioning costs to a health care district formed pursuant to Division 23 (commencing with Section 32000) of the Health and Safety Code that operates a hospital, a health care district's share, except as provided in clauses (ii) and (iii), shall be apportioned in proportion to each district's net from operations as reported in the most recent edition of the hospital financial disclosure report form published by the Office of Statewide Health Planning and Development, as a percentage of the combined independent special districts' net operating revenues within a county.

(ii) A health care district for which net from operations is a negative number may not be apportioned any share of the commission's operational costs until the fiscal year following positive net from operations, as reported in the most recent edition of the hospital financial disclosure report form published by the Office of Statewide Health Planning and Development.

(iii) A health care district that has filed and is operating under public entity bankruptcy pursuant to federal bankruptcy law, shall not be apportioned any share of the commission's operational costs until the fiscal year following its discharge from bankruptcy.

(iv) As used in this subparagraph "net from operations" means total operating revenue less total operating expenses.

(E) Notwithstanding the requirements of subparagraph (C), the independent special districts' share may be apportioned by an alternative method approved by a majority of the districts, representing a majority of the combined populations. However, in no event shall an individual district's apportionment exceed the amount that would be calculated pursuant to subparagraphs (C) and (D), or in excess of 50 percent of the total independent special districts' share, without the consent of that district.

(F) Notwithstanding the requirements of subparagraph (C), no independent special district shall be apportioned a share of more than 50 percent of the total independent special districts' share of the commission's operational costs, without the consent of the district as otherwise provided in this section. In those counties in which a district's share is limited to 50 percent of the total
independent special districts' share of the commission's operational costs, the share of the remaining districts shall be increased on a proportional basis so that the total amount for all districts equals the share apportioned by the auditor to independent special districts.

(2) In counties in which there is no independent special district representation on the commission, the county and its cities shall each provide a one-half share of the commission's operational costs. The cities' share shall be apportioned in the manner described in paragraph (1).

(3) In counties in which there are no cities, the county and its special districts shall each provide a one-half share of the commission's operational costs. The independent special districts' share shall be apportioned in the manner described for cities' apportionment in paragraph (1). If there is no independent special district representation on the commission, the county shall pay all of the commission's operational costs.

(4) Instead of determining apportionment pursuant to paragraph (1), (2), or (3), any alternative method of apportionment of the net operating expenses of the commission may be used if approved by a majority vote of each of the following: the board of supervisors; a majority of the cities representing a majority of the total population of cities in the county; and the independent special districts representing a majority of the combined total population of independent special districts in the county. However, in no event shall an individual district's apportionment exceed the amount that would be calculated pursuant to subparagraphs (C) and (D) of paragraph (1), or in excess of 50 percent of the total independent special districts' share, without the consent of that district.

(c) After apportioning the costs as required in subdivision (b), the auditor shall request payment from the board of supervisors and from each city and each independent special district no later than July 1 of each year for the amount that entity owes and the actual administrative costs incurred by the auditor in apportioning costs and requesting payment from each entity. If the county, a city, or an independent special district does not remit its required payment within 60 days, the commission may determine an appropriate method of collecting the required payment, including a request to the auditor to collect an equivalent amount from the property
tax, or any fee or eligible revenue owed to the county, city, or district. The auditor shall provide written notice to the county, city, or district prior to appropriating a share of the property tax or other revenue to the commission for the payment due the commission pursuant to this section. Any expenses incurred by the commission or the auditor in collecting late payments or successfully challenging nonpayment shall be added to the payment owed to the commission. Between the beginning of the fiscal year and the time the auditor receives payment from each affected city and district, the board of supervisors shall transmit funds to the commission sufficient to cover the first two months of the commission's operating expenses as specified by the commission. When the city and district payments are received by the commission, the county's portion of the commission's annual operating expenses shall be credited with funds already received from the county. If, at the end of the fiscal year, the commission has funds in excess of what it needs, the commission may retain those funds and calculate them into the following fiscal year's budget. If, during the fiscal year, the commission is without adequate funds to operate, the board of supervisors may loan the commission funds. The commission shall appropriate sufficient funds in its budget for the subsequent fiscal year to repay the loan.
56381.6. (a) Notwithstanding the provisions of Section 56381, for counties whose membership on the commission is established pursuant to Sections 56326, 56326.5, 56327, or 56328, the commission's annual operational costs shall be apportioned among the classes of public agencies that select members on the commission in proportion to the number of members selected by each class. The classes of public agencies that may be represented on the commission are the county, the cities, and independent special districts. Any alternative cost apportionment procedure may be adopted by the commission, subject to a majority affirmative vote of the commission that includes the affirmative vote of at least one of the members selected by the county, one of the members selected by the cities, and one of the members selected by districts, if special districts are represented on the commission.

(b) Allocation of costs among individual cities and independent special districts and remittance of payments shall be in accordance with the procedures of Section 56381. Notwithstanding Section 56381, any city that has permanent membership on the commission pursuant to Sections 56326, 56326.5, 56327, or 56328 shall be apportioned the same percentage of the commission's annual operational costs as its permanent member bears to the total membership of the commission, excluding any public members selected by all the members. The balance of the cities' portion of the commission's annual operational costs shall be apportioned to the remaining cities in the county in accordance with the procedures of Section 56381.
Date: June 25, 2019

To: El Dorado Irrigation District

From: Marsha Tover, Accountant II

RE: IMPORTANT -- Invoice for 2019/2020 LAFCO Net Operating Expenses -- IMPORTANT

INVOICE - PAYMENT DUE BY AUGUST 30, 2019

Pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 and Government Code §56381, the El Dorado County Auditor has apportioned the FY2019/20 net operating expenses of the LAFCO commission. Your city or independent special district’s share of this cost is $63,386.58. Pursuant to Government Code §56381, your city/district is required to remit payment within 60 days of July 1. 60 days from July 1 is August 30, 2019. There is NO statutory provision to abate small amounts or penalties.

Pursuant to GC§56381(c), if payment isn’t received within the allotted time period, the LAFCO commission has authorized the El Dorado County Auditor to collect an equivalent amount from property tax, or any fee or eligible revenue, owed to the city/district. If this occurs, the auditor shall provide written notice to the city/district prior to appropriating a share of the property tax or other revenue. Important: Please note that GC§56381(c) requires that any expenses incurred by LAFCO or the Auditor in collecting late payments shall be added to the invoice amount, which may significantly increase the amount paid by the city/special district.

If the city/special district banks with the county, complete the attached Payment Authorization Form and return by August 30, 2019 to the address below. Make sure the form is signed by at least the minimum number of authorized signature(s) as per your city/special district’s signature sheet.

If the city/special district doesn’t bank with the county please remit a check payable to the El Dorado County Auditor-Controller for $63,386.58 and send by August 30, 2019 to:

El Dorado County Auditor-Controller
Attn: Marsha Tover
360 Fair Lane
Placerville, CA 95667

If you have any questions, please contact me at (530) 621-5472.

Enclosure
CC: LAFCO FY 2019/20 File
Pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 and Government Code §56381, the Auditor is charged to collect the net operating expenses of the LAFCO commission for each fiscal year. The information on this form will be used to pay the amount listed below. This form is essentially an invoice payment authorization and should be treated as such.

- **Complete** the information below.
- **Sign** and **date** the form.
- **Retain a copy** for the district’s records.
- **Submit** the original signed form by **August 30, 2019** to:

  El Dorado County Auditor-Controller’s Office
  Attn: Property Tax Division-Marsha Tover
  360 Fair Lane
  Placerville, CA 95667

---

**County/City/Special District:** El Dorado Irrigation District  
**District Amount:** $63,386.58  
**For Tax year:** 2019/20 (July 1, 2019 through June 30, 2020)

---

**Date:** ____________________________

**FENIX Org number to Pay for the LAFCO Billing:** ____________________________

**FENIX Object number to Pay for the LAFCO Billing:** ____________________________

**Authorized Signature(s):**  
(per current signature Sheet on file with the Auditor’s Office)

________________________________________  ______________________________________

________________________________________  ______________________________________

________________________________________  ______________________________________

________________________________________  ______________________________________

________________________________________  ______________________________________

________________________________________  ______________________________________

LAFCO Payment Authorization Form
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| TOTAL                                                                                           | 464,121.00           | 464,121.00                                    | 1,872.00                    | 465,993.00|

DIFF: -

LAFCO GC56381-JUNE 2019 Billing EID.xlsx, Roll Up LAFCO+ Auditor
### ESTIMATE OF COUNTY, CITY, DISTRICT SHARE OF LAFCO BUDGET FOR FY 2019 / 2020

**Prepared by Marya Tever***

LAFCO-GC56381 - JUNE 2019 Billing ED.xslx, LAFCO chg for ex dist

**ESTIMATE OF COUNTY, CITY, DISTRICT SHARE OF LAFCO BUDGET FOR FY 2019 / 2020**

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<th>City</th>
<th>City (excl. distressed)</th>
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<th>Separate Revenue FY 2019</th>
<th>Percent Share Within Type</th>
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**Note:**
- **City:** includes all cities, unless noted otherwise.
- **City - N (excl. distressed):** includes non-distressed cities.
- **City (excl. distressed):** includes distressed cities.
- **City - N (excl. distressed):** includes non-distressed cities.
- **Percentage Share:** calculated as a percentage of the total city's or city-territory's budget.
- **Separate Revenue FY 2019:** the estimated separate revenue for each city or city-territory for the fiscal year 2019.
- **Percent Share Within Type:** the estimated percent share of the LAFCO budget for each city or city-territory within their type.

**Note:**
- **Independent special districts:** those districts not included in any type.
- **Type:** the classification of the district.

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### Table of Estimated Budget Shares

<table>
<thead>
<tr>
<th>District Name or Designation</th>
<th>City - N (excl. distressed)</th>
<th>City</th>
<th>City (excl. distressed)</th>
<th>City - N (excl. distressed)</th>
<th>Percentage Share</th>
<th>Separate Revenue FY 2019</th>
<th>Percent Share Within Type</th>
<th>Share of LAFCO Budget</th>
</tr>
</thead>
<tbody>
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</table>

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**Note (1):**
- **City:** includes all cities, unless noted otherwise.
- **City - N (excl. distressed):** includes non-distressed cities.
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**Note:**
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- **Type:** the classification of the district.
### California State Controller's Office - Data For LAFCO Fee Calculations

**Source:** Special Districts Annual Report, Fiscal Year 2016/17 Used for FY 19/20 Calculations

List includes only independent special districts

Total Intergovernmental Revenues includes Federal, State, and Other Intergovernmental Agencies

### Principal County | Independent Special District Name | Activity | Enterprise Operating Revenues | Enterprise Non-Operating Revenues | Non-Enterprise General Purpose Revenues | Total Inter Governmental Revenues | Intergovernmental Agencies/Voter Approved Tax | Enterprise Non-Operating | Non-Enterprise | TOTAL W/O OGA OR VAT
---|---|---|---|---|---|---|---|---|---|---
El Dorado | Arroyo Vista Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 20,020 | 115 | (115) | (115) | 20,805
El Dorado | Audubon Hills Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 42,486 | 294 | (294) | (294) | 42,192
El Dorado | Cameron Estates Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 199,858 | 879 | (879) | (879) | 198,979
El Dorado | Cameron Park Airport District | Airport Enterprise | 228,827 | 88,758 | 0 | 10,139 | (10,139) | (10,139) | 307,466
El Dorado | Cameron Park Community Services District | Recreation and Park, L&L and FPD | 0 | 0 | 6,089,055 | 1,029,556 | (1,029,556) | (1,029,556) | 5,059,499
El Dorado | Connie Lane Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 10,417 | 81 | (81) | (81) | 10,336
El Dorado | Cosumnes River Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 37,697 | 90 | (90) | (90) | 37,607
El Dorado | Diamond Springs/El Dorado Fire Protection District | Fire Protection | 0 | 0 | 4,047,163 | 379,048 | (379,048) | (379,048) | 3,668,115
El Dorado | East China Hill Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 14,258 | 88 | (88) | (88) | 14,170
El Dorado | El Dorado County Fire Protection District | Fire Protection | 0 | 0 | 11,067,222 | 1,214,246 | (1,214,246) | (1,214,246) | 9,852,976
El Dorado | El Dorado County Resource Conservation District | Resource Conservation | 0 | 0 | 1,107,600 | 1,070,522 | (1,070,522) | (1,070,522) | 37,078
El Dorado | El Dorado Hills Community Services District | Recreation and Park, L&L and FPD | 0 | 0 | 14,509,193 | 59,096 | (59,096) | (59,096) | 14,450,097
El Dorado | El Dorado Hills County Water District | Fire Protection | 0 | 0 | 20,532,723 | 1,743,848 | (1,743,848) | (1,743,848) | 18,788,875
El Dorado | El Dorado Irrigation District | Electric Enterprise | 6,296,331 | 13,839 | 0 | 0 | 0 | 0 | 6,320,170
El Dorado | El Dorado Irrigation District | Waste Disposal Enterprise | 21,575,900 | 6,139,021 | 0 | 41,824 | (41,824) | (41,824) | 27,673,097
El Dorado | El Dorado Irrigation District | Water Enterprise | 28,933,652 | 11,242,103 | 0 | 568,462 | (568,462) | (568,462) | 39,607,293
El Dorado | El Dorado Irrigation District | Other | 1,592,913 | 4,694 | 0 | 0 | 0 | 0 | 1,537,707
El Dorado | Fallen Leaf Lake Community Services District | Fire Protection / Rec and Park | 0 | 0 | 1,007,671 | 300 | (300) | (300) | 1,007,371
El Dorado | Garden Valley Fire Protection District | Fire Protection | 0 | 0 | 2,311,122 | 116,534 | (116,534) | (116,534) | 2,195,588
El Dorado | Garden Valley Ranch Estates Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 42,773 | 160 | (160) | (160) | 42,613
El Dorado | Georgetown Divide Public Utility District | Waste Disposal Enterprise | 347,582 | 8,506 | 0 | 0 | 0 | 0 | 356,088
El Dorado | Georgetown Divide Public Utility District | Water Enterprise | 1,876,418 | 2,192,253 | 0 | 12,318 | (12,318) | (12,318) | 4,057,353
El Dorado | Georgetown Divide Recreation District | Recreation and Park | 0 | 0 | 542,588 | 4,844 | (4,844) | (4,844) | 537,744
El Dorado | Georgetown Divide Resource Conservation Dist | Resource Conservation | 0 | 0 | 1,059,334 | 1,056,507 | (1,056,507) | (1,056,507) | 2,727
El Dorado | Golden West Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 127,974 | 679 | (679) | (679) | 127,295
El Dorado | Greenstone Country Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 214,911 | 1,685 | (1,685) | (1,685) | 213,226
El Dorado | Grizzly Flats Community Services District | Water Enterprise | 553,102 | 25,358 | 0 | 25,596 | (25,596) | (25,596) | 556,864
El Dorado | Happy Homestead Cemetery District | Cemetery | 0 | 0 | 374,699 | 2,541 | (2,541) | (2,541) | 372,158
El Dorado | Hickok Road Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 17,078 | 60 | (60) | (60) | 17,018
El Dorado | Hillwood Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 48,242 | 189 | (189) | (189) | 48,053
El Dorado | Holiday Lakes Community Services District | Recreation and Park | 0 | 0 | 13,895 | 47 | (47) | (47) | 13,848
El Dorado | Kelley Cemetery District | Cemetery | 0 | 0 | 2,570 | 16 | (16) | (16) | 2,554
El Dorado | Knolls Property Owners Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 15,101 | 52 | (52) | (52) | 15,049
El Dorado | Lake Valley Fire Protection District | Fire Protection | 0 | 0 | 6,262,780 | 1,009,015 | (1,009,015) | (1,009,015) | 5,253,765
El Dorado | Lakeview Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 19,207 | 97 | (97) | (97) | 19,110
El Dorado | Marble Mountain Homeowners Community Service District | Streets and Roads - Construction and Maintenance | 0 | 0 | 41,298 | 180 | (180) | (180) | 41,118
El Dorado | Meetks Bay Fire Protection District | Fire Protection | 0 | 0 | 1,524,452 | 44,963 | (44,963) | (44,963) | 1,479,489
El Dorado | Mortara Circle Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 15,901 | 44 | (44) | (44) | 15,857
El Dorado | Mosquito Fire Protection District | Fire Protection | 0 | 0 | 364,422 | 1,273 | (1,273) | (1,273) | 363,149
El Dorado | Nashville Trails Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 23,341 | 0 | 0 | 0 | 23,341
El Dorado | Pioneer Fire Protection District | Fire Protection | 0 | 0 | 1,578,208 | 410,680 | (410,680) | (410,680) | 1,168,028
El Dorado | Rescue Fire Protection District | Fire Protection | 0 | 0 | 1,688,363 | 207,910 | (207,910) | (207,910) | 1,480,453
El Dorado | Rising Hill Community Services District | Streets and Roads - Construction and Maintenance | 0 | 0 | 45,749 | 109 | (109) | (109) | 45,640
<table>
<thead>
<tr>
<th>Principal County</th>
<th>Independent Special District Name</th>
<th>Activity</th>
<th>Enterprise Operating Revenues</th>
<th>Enterprise Non-Operating Revenues</th>
<th>Non-Enterprise General Purpose Revenues</th>
<th>Total Inter Governmental Revenues</th>
<th>Intergovernmental Agencies/Voter Approved Tax</th>
<th>Enterprise Non-Operating</th>
<th>Non-Enterprise</th>
<th>TOTAL W/O OGA OR VAT</th>
</tr>
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<tbody>
<tr>
<td>El Dorado</td>
<td>Rolling Hills CSD was Springfield Meadows Community Services District</td>
<td>Streets and Roads - Construction and Maintenance</td>
<td>0</td>
<td>0</td>
<td>366,620</td>
<td>765</td>
<td>(765)</td>
<td>365,855</td>
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<td>El Dorado</td>
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<td>0</td>
<td>30,032</td>
<td>114</td>
<td>(114)</td>
<td>29,918</td>
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<td>El Dorado</td>
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<td>0</td>
<td>5,639</td>
<td>53</td>
<td>(53)</td>
<td>5,886</td>
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<tr>
<td>El Dorado</td>
<td>South Tahoe Public Utility District</td>
<td>Waste Disposal Enterprise</td>
<td>14,226,813</td>
<td>8,285,429</td>
<td>0</td>
<td>626,451</td>
<td>(626,451)</td>
<td>21,885,792</td>
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<td>El Dorado</td>
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<td>Water Enterprise</td>
<td>11,965,538</td>
<td>795,022</td>
<td>0</td>
<td>297,490</td>
<td>(297,490)</td>
<td>12,463,070</td>
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<td>El Dorado</td>
<td>Tahoe Paradise Resort Improvement District</td>
<td>Recreation and Park</td>
<td>0</td>
<td>0</td>
<td>102,209</td>
<td>50,000</td>
<td>(50,000)</td>
<td>52,209</td>
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<tr>
<td>El Dorado</td>
<td>Tahoe Resource Conservation District</td>
<td>Resource Conservation</td>
<td>0</td>
<td>0</td>
<td>2,735,852</td>
<td>1,499,735</td>
<td>(1,499,735)</td>
<td>1,236,117</td>
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<tr>
<td>El Dorado</td>
<td>West El Largo Community Services District</td>
<td>Streets and Roads - Construction and Maintenance</td>
<td>0</td>
<td>0</td>
<td>7,011</td>
<td>20</td>
<td>(20)</td>
<td>6,991</td>
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<td>TOTAL</td>
<td></td>
<td></td>
<td>87,537,076</td>
<td>28,809,983</td>
<td>79,256,077</td>
<td>11,492,896</td>
<td>(11,492,896)</td>
<td>263,601,288</td>
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</tbody>
</table>

Less Other Government Agencies & Voter Approved Taxes

| Item not on list | City of Placerville                                             |                                      | 21,755,681                       |                                  |                                      |                                  | 184,110,240               |                |                     |
| Item not on list | City of South Lake Tahoe                                        |                                      | 57,795,567                        |                                  |                                      |                                  |                              |                |                     |
| TOTAL to be reported | 87,537,076                                      | 28,809,983                       | 68,262,607                        | 263,601,288                      |                                      |                                  |                              |                |                     |

LAFCO SPREADSHEET 19/20

Difference 263,601,288
EL DORADO IRRIGATION DISTRICT

Subject: Consideration to award a contract to Water Works Engineers, LLC in the not-to-exceed amount of $92,920 for professional modeling services of the El Dorado Hills Collection System and authorize funding of $132,920 for the El Dorado Hills Collection System Wastewater Modeling Project, Project No. 15036.02.

Previous Board Actions
January 28, 2019 – Board approved the 2019-2023 Capital Improvement Plan (CIP), which included this project, subject to available funding.

Board Policies (BP), Administrative Regulations (AR), and Board Authority
BP 3060 Contracts and Procurement
BP 6010 Wastewater System Management

Summary of Issue
In past years, the District developed a hydraulic model of the El Dorado Hills wastewater collection system that identified pipe segments and lift stations that are potentially at or near capacity. This project intends to update the model with additional flow calibration and additional loading to inform replacement schedules, support CIP planning efforts, and identify areas with high source of infiltration and inflow (I/I).

Background/Discussion
In 2009, the District completed its first iteration of the Sewer System Management Plan as required by the State Water Resources Control Board (SWRCB). In Section 8: System Evaluation and Capacity Assurance Plan, State requirements included an evaluation of sewer system capacity and development of enhancement measures needed to reduce the likelihood of capacity-induced sanitary sewer overflows. At that time, the District hired HDR Engineering, Inc. to develop collection system hydraulic models for both the El Dorado Hills and Deer Creek systems.

Since the development of the original hydraulic models, District staff has performed minor updates to account for wet weather peaking factors and unique site conditions. Operational data from the treatment plants and lift stations, as well as field observations, play a crucial role in continual calibration of the model to simulate flows in the collection system and identify capacity deficiencies. The models were last updated in 2013 and the results identified several locations that should be considered for current and/or future capacity upgrades including El Dorado Hills trunk pipeline, Silva Valley trunk pipeline, and several other pipelines and lift stations. In response to the theoretical modeling results, staff proceeded to install multi-year flow monitoring equipment at the identified areas to validate the results.

Staff recommends updating the El Dorado Hills hydraulic model in a two-phased approach. The first phase will be to update the model with changes to sewer infrastructure that has occurred between the years 2012 to the end of 2018, calibrate it with recent flow data, assess peak wet weather flow patterns and determine the current peak wet weather flow factor. From there, the consultant will re-run the model to make an informed hypothesis of capacity deficiencies in the system.
The second phase will include relocating flow meters to any additional areas identified with potential capacity concerns or deficiencies and then re-calibrate the model once a winter’s worth of data is collected. Refining upstream hydraulics, especially during peak wet weather flow, is a critical element of sizing downstream pipes. If increases are due to localized inflow and infiltration, the correction could be simply in the localized area and be substantially more cost effective. The downstream El Dorado Hills and Silva Valley trunk pipelines will be reassessed for proper sizing once upstream capacity deficiencies have been assessed and corrected in the model. This modeling project will serve as the Basis of Design report for the potential El Dorado Hills and Silva Valley pipeline replacement project.

The end results of the two-phased approach will be a calibrated wastewater collection system model as well as identification of needed pipeline and lift station capacity projects in the El Dorado Hills system for incorporation into the CIP. An update of the Deer Creek wastewater model will be planned in future years.

**Request for Proposals**

A Request for Proposals was publically advertised in June 2019. Four consultants submitted proposals to the District. The proposals are summarized below:

<table>
<thead>
<tr>
<th>Consultant</th>
<th>Phase 1 Cost</th>
<th>Phase 2 Cost</th>
<th>Optional Item</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Works Engineers, LLC</td>
<td>$30,656</td>
<td>$48,420</td>
<td>$13,844</td>
<td>$92,920</td>
</tr>
<tr>
<td>Stantec Consulting Services, Inc.</td>
<td>$30,653</td>
<td>$69,147</td>
<td>-</td>
<td>$99,800</td>
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<tr>
<td>Carollo Engineers, Inc.</td>
<td>$69,300</td>
<td>$186,900</td>
<td>-</td>
<td>$256,200</td>
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<tr>
<td>Tully &amp; Young, Inc.</td>
<td>$19,455</td>
<td>“to be negotiated”</td>
<td>-</td>
<td>$19,455 (Phase 1 only)</td>
</tr>
</tbody>
</table>

The proposal from Tully & Young was found to be non-responsive. Although extensive modeling experience was demonstrated, Tully & Young did not include experience specific to peak wet weather flow calibration.

The proposal from Water Works Engineering, LLC (WWE) was found to be the most technically informed proposal with a very reasonable price. WWE included an optional item for lift station consolidation assessment, which could potentially reduce operation costs and add efficiencies to the wastewater system. Therefore, staff is recommending award of the professional services contract to Water Works Engineering, LLC with inclusion of the optional proposal item.

**Funding**

Funding for this project was identified in the 2019-2023 CIP. The funding source is 100% wastewater FCCs.

**Funding Requirements**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Water Works Engineers LLC – Professional Services contract</td>
<td>$92,920</td>
</tr>
<tr>
<td>Capitalized labor</td>
<td>$30,000</td>
</tr>
<tr>
<td>Project contingency (10%)</td>
<td>$10,000</td>
</tr>
<tr>
<td><strong>Total Funding Requested</strong></td>
<td><strong>$132,920</strong></td>
</tr>
</tbody>
</table>
**Board Options**

**Option 1:** Award a contract to Water Works Engineers, LLC in the not-to-exceed amount of $92,920 for professional modeling services of the El Dorado Hills Collection System and authorize funding of $132,920 for the El Dorado Hills Collection System Wastewater Modeling Project, Project No.15036.02.

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

**Option 3:** Take no action.

**Recommendation**
Option 1

**Attachments**
Attachment A: Water Works Engineering, LLC Proposal
Attachment B: CIP Summary
Liz Carrington
Senior Civil Engineer

Elizabeth Dawson
Engineering Manager

Tracy Crane
Wastewater/Recycled Water Manager

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

Mark Price
Finance Director

Elizabeth Leeper
Deputy General Counsel

Jim Abercrombie
General Manager
June 28, 2019

El Dorado Irrigation District (EID)
2890 Mosquito Road
Placerville, CA 95667

Subject: Proposal for RFP19-09 – El Dorado Hills Collection System Wastewater Modeling Project

Dear Distinguished Members of the Selection Committee:

Water Works Engineers LLC (Water Works, or WWE) is pleased to submit one (1) electronic copy of our Proposal No. RFP19-09 for the El Dorado Hills Collection System Wastewater Modeling Project. Over the past ten years, our Team has specialized in sewer collection system hydraulic modeling for local agencies including the Cities of Folsom, Woodland, Roseville, and South Placer Municipal Utility District. **We have developed a highly refined and proven approach to producing well calibrated peak wet-weather hydraulic models and integrating flow monitoring data to ensure that any capacity deficiencies identified are real and not a result of modeling inaccuracies.** We are confident that the experience of our team, particularly in operating complex InfoWorks ICM hydraulic models, is unmatched by anyone in the area and that our current clients will attest to that.

We have built a reputation with our local clients of providing high quality, cost-effective services in a timeline consistent with the needs of the project schedule. Water Works Engineers is a small to medium-sized firm which has prided itself on it’s low-overhead structure that allows for us to be nimble, responsive to the needs of our clients, and cost-effective. **We understand the challenge of maintaining an excellent level of service using limited resources** to maintain the capacity of a wastewater collection system and tackle the large and complex challenge of reducing infiltration and inflow (I/I) in older areas of a collection system.

Water Works Engineers was formed in 2005 by engineers who believed that municipal water/wastewater systems engineering and consulting could be done a better way, by combining the best attributes of large and small engineering and consulting firms: the technical expertise and resources of large firms and the personal attention to client specific needs of small firms. Our vision was the formation and growth of a new kind of engineering firm, a firm built on providing exceptional client service from highly experienced engineers without the overhead and bureaucracy of a large company. We ensure that each project is assigned the right mix of staff with specific experience in the tasks at hand and that all design decisions are made with appropriate involvement and oversight from our most experienced staff.

At WaterWorks, we believe and insist that our Project Managers have an in-depth involvement in the technical execution of projects they manage. Our firm was built from the ground up around experienced staff whose focus is engineering, not marketing, limiting overhead functions to provide our clients with cost effective services. This combination of experienced staff and competitive rates will allow us to offer exceptional value in the provision of engineering services to the District. If you have any questions regarding this proposal, please contact Mike Fisher at: (916) 277-9027 ; mikef@wwengineers.com

Very Truly Yours,
Michael J. Fisher
Project Manager / Managing WaterWorks Engineers, LLC Member
SECTION 1 – SCOPE OF WORK

Task 1 – Project Management

The core of our project team, and most critical to any project’s success, is the Project Manager. Mike Fisher, P.E. (22 years of experience, Water Works Managing Member and Senior Master Planner) will lead the Project Team in our Roseville, CA office. Mike leads our California Collections and Distribution Linear Infrastructure Design Group and has been specializing in wastewater collection system hydraulic modeling, design, condition assessment, I/I reduction, and rehabilitation for decades. Mike will be committed to this project from start to finish and will ensure District Staff are continually updated on project status. Mike will be providing project leadership, direction, monitoring, and quality control for all work products. Mike takes a highly interactive approach to these responsibilities and digs into the details of each hydraulic model as the work is being performed because he understands how the idiosyncrasies of the many settings within InfoWorks ICM hydraulic models can have large impacts on the model results. Performing appropriate oversight and quality control of a work product such as this requires this high level of detailed knowledge of the software, and Mike possess these abilities.

Phase 1

Task 2 – Model Update

Starting with the District’s most recent GIS data of the El Dorado Hills tributary wastewater collection system, WWE will update the District’s existing InfoWorks ICM hydraulic model with all 8-inch and larger pipe segments (and all associated new manholes) that were constructed from 2012 to 2018. New model elements will be input into the model using all available attribute information for mapped assets, including (where available) size, age, latitude, longitude, invert elevations, rim elevation, type, material, slopes, etc. Water Works will catalogue and review available documents (i.e. as-built drawings, related reports, etc.) with the intent of corroborating and validating recently constructed infrastructure as represented in GIS data. All collection system infrastructure built before 2012 (and thereby assumed to already exist within the hydraulic model) shall be assumed to be accurate. Water Works shall ensure that all connection points between the existing and new infrastructure (whether at manholes, lift stations, or elsewhere) reflect the information obtained from District-supplied documentation. Any discrepancies and/or questions stemming from the model infrastructure update process will be promptly communicated with the District to ensure an accurate and up-to-date hydraulic model is in place before commencing with subsequent tasks.

Task 3 – Validation of Existing Flow Data

WWE shall perform analysis of the District’s flow monitoring data from the last three (3) years with the intent of confirming and/or updating the current model’s design flow factor(s) and associated peaking factor(s). In addition to the District’s six (6) flow monitors currently installed throughout the system, WWE shall also utilize available lift station flow data, El Dorado Hills Wastewater Treatment Plant (WWTP) flow data, and rain gauge data (either publicly available or supplied by the District). It is assumed that the data set for analysis will contain data from approximately June 2016 through June 2019.

WWE will analyze available data by sewer flow monitoring sub-areas (i.e. the tributary areas to each of the individual flow monitors or major lift station) with the intent of developing sub-area specific diurnal curves for average dry weather flow (ADWF) that best fit the recorded data from the flow meter sites, lift station data, and WWTP data. WWE will then review land use GIS data specific to each sub-area and compare and confirm if the referenced design flow criteria used in the existing model (240 gpd/EDU) is consistent with these results. Should updates to the design flow factor and/or diurnal curves be recommended, WWE will make these updates and run
updated modeling scenario(s) for dry weather conditions. The following flow data analysis and calibration tasks will be completed:

**Dry Weather Flow Analysis**

- Review current land use data and verify/update appropriate number of EDUs per developed parcel to account for new development since the previous model run.
- Review how wastewater flows are currently being loaded into the existing hydraulic model. This may be by parcel, or by more granular aggregated areas. WWE prefers to have a wastewater flow load for each parcel in the hydraulic model to provide a high level of accuracy and also allow for straightforward updates to the model in the future if specific development activities are occurring on individual parcels.
- If the model is not currently loaded on a parcel-by-parcel basis, WWE recommends updating the model to operate this way and this task is included in our scope of work. This would also include assigning each parcel to load flow into the model to the closest manhole in the system. This work would also be completed for new infrastructure and development areas in the system since 2012.
- Determine if the District’s average dry weather flow (ADWF) design factors (wastewater generation rates and associated diurnal curves by land use type) should be updated to match current flow data. A careful analysis of which data periods from the past 3 years are used to make this determination will be conducted. Monitored ADWF flows may vary significantly from year to year depending on the intensity and timing of winter rainfall, groundwater levels based on the winter rains, and infiltration and inflow in different areas of the collection systems. All this will be taken into account and discussed collaboratively with EID Staff.
- Diurnal curves for different land use types (residential, commercial, institutional) will be developed and applied to the model, so that the model can be run in a dynamic 24-hour simulation which accurately models the daily peak ADWF with respect to peaking factor and hourly timing as measured at the WWTP.

**Wet Weather Flow Analysis**

The wet weather flow analysis is the most critical aspect to hydraulic modeling, because virtually all hydraulic capacity deficiencies are caused by peak wet weather flow events, and the peak flow may be limited to spaces as short as an hour during the most intense rainfall of an infrequent design storm event.

- WWE shall analyze the last three years of the District’s flow monitoring and rain gauge data to determine the storm event(s) that produced the maximum flows recorded in the collection system. The past three years have contained some very significant storm events based on our work at other local agencies such as Folsom and Woodland, both of which we have performed detailed analysis of their flow monitoring data. January of 2017 saw the wettest January on record for many areas in the Sacramento Region. WWE analyzed several storm events occurring in January 2017 for the recent calibration of the City of Folsom’s model that were approximately 10-year return period events. March of 2018 also had several intense storm events, and the entire winter of 2018-2019 saw sustained rainfall. **WWE shall also discuss with EID Operation Staffs observations from these storm events that can be incorporated into the hydraulic model effort.**
As a standard practice, WWE uses EPA’s Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox software to analyze storm event flow data in comparison to ADWF flow data to generate sub-area specific I/I hydrographs that can then be scaled up to specified design storm I/I hydrographs in combination with a design storm hyetograph (or rainfall pattern). SSOAP utilizes a triangular synthetic hydrograph approach called the “RTK” method.

- “R” is the percentage of rainfall that lands on a given analysis area that makes its way into the sewer collection system as I/I, and is the total volume under the unit I/I hydrograph curve
- “T” is the time of the peak flow of the hydrograph
- “K” is the time of the total length of I/I flow generated by a given rainfall amount/duration

RTK unit hydrographs are developed specific to each monitored “sub-area” in response to observed rain events, and once refined to match a range of other observed storm events, can be used to project I/I flows from any chosen design storm. Based on WWE’s experience, caution must be taken in choosing which storms to analyze and develop RTK unit hydrographs from. WWE has found that RTK values from relatively small events such as 1-2 yr return period events should not be used to scale up to project much larger events such as 25-yr return period storm. Rain dependent infiltration and inflow behavior can make a large shift between a 1-2yr event and a much larger event because of inundation of manholes and flooding in larger events that may not occur in smaller events. WWE recommends that at minimum, the flow data from a documented 5-10yr event is used as the basis for developing hydrographs and projecting to a 25-yr (or larger) event, if a 25-yr event has not yet been observed in actual data. It is this high level of experience and detail that WWE employs in our analysis that we have not seen in the work of our competitors.

WWE proposes to separately analyze each “sub-area” monitored by each flow meter, and generate a RTK hydrograph and the resulting “PWWF factor” for a 25-year 24-hour storm event specific to each sub-area as the values may be very different between sub-areas depending on issues such as system age and pipe infiltration, inundation of low-lying areas during large storm events, and the effectiveness of local storm drain systems. We propose to do this using the last 3 years of data because it is possible that the upcoming winter may be dry and not contain data relative to a large storm as occurred in 2017.
EDH Collection System Wastewater Modeling Professional Services

- WWE will confirm with EID the desired design storm event of a 25-year 24-hour duration event. For reference, the City of Folsom’s design storm event is the 10-year 6-hour event. The design storm event may be written into EID’s Sanitary Sewer Management Plan, but in any case we recommend at minimum a discussion to confirm the design storm event as the level of hydraulic capacity impacts could be significantly different based on the event selected.

- WWE will develop synthetic I/I hydrographs for the design storm event specific to each “sub-area” of the system, and then update the dynamic wet weather hydraulic model scenario by applying these real-time flows in addition to the base ADWF flow of the model. A comparison to wet weather flow loads and peaking factors from the previous hydraulic model runs will be made.

- WWE will analyze the hydraulic model results and identify areas of hydraulic capacity deficiency under current design storm conditions. Based on this analysis, WWE will identify new flow monitoring locations in areas of identified deficiencies to provide a higher level of definition of where excess I/I may be originating further up in the system from the current flow monitor locations.

- WWE will produce a presentation summarizing the results of the Task 2 efforts and review the results with appropriate EID Staff in a workshop setting.

Phase 2

Task 4 – Calibration of Peak Wet Weather Flow

Task 4 will consist of performing the same data analysis methodology as laid out for Task 3, except will be done for new data collected during the 2019/2020 rainy season and may include new flow monitoring locations. Water Works Engineers sees some potential challenges and uncertainties to the completion of this task. Those are:

1. The project schedule defined in the RFP calls for completion of the project by February 28, 2020. In many years, March is the best month for wet weather sewer flow monitoring because the ground is reaching maximum saturation from winter rainfall and many large storms tend to occur in March. There may be some benefit to extending the project schedule to capture and analyze March 2020 data, although this is certainly not required. It would be unfortunate to have a relatively dry start to the winter and complete the project, only to have large storm events and good data for new flow monitoring sites the next month after the project has been completed. This exact rain pattern occurred in the Winter of 2017/2018. March 2018 was a “miracle March” with record setting monthly snowfall in the Sierra just east of El Dorado Hills following a relatively dry December-February.

2. As previously stated, based on our experience, capturing data for a small 1-yr return period event does not always yield useful results that can be projected accurately to reflect a much larger design storm event. Dependent on the collection system configuration, sometimes excessive I/I only shows up for 5-yr + storms when minor surface flooding begins to develop due to backup of storm drain systems. If the winter is relatively dry with no significant rainfall events during the monitoring period, analysis of the data may not be particularly fruitful.

Given the rationale described above, WWE recommends that Task 4 be considered an “allowance” in the project budget, and during the course of the project, based on winter rainfall patterns, a decision can be made to analyze the data or not based on a preliminary review of the data. If the data is analyzed and processed, it would be used to update the existing “sub-area” RTK unit hydrographs and design storm I/I hydrographs, and also create new sub-area hydrographs to further refine the model based on new flow monitoring locations.
**Task 5 – Hydraulic Model of Existing Wastewater System**

Water Works shall utilize the flow monitoring analysis results from Task 3 and Task 4 to update and calibrate the District’s hydraulic model under existing conditions. Some particular issues in final setup and execution of the wet weather design storm scenario will be discussed collaboratively with appropriate EID staff such as:

- Confirmation of operational parameters of key lift stations (i.e. pump capacities, level control setpoints)
- Determination of timing of storm peak rainfall with ADWF daily peaking for dynamic 24-hour modeling.
  
  Determine if peak rainfall should occur exactly at the time of peak base flow (worst case), or offset somewhat from peak base flow, as this may also have a somewhat significant impact on results.

After final calibration of the existing conditions model, Water Works shall complete a capacity analysis of the existing conditions system consisting of:

- Review and update (with District input) capacity evaluation criteria.
  - Maximum design standard depth of flow to pipe diameter (d/D) and velocities under dry and peak wet weather flow conditions.
  - Acceptable pipe surcharging limits for peak wet weather conditions, and if surcharging should be allowed under any circumstances, such as in areas with high depth of cover (i.e. over 10 ft).
  - Lift station pumping capacity criteria and redundancy requirements
- Analyze model results to identify capacity deficiencies based on agreed upon capacity evaluation criteria under the various Existing Conditions model scenarios.
  - Close attention will be paid to the Silva Valley and El Dorado Hills trunk pipelines, which are recognized as crucial assets in the District’s overall El Dorado Hills wastewater collection system.
- WWE will develop capital improvement project (CIP) concepts to alleviate each identified hydraulic capacity deficiency under existing conditions. WWE will produce a project description for each identified CIP project, including a figure (where deemed necessary to describe project), text descriptions, and conceptual level cost estimates.
  - Develop capital improvement that alleviates deficiencies
  - Re-run model with mitigation to confirm adequate resolution of deficiency
  - Recommended construction timeframe and prioritization for existing system deficiencies
  - Compare mitigation recommendations to those provided in any previous Master Plan
  - Develop figures and cost estimates depicting recommended improvements and trigger points

Building upon the wet weather flow monitoring analysis performed under Task 4, WWE will identify and analyze the levels of I/I found in each sub-area, summarize the results, and compare the results to industry standard values to determine areas that have excessive levels of I/I that may warrant a further I/I reduction program. Each sub-shed area shall be ranked and prioritized to provide the District a quantifiable analysis of the collection system’s performance with respect to I/I.

WWE will also provide specific recommendations and estimates to initiate I/I reduction programs in sub-areas with highly excessive I/I. In some cases, it may be more cost-effective to spend resources to pinpoint and address sources of excessive I/I rather than build capital projects in the collection system to provide the necessary capacity and continue treating that I/I at the wastewater treatment plant in perpetuity.
Water Works will develop the following deliverables as specified in the RFP at the conclusion of Task 5 and present these to the District in a workshop setting. These deliverables would also be included in the Final Report under Task 7:

1. Electronic files
2. Summary tables of model runs
3. Discussion of model methodology
4. Summary of key findings
5. Map figures displaying key results such as over-capacity pipes, surcharging, spills
6. Key hydraulic profiles

Task 6 – Hydraulic Model of Future Wastewater System

Water Works will perform much of the same analysis as described in Task 5, but for the District’s future conditions system model. Water Works shall collect/review/implement any available future development information on the following:

- Highland Hills Lift Station shed area
- North Uplands Lift Station shed area
- Addition of Carson Creek 1 and Carson Creek 2 Lift Station shed areas
- Addition of Folsom Heights Lift Station to Stonebriar Lift Station shed area
- Other foreseeable future development projects (as agreed upon with District input)

WWE will add additional sewer loads to the hydraulic model based on information provided by the District and will also assign base levels of new I/I to development areas for the peak wet weather model based on either District design standard values, industry standard values, or I/I seen in the existing system in newer areas.

After updating the future conditions model with the foreseeable development projects, WaterWorks shall complete a capacity analysis of the future conditions system consisting of:

- Utilize same capacity evaluation criteria as agreed upon in Task 5.
- Analyze model results to identify new capacity deficiencies above and beyond Task 5 results.
- WWE will implement all recommended CIP projects stemming from Task 5’s existing conditions model calibration/update and further analyze them to determine whether or not the mitigation recommendation continues to fully alleviate the deficiency to remain within District capacity design standards.
Should the updated future conditions model scenarios show that the recommended CIP projects from Task 5 are no longer sufficient, Water Works shall update the CIP recommendation(s) to identify portions of these projects that should possibly be funded partially by development projects rather than completely by existing rate payers.

- WWE will develop additional CIP concepts to alleviate each new identified hydraulic capacity deficiency under future conditions. WWE will produce a project description for each identified CIP project, including a figure (where deemed necessary to describe project), text descriptions, and conceptual level cost estimates.

- WWE will perform closer analyses for both the Silva Valley and El Dorado Hills trunk pipelines. Taking into account all foreseeable development growth in each trunk pipelines’ upstream areas, WWE will determine the number of additional EDUs (based on the updated wastewater generation rates) that each trunk pipeline can receive while still adhering to District capacity design standards relating to pipe capacity. Based on an assumed growth rate for El Dorado Hills (as agreed upon beforehand with the District), Water Works will determine estimated dates of any and all required upgrades to either trunk pipeline. Recommendations for construction timeframe(s) and growth-based trigger points will be provided.

Water Works will develop the deliverables as specified in the RFP at the conclusion of Task 6 and present these to the District in a workshop setting. These deliverables would also be included in the Final Report under Task 7:

**Task 7 – Final Report**

WWE shall aggregate all previous Tasks’ analysis and findings into a Final Report for the Project. In addition, the Final Report shall contain discussion of the El Dorado Hills wastewater collection system’s ability to sufficiently serve its resident’s wastewater flows today and into the future. The Final Report shall evaluate the District’s compliance with provision D.13.viii of the SSS-GWDRs SSMP requirements. WWE intends for the Final Report to summarize the District’s efforts to update and calibrate the collection system hydraulic model to assure capacity for existing customers and provide information on how to prepare and plan for future development. WWE shall make sure to provide the District with all updated model files, as well as GIS shapefiles containing all model scenario results.

Five hard copies and one electric copy of the final report shall be provided to the District.

**OPTIONAL TASK 8 – Lift Station Analysis**

It is Water Works’ understanding that the District has interest in the potential for the elimination of lift stations where feasible throughout the system. As a collection system grows and changes over time, new opportunities to eliminate older lift stations sometimes present themselves. WWE proposes to perform a feasibility assessment of the District’s capability to eliminate/downsize existing lift stations. The assessment would include identification of which lift stations could be realistically eliminated, what that would require (e.g. new gravity diversion pipelines), including associated conceptual design and high-level cost estimates. The cost comparison to eliminate a lift station would be made on a 25-year net-present-worth basis, comparing the capital cost of eliminating the lift station to the ongoing power, maintenance, operation, rehabilitation, and replacement costs. This analysis would be made only for stations determined to be reasonably feasible as determined by WWE and the District.
**SECTION 2 – RELEVANT EXPERIENCE AND EXPERTISE**

The following is a summary of sewer collection system Hydraulic Modeling Professional Services and projects performed by the Water Works Team over the past 5 years for local agencies that are similar in size and operational activities to El Dorado Irrigation District.

<table>
<thead>
<tr>
<th>Comparable Clients</th>
<th>Operations</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Folsom</td>
<td>Sewer Collections</td>
<td>72,000 Customers</td>
</tr>
<tr>
<td>City of Roseville</td>
<td>Sewer Collections and Wastewater Treatment</td>
<td>135,000 Customers</td>
</tr>
<tr>
<td>South Placer MUD</td>
<td>Sewer Collections</td>
<td>75,000 Customers</td>
</tr>
<tr>
<td>Town of Colma</td>
<td>Sewer Collections</td>
<td>1,500 Customers</td>
</tr>
<tr>
<td>City of Woodland</td>
<td>Sewer Collection and Wastewater Treatment</td>
<td>60,000 Customers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Salt Lake City, UT</th>
<th>2015-2018 Wastewater Master Plan, Hydraulic Model, Permanent Flow Metering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role:</strong> Prime Consultant – Planning, Preliminary Design</td>
<td></td>
</tr>
<tr>
<td><strong>Project Fee:</strong> $450,000 (all phases of work)</td>
<td></td>
</tr>
<tr>
<td><strong>Team Members:</strong> Mike Fisher, Project Manager / Principal-in-Charge</td>
<td></td>
</tr>
<tr>
<td>Anthony Baltazar, Modeler / Analyst</td>
<td></td>
</tr>
<tr>
<td>Tim Lewis, Modeler / Analyst / GIS</td>
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</table>

From 2015 to 2018, Water Works updated the City’s existing Innovyz & InfoWorks CS hydraulic model to InfoWorks ICM and analyzed existing and future build out sewer flows using this software to identify capacity deficiencies and identify, develop and size wastewater infrastructure improvements to eliminate these deficiencies. Water Works utilized recent flow monitoring data (obtained from basin-specific flow metering sites that Water Works designed and provided construction management for) to update the hydraulic model flow inputs and used the calibrated model extensively to determine the effects of planned developments and locate sites for new improvements. Resultant recommendations for improvements included the following:

- Construct 500S Diversion Pump Station and Forcemain to remove flow from the Orange St. trunkline, which Water Works designed and construction managed.
- Complete additional collection system improvements to accommodate planned development, including a major interceptor upsze that Water Works is currently designing.

<table>
<thead>
<tr>
<th>City of Roseville, CA</th>
<th>2018 Wastewater Collection System Master Plan Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role:</strong> Prime Consultant, Planning</td>
<td></td>
</tr>
<tr>
<td><strong>Project Fee:</strong> $15,000</td>
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<tr>
<td><strong>Team Members:</strong> Mike Fisher, Project Manager / Principal-in-Charge</td>
<td></td>
</tr>
<tr>
<td>Joe Ziemann, Sr. Modeler</td>
<td></td>
</tr>
<tr>
<td>Mohsen Karbakhsh, Modeler / Analyst</td>
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</table>

The City of Roseville contacted Water Works to provide additional analysis of the City’s recently completed Hydraulic Model Update performed by another consultant in InfoWorks ICM. The previous consultant updated the hydraulic model physical geometry, loading, and model results, but did not provide detailed analysis of I/I by sewer sub-shed or detailed results of areas of hydraulic deficiencies. Water Works received and utilized the existing model to provide this additional analysis and generate a Master Plan Addendum document that was used by the City to prioritize areas of the system for further I/I reduction work and also to install additional flow monitors in areas of hydraulic capacity deficiency to validate the peak wet weather flow surcharging model results.
City of Woodland, CA 2009 – 2018 Wastewater Hydraulic Model Development, Calibration & Updates

**Role:** Prime Consultant - Planning, Preliminary Design  
**Project Fee:** $374,000 (all phases of work)

**Team Members**  
Mike Fisher, Project Manager / Principal-in-Charge  
Anthony Baltazar, Modeler / Analyst / CCTV  
Tim Lewis, Modeler / Analyst / GIS  
Joe Ziemann, Sr. Modeler / CCTV  
Esmerelda Diego, Modeler / Analyst / GIS

Water Works completed a system-wide hydraulic evaluation and identified capacity improvements for existing and future development scenarios. Our services included phased update the City’s hydraulic model from an outdated software to Innovyze InfoSewer using the existing model as the basis for the model geometry, followed by exhaustive record drawing research and survey to refine the model physical geometry accuracy for 250 miles of 6” to 36” pipes. The process began with updating the existing GIS sewer network, adapting the new City General Plan into actionable development scenarios for the sewer collection system, and conducting a thorough analysis of existing flow meter data to produce a calibrated hydraulic model. Flow metering included 20 temporary flow monitoring sites across the City, as well as three permanent flow meters, which were designed and seen through construction by the Water Works team. The data from these meters was used to simulate and calibrate the hydraulic model for design storm peak wet weather flow conditions. Water Works built and calibrated the City of Woodland hydraulic model using Innovyze InfoSewer. Our services were phased over multiple project, with progressively further reaches of the collection system being incorporated into the model:

- SECAP / Hydraulic Model Expansion, incorporated Spring Lake and SP1A Specific Plan Collection System, (2018)
- 2016-2046 General Plan Hydraulic Model Update and Master Plan Review, (2015-2016)
- Sewer Main Condition and Capacity Assessment Services, added all pipes to model (2014-2015)
- Wastewater Collection System Hydraulic Model Update, added 8-10” pipes (2013-2014)
- SECAP Hydraulic Model Development (pipes >10”), SSMP Audit and Update (2009 – 2010)

South Placer MUD, Placer County 2012 – 2015 System Evaluation and Capacity Assurance Planning

**Role:** Prime Consultant – Planning  
**Project Fee:** $324,000 (all phases of work)

**Team Members**  
Mike Fisher, Project Manager  
Anthony Baltazar, Modeler / Analyst  
Tim Lewis, Modeler / Analyst

Water Works developed a wastewater collection system model using InfoSewer GIS-based dynamic modeling software. Water Works evaluated ultimate build-out flows, identified deficiencies, and prioritized needed improvements with development trigger points for scheduling work. Our team’s services included review of existing data and analysis for four permanent flow meters and 8 temporary sites. Phased upgrades and expansion of the model were completed over multiple years:

- On-Call Hydraulic Modeling in Support of Updated Build-Out Projects 2016-current  
- System Evaluation & Capacity Assurance Plan and Master Plan Update (expand from 150-225 miles pipe), 2015  
- Temporary Flow Monitoring Study (calibrate model with flow data), 2014  
- Collection System Hydraulic Model (import old model and expand GIS), 2012-2013

Water Works remains on-call with SPMUD to complete as-needed updates to the hydraulic model and evaluate the impact of new proposed projects that deviate from previous assumptions in the model.
<table>
<thead>
<tr>
<th>City of Folsom</th>
<th>2016 &amp; 2018 Hydraulic Model &amp; Capacity Assurance Plan</th>
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<tbody>
<tr>
<td><strong>Role:</strong> Prime Consultant - Planning, Preliminary Design</td>
<td><strong>Team Members</strong></td>
</tr>
<tr>
<td><strong>Project Fee:</strong> $225,000</td>
<td>Mike Fisher, Project Manager / Principal-in-Charge</td>
</tr>
<tr>
<td></td>
<td>Tim Lewis, Modeler / Analyst / GIS</td>
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<td></td>
<td>Joe Ziemann, Sr. Modeler</td>
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Water Works prepared a system-wide hydraulic evaluation and capacity assurance plan (SECAP) for existing and future development scenarios, including creation of a new GIS-based collection system hydraulic model in Innovyze InfoWorks-ICM version 7.0. The basis for the model was the City’s 2007 InfoWorks—CS hydraulic model files which Water Works converted and updated to the latest Innovyze software. Water Works bridged the gap that existed between planning and utility engineering departments by translating the new City General Plan into practical sewer growth models that are grounded in constructive workshop feedback and transparent coordination between departments. Water Works Engineers also organized and produced the SECAP in a manner easily adapted to support both planning/design staff and O&M staff. The City utilized the results of the SECAP update project to prioritize capital improvements and enhance proactive maintenance of the City’s wastewater collection system assets to meet regulatory-driven requirements. Our range of services on the project included:

- Planning, design and construction management for 17 sewer basin specific permanent flow meter sites.
- Review previous master plans, memos, hydraulic models, and updated the physical hydraulic model in GIS to accurately portray existing conditions, expanding modeled pipes from 100 to 250 miles (4" - 54").
- Produce parcel-by-parcel sewer loads, calibrated to existing dry weather flow monitoring and scaled up to meet General Plan and Ultimate Build Out development scenario requirements.
- Analyzed 3-years of flow meter data utilizing EPA SSOAP software to develop design-storm I/I unit hydrographs.
- Input and build new InfoWorks ICM 7.0 hydraulic model, calibrated with permanent wet weather flow monitoring and rain fall data.
- Ran peak wet weather flow hydraulic scenarios based on a chosen design storm.
- Conducted capacity assessment and sensitivity analysis (by loading the model with increasing design storms) and stressing the collection system model to identify constraints.
- Updated the City’s list of capital improvement projects and prioritized basins for additional Inflow/Infiltration reduction studies and mitigation measures that maximize efficient use of the City’s budget.

Water Works remains on-call with the City of Folsom to complete as-needed updates to the hydraulic model and evaluate the impact of new proposed projects that deviate from previous assumptions in the model.
From 2017-2018, Water Works developed a wastewater collection system hydraulic model using InfoSewer GIS-based dynamic modeling software. Development of the physical model geometry was based on the Town’s previously developed backbone sewer model and GIS. Water Works updated the model based on field survey, record drawing research and development plan review. Water Works evaluated the proposed Town General Plan Update for existing and ultimate build-out flows, identification of deficiencies, and prioritization of needed improvements with development trigger points for scheduling work. Our team’s services included installation and analysis of eight temporary flow meter sites and calibration of the hydraulic model based on this data. Water Works conducted sensitivity analyses of various development scenarios and storm events (6-hr/10-yr, 24-hr/10-yr, 6-hr/25-yr, 24-hr/25-yr, etc.) to determine the maximum capacity of the existing and future collection system with improvements.

### SECTION 3 – PROJECT TEAM

All team members will be working out of our Roseville, CA office. **Project Manager, Mike Fisher, P.E.** will lead the Team with the support of **Joe Ziemann, P.E.** who is a versatile and experienced senior hydraulic modeler. Mike will serve as the Project Manager overseeing all technical work and maintain communications with the District’s Project Manager regarding scope, progress, budget compliance and schedule adherence. Our Team commits to completing the project within the schedule outlined in the RFP. **Anthony Baltazar, P.E.** and **Tim Lewis, P.E.** will also be key project engineers responsible for executing the hydraulic model, with **Mohsen Karbakhsh** and **Esmerelda Diego** supporting with analytical functions. Resumes for Team members are provided in Appendix 1.

**Mike Fisher, P.E. - Project Manager / QA-QC Manager**

<table>
<thead>
<tr>
<th>Location</th>
<th>Yrs Exp.</th>
<th>Education</th>
<th>Registration</th>
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<tbody>
<tr>
<td>Roseville</td>
<td>22</td>
<td>B.S. Civil/Environmental Engineering, Cal Poly, SLO</td>
<td>P.E.: CA C67194</td>
</tr>
</tbody>
</table>

**Special Expertise: Pipeline Design, Hydraulic Modeling, Master Planning, Condition Assessment**

Mike has over 22 years of experience and leads the California Collections and Distribution Linear Infrastructure Design Group. Mike has a proven history of success in executing complex pipeline condition assessment, rehabilitation/replacement, and design projects, and will provide a valuable resource when it comes to developing the capital improvement projects to address any hydraulic capacity deficiencies. Mr. Fisher will serve as project manager and lead technical engineer for the project, and has working knowledge of both InfoWorks ICM and GIS, which allows him to conduct real-time and in-depth quality control and responsible charge of the project.

**Joe Ziemann, P.E. - Senior Hydraulic Modeler**

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<th>Education</th>
<th>Registration</th>
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</thead>
<tbody>
<tr>
<td>Roseville</td>
<td>13</td>
<td>M.S. – Environmental Engineering, Lehigh University B.S. – Environmental Engineering, Lehigh University</td>
<td>P.E.: CA C76172</td>
</tr>
</tbody>
</table>

**Special Expertise: Hydraulic Modeling, I/I Analysis, Model Calibration**

Mr. Ziemann was the engineer in responsible change for developing the City of Woodland and City of Folsom hydraulic models for Water Works Engineers. Mr. Ziemann completed the design of the City of Folsom’s upgraded flow monitoring sites and lead analysis of the data in order to update the City’s hydraulic model in 2017. Mr. Ziemann has a strong understanding of hydraulics and hydrology, and develops and refines Water Work’s approach to creating unit hydrographs from flow monitoring data and projecting flow for design storm events.
**Anthony Baltazar, P.E. - Hydraulic Modeler / GIS Specialist**

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<tr>
<th>Location</th>
<th>Yrs Exp.</th>
<th>Education</th>
<th>Registration</th>
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</thead>
<tbody>
<tr>
<td>Roseville</td>
<td>6</td>
<td>B.S. Civil Engineering, UC Davis</td>
<td>P.E.: CA C87494</td>
</tr>
</tbody>
</table>

**Special Expertise: Hydraulic Modeling, GIS, Operations and Maintenance, Condition Assessment**

Mr. Baltazar is a civil engineer specializing in existing infrastructure condition / capacity assessment, engineering hydraulics, and GIS. Anthony has recent experience with the detailed analysis of wet weather flow monitoring data and the analysis of I&I for use in hydraulic modeling, including EPA’s SSOAP (Sanitary Sewer Overflow Assessment Program) software to develop unit hydrographs for individual sewer basins that can be scaled to specific design storms. Anthony holds a NASSCO Pipeline Assessment Certification Program certificate and has utilized those qualifications to complete CCTV condition assessment of over 300,000 lineal feet of sewer pipeline. Anthony was the lead hydraulic modeler for the large-scale Salt Lake City model that WWE developed and has utilized to launch several significant capital improvement projects to address capacity deficiencies.

**Tim Lewis, P.E. - Hydraulic Modeler / Capital Improvement Planning**

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<thead>
<tr>
<th>Location</th>
<th>Yrs Exp.</th>
<th>Education</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roseville</td>
<td>5</td>
<td>B.S. Civil Engineering, UC Davis</td>
<td>P.E.: CA C88367</td>
</tr>
</tbody>
</table>

**Special Expertise: Hydraulic Modeling, Sanitary Sewer Management Plans, Capital Improvement Planning**

Mr. Lewis is a civil engineer experienced in developing plans and specifications for linear infrastructure, master planning, and hydraulic modeling. Tim has worked extensively within graphical information systems (GIS), AutoCAD Civil 3D, and various hydraulic modeling software programs such as InfoSewer and InfoWorks ICM. Mr. Lewis was the project engineer integrally involved with WWE’s City of Woodland, City of Folsom, and Salt Lake City hydraulic modeling projects, and has taken the lead with the ongoing use of the Folsom and SPMUD models to analyze newly proposed developments and make as-needed updates to those models as on-call work. He has extensive experience in development densification analysis and master planning for future growth, flow monitoring program development, wet weather data analysis, and the development of I/I reduction programs.

**Mohsen Karbakhsh, E.I.T. - Hydraulic Modeler / Analyst**

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<th>Location</th>
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<tr>
<td>Roseville</td>
<td>2</td>
<td>Ph.D./M.S. Environmental Engineering, New Mexico St.</td>
<td>EIT Texas-54228</td>
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**Special Expertise: Hydraulics, Database Management**

Mohsen provided operation of the InfoWorks ICM model for the City of Roseville Master Plan Addendum work completed recently and is knowledgeable in the methods required to develop and apply sewer loads in InfoWorks ICM and run model simulations. Mohsen will provide analyst support to the project such as developing a dry weather sewer loads spreadsheet and applying it spatially to the model, and updating the physical model based on as-built data provided by the District.

**Esmerelda Diego, E.I.T. - Hydraulic Modeler / Analyst**

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<th>Location</th>
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<tr>
<td>Roseville</td>
<td>1</td>
<td>M.S. Civil/Environmental Engineering, Cal Poly, SLO</td>
<td>Passed EIT, CA</td>
</tr>
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**Special Expertise: Hydraulic Modeling, Database Management**

Esmerelda has operated a hydraulic model recently completed by Water Works for the Town of Colma, and provided analysis of wet weather flow monitoring data using EPA’s SSOAP (Sanitary Sewer Overflow Assessment Program) software. Esmerelda will provide analyst support to the project in the area of wet weather data analysis, and updating the physical model based on as-built data provided by the District.
SECTION 4 – QUALITY ASSURANCE AND CONTROL; CONFLICTS

Continuous Quality Control and Technical Review are key tools in WWE’s project management philosophy. Quality, budget, and schedule performance are all optimized when technical issues are identified and resolved as early as possible in the project delivery process. A cornerstone of our Quality Control philosophy, and our work philosophy in general at WWE is that senior staff are integrally involved with the development of all deliverables, and that junior level staff are not left to produce a majority of the work without hands-on involvement and mentoring from our highly experienced staff. Junior level staff perform tasks that are appropriate for their level of experience which helps improve the cost efficiency of our work, but are not thrown in “over their heads”, which is a common root cause of projects that go “off the tracks”.

Quality Control Reviews

All technical work products are reviewed with the QA/QC Reviewer in an internal workshop setting prior to finalizing Project Deliverables. The QA/QC Reviewer for this project will be involved on a daily basis, to “check in” on the work and ensure that key client concerns and over-arching project requirements are addressed throughout the project execution.

QA/QC Documentation

At each deliverable WaterWorks will provide a statement certifying that the deliverables were reviewed through our QA/QC program prior to submittal. WaterWorks will also provide the project design file will that includes all correspondence, meeting notes, back checked comments, checklists, calculations, model files, etc. to date.

A quality work deliverable is one that meets our contractual requirements with the District and is prepared in accordance with accepted standards of professional practice. It is the responsibility of WWE to plan and execute work so that quality deliverables are produced to meet those requirements. The quality assurance and control program is summarized in the figure at right.

Professional Conflicts of Interest

WWE does not have any foreseeable actual or potential professional conflicts to disclose to the District that could hinder the provision of the requested services.

SECTION 5 – CLIENT REFERENCES

Water Works is proud of our record as indicated by the development of long-term working relationships that include numerous projects completed for our core clients over the last ten years. Below is a reference list of our clients for which we have provided engineering services for key projects relevant to this RFP. We sincerely encourage you to contact each of our references. We are confident that they will attest to our passion about providing quality projects, personal attention, and exceptional service.
SECTION 6 – CONTRACT AND INSURANCE REQUIREMENTS

Water Works Engineers (WWE) confirms that we are willing and able to execute the District’s standard Professional Services Agreement with only the following requested changes.

Appendix C – 1.1 Commercial General Liability Insurance

Commercial general liability insurance, written on an “occurrence” basis, which shall provide coverage for bodily injury, death and property damage resulting from operations, products liability, liability for slander, false arrest and invasion of privacy arising out of professional services rendered hereunder, blanket contractual liability, broad form endorsement, products and completed operations, personal and advertising liability, with per location limits of not less than $2,000,000 general aggregate and $1,000,000 each occurrence, subject to a deductible of not more than $25,000 payable by Consultant.

Appendix C – 1.2 Business Automobile Liability Insurance

Business automobile liability insurance with limits not less than $1,000,000 each occurrence including coverage for owned, non-owned and hired vehicles, subject to a deductible of not more than $25,000 payable by Consultant.

Note: Water Works Engineers does not have any company-owned vehicles and therefore does not have insurance covering company-owned vehicles.

SECTION 7 – ADDENDA

There have been no Addenda issued for this project.

COST PROPOSAL

Our cost proposal can be found in Appendix 2.
APPENDIX 1 – RESUMES
MIKE FISHER, P.E.
Senior Engineer/Project Manager

**Credentials:** California Water Environment Association SSO-WDR subject matter expert • CWEA Board of Directors, Director at Large (North) • Author - CVCWA/BACWA SSO Response BMP Manual • Guest Lecturer – CSU SAC & Cal-Poly SLO on Trenchless Technologies • Certified NASSCO Pipeline and Manhole Assessment Trainer • Certified NASTT Pipe Bursting and CIPP Design Best Practices

**Representative Project Experience**

**Wastewater Collection Infrastructure**

**City of Folsom Sewer Flow Meter Replacement – Folsom, CA** - Mr. Fisher was the Project Manager responsible for design and construction phase oversight for the replacement and/or construction of new gravity sewer flow meters at 17 locations throughout the City. Work included survey; site assessment and layout; civil, mechanical, electrical and instrumentation design; and permitting.

**Hawaii Water Service Company Wastewater Collection System Improvement Projects – Pukalani, HI** - Mr. Fisher was the Project Manager for the replacement of over 2,250 LF of 6-8” sewer pipe with new 8” FPVC at three distinct locations throughout collection system; reconnections of multiple residential laterals; and abandonment of 1,000-LF of deteriorated and sagging backyard and inaccessible pipeline. Project services included alternatives assessment, hydraulics and pipe selection; design and construction administration; utility coordination; encroachment and easement procurement from Maui County and golf course; and significant public outreach to minimize impact of golf course shut-down during construction.

**City of Roseville Oak Street 63” Interceptor Relocation – Roseville, CA** - Mr. Fisher was the Project Manager on the assessment of relocation options for approximately 700-LF of 63” RCP; alignment study, hydraulics; pipe selection; construction methodology (open cut versus tunneling) utility coordination, traffic, business impacts; ROW/easement procurement; environmental constraints assessment. The Project Team created a 30% design package that will be used to construct the job using either traditional design-bid-build or using City design-assist (CM @ Risk) procurement methodology.

**The Railyards - Sacramento, CA** - As Senior Engineer, Mr. Fisher was responsible for master planning, modeling and hydraulic design of wet infrastructure for the 238-acre infill project; 2,500-LF of 42-inch PCCP transmission line and 5-miles of 8-inch to 12-inch distribution mains, 2-miles of 30-inch VCP interceptor and 4-miles of 8-inch to 18-inch collection mains; 5-miles of 60-inch to 12-inch storm water collection piping.

**Sewer Lift Station Rehabilitation and Replacement**

**City of Redding Mary Street Lift Station Replacement – Redding, CA** - Mr. Fisher was a senior engineer on the replacement of the existing raw sewage lift station with new, parallel wet-pit lift station using duplex dry-pit submersible pumps, and new electrical building with outdoor generator set. Performed hydraulic calculations to support future 12-inch forcemain project (3 mgd).
Master Planning / Infrastructure Assessment / GIS

Town of Colma WW Collection System Master Plan – Colma, CA - As Project Manager, Mr. Fisher oversaw the development of a wastewater collection system model using InfoSewer GIS based dynamic modeling software. Water Works is evaluating the proposed Town General Plan Update for existing and ultimate build-out flows, identification of deficiencies, and prioritization of needed improvements with development trigger points for scheduling work. Our team’s services include installation and analysis of eight temporary flow meter sites and calibration of the hydraulic model based on this data. Water Works is conducting sensitivity analysis of various development scenarios and storm events (6-hr/10-yr, 24-hr/10-yr, 6-hr/25-yr, 24-hr/25-yr, etc.) to determine the maximum capacity of the existing and proposed system.

City of Woodland WW Hydraulic Model and Master Plan Updates – Woodland, CA - Mr. Fisher oversaw the City’s ongoing hydraulic model development process (2014 and 2018) which included upgrading the existing physical sanitary sewer system within Innovyze InfoSewer, precipitation analysis and recalibration of dry and wet weather flows, and new modeling scenario updates based on the City’s updated General Plan. The Team utilized the results of the hydraulic model simulations to identify systemic capacity deficiencies and developed capital improvement projects (prioritized) and inflow and infiltration reduction programs to solve them.

City of Roseville Dry Creek WWTP Sewer Collection System and Pump Station Hydraulic Investigation - Roseville, CA - Mr. Fisher oversaw the engineering services in conducting a review of the existing City of Roseville sanitary sewer hydraulic model (in InfoWorks ICM) and developing inflow and infiltration reduction program recommendations.

South Placer Municipal Utility District Wastewater Temporary Flow Monitoring Study — Rocklin, CA - As Project Manager Mr. Fisher is overseeing the temporary flow monitoring of discreet locations to quantify and characterize wastewater unit flow and strength by type of connection. (I.E. Residential, commercial, industrial, etc.) This data is being used to commence a new rate study, as well as 5-year budget plan for the District.

South Placer Municipal Utility District, Wastewater Hydraulic Model – Rocklin, CA - As Project Manager, Mr. Fisher oversaw development of the District’s dynamic hydraulic model (GIS based InfoSuite-Sewer, 6000 pipes) to evaluate current and future build-out needs. Utilized model results to compare and confirm previously identified near-term capital improvements and set budgeting amounts for future capacity needs and likely condition related deterioration using “Risk” of failure mathematical algorithms based on pipe age, material, depth, size, etc. Services included recommended updates to the District’s local residential capacity impact fee for new connections.

Hawaii Water Service Company Wastewater Hydraulic Model –, Pukalani, HI - As Project Manager, Mr. Fisher oversaw the development of the GIS and dynamic hydraulic model (GIS based InfoSuite-Sewer, 1000 pipes) to evaluate current and future build-out needs. Utilized model results in conjunction with available condition data to identify near-term capital improvements and set budgeting amounts for future capacity needs and likely condition related deterioration using “Risk” of failure mathematical algorithms based on pipe age, material, depth, size, etc.

Delta Diablo Sanitation District, Collection System Reliability Assessment Project – Antioch, CA - Mr. Fisher was the Project Manager responsible for integrating the District’s Hydraulic Model, AutoCAD and MainSaver CMMS into a comprehensive asset registry with GIS interface. Assisted with development of “Risk” of Failure based condition assessment program utilizing probability and consequence of failure statistical algorithms based on quantitative field data to conduct life cycle cost analysis for District’s wastewater infrastructure. Developed GIS and MS Excel based software application that combined data from District field assessment programs, CMMS, asset data (size, age, material, etc.) and hydraulic modeling software to manage and prioritize capital improvement budget expenditures and recommend preventive maintenance frequencies.
**REPRESENTATIVE PROJECT EXPERIENCE**

**Wastewater Collection Infrastructure**

City of Folsom – System Wide Sewer Hydraulic Evaluation and Capacity Assurance Plan – Folsom CA - Mr. Ziemann served as task manager and senior engineer for a system wide sewer hydraulic evaluation and capacity assurance plan (SECAP) update for existing and future development scenarios and developed a new hydraulic model that simulated 250 miles of 6” to 54” pipeline within InfoWorks ICM 7.0 under design storm peak wet weather flow conditions. The project included updating the existing GIS sewer network, adapting the new City General Plan into actionable development scenarios for the sewer collection system, and conducting a thorough analysis of existing flow meter data to produce a calibrated hydraulic model. Based on model simulation results a list of improvements with an associated timeline and trigger points was produced, along with a recommended inflow and infiltration reduction program to address capacity constraints within the collection system.

Sanitary Sewer Management Plan Development and Implementation Woodland, Shasta Lake, Rosemead, and Fresno County, CA - Typical services included General Waste Discharge Requirement gap analysis, SSMP development workshop facilitation, SSMP development plan and schedule preparation, staffing and budgeting impact assessment, and management, operation, and maintenance program development. Mr. Ziemann has extensive experience interpreting the requirements of the GWDR and developing operation, maintenance, capital improvement planning, fats/oils/grease control, and capacity assessment programs appropriate for the size and complexity of various types of sewer collection systems to both meet regulatory requirements and provide a value in terms of enhancing proactive and strategic maintenance and planning processes.

Sewer System Hydraulic Model and Master Plan - Woodland CA - Mr. Ziemann was involved with all phases of the hydraulic model development process, which included the following tasks: setup of the physical model within MWH Soft InfoSewer based on existing sewer collection system GIS data, physical data quality review, quantification of existing and future sewer system flows using land use GIS data, development of adjustable spatial sewage flow assignment methods, establishment of modeling scenarios and dynamic simulation parameters, analysis of simulation results, and calibration with flow monitoring data. The project included assistance with integration of the hydraulic modeling process into the City’s System Evaluation and Capacity Assurance section of their Sewer System Management Plan (SSMP) and development of processes and procedures for the City’s continued use of the model by the technology and engineering departments.

Wastewater Collection Assessment and Capital Improvement Planning (CA&CIP) Software Module Development and Implementation – Roseville, and Woodland, CA - Mr. Ziemann was involved with development of the CA&CIP software module data acquisition, data analysis, and user interface design. The CA&CIP module collects and analyzes data from sources including CCTV inspection databases, computerized maintenance management systems, and hydraulic model databases, and uses a customizable risk of failure algorithm to process this data and prioritize capital improvement projects through a GIS based interface.
City of Folsom Sewer Meter Replacement - Folsom CA - Mr. Ziemann developed construction plans and specifications and provided construction management services for replacement of 17 existing open-channel sewer flow meters throughout the City’s sewer collection system and for installation of 3 new flow metering sites. The project included updates to the City’s SCADA system that is used to monitor and record the flow meter data to allow for a more streamlined process of data extraction for future hydraulic model updates.

Wastewater Collection System Improvement Projects Hawaii Water Service Company, Pukalani, HI - Replacement of over 2,250 LF of 6-8” sewer pipe with new 8” FPVC at three distinct locations throughout collection system; reconnections of multiple residential laterals; and abandonment of 1,000-LF of deteriorated and sagging backyard and inaccessible pipeline. Project services included alternatives assessment, hydraulics and pipe selection; design and construction administration; utility coordination; encroachment and easement procurement from Maui County and golf course; and significant public outreach to minimize impact of golf course shut-down during construction.

Reclaimed Water Line Extension – City of Shasta Lake, CA - Conducted a pipeline route analysis and feasibility study for an approximately 2-mile long, 10-inch diameter pipeline to deliver recycled water from the City’s existing recycled water distribution system to the Tierra Oaks Golf Course. The project included a detailed alternatives assessment and route study to identify the most cost-effective option based on construction materials and methodology; hydraulic and water quality design criteria; environmental constraints; right-of-way; existing utilities; O&M, and other related constraints. The project includes crossing of several sensitive environmental areas, many of which would be mitigated through the use of trenchless pipeline construction methods.

Wastewater and Industrial Treatment

Lehigh Cement Process Water Treatment Plant – Cupertino, CA - Mr. Ziemann completed design of a process water treatment plant treating industrial waste in partnership with the treatment equipment supplier in order to deliver project design and bid documents on a rapid timeline in order to meet regulatory requirements. Treatment process included UF/RO and proprietary biological treatment processes.

Water Treatment
Santa Clara Valley Water District Rinconada WTP Analysis – Los Gatos, CA - Mr. Ziemann performed an analysis of the WTP’s centrifuge dewatering facility and developed recommendations for improvements and changes to system operation to overcome challenges experienced due to the facility being under capacity for the current solids load at the WTP. Water Works also developed an interactive hydraulic model spreadsheet of the plant’s treated water pump station that allowed for Agency staff to change operating conditions such as flow, suction water surface, discharge water surface, and number of pumps operating. The spreadsheet could be used to predict optimal operating parameters at varying conditions and was used by Plant Operations Staff.

Water Distribution Infrastructure
Sierra Army Depot Water Distribution System Hydraulic Model – Herlong, CA - Developed a GIS-based hydraulic model of the Army Depot’s water storage and distribution system based on a combination of AutoCAD and hard copy maps. Mr. Ziemann developed water use estimates for each major water service connection in the system, including conceptual diurnal demand patterns. The hydraulic model was run, and then further calibrated to correlate with both anecdotal evidence of historical system performance, and hydrant testing results. Mr. Ziemann developed a water storage and delivery improvement alternatives analysis to address water storage shortfalls based on California Department of Public Health requirements, and the Depot’s desire to eliminate elevated storage in favor of below-grade storage and delivery while improving system pressures in problem areas.
ANTHONY BALTAZAR, P.E.
Associate Engineer

Education
B.S. – Civil Engineering
University at CA, Davis

Experience
6 years

Registration
Registered Civil Engineer
California - C87494

Representative Project Experience

Master Planning / Infrastructure Assessment / GIS
Town of Colma WW Collection System Master Plan – Colma, CA - Mr. Baltazar assisted in the development of a wastewater collection system model using InfoSewer GIS based dynamic modeling software. Water Works is evaluating the proposed Town General Plan Update for existing and ultimate build-out flows, identification of deficiencies, and prioritization of needed improvements with development trigger points for scheduling work. Our team’s services include installation and analysis of eight temporary flow meter sites and calibration of the hydraulic model based on this data. Water Works is conducting sensitivity analysis of various development scenarios and storm events (6-hr/10-yr, 24-hr/10-yr, 6-hr/25-yr, 24-hr/25-yr, etc.) to determine the maximum capacity of the existing and proposed system.

Salt Lake City – Wastewater Collection System Improvements - Mr. Baltazar assisted in analyzing existing flow monitoring data and its viability for helping to develop unit hydrographs to be used in the City’s hydraulic sewer model. This analysis is needed to confirm capacity-related design criteria to be utilized later in the overall project to identify, evaluate, recommend, select, design and see through construction of preferred improvements to the City’s collection system. Mr. Baltazar’s work on this project included hydraulic analysis of several improvement alternatives using Innovyze InfoWorks ICM dynamic hydraulic modeling software.

City of Folsom - Plan Area Sewer Master Plan Update, Folsom, CA - Mr. Baltazar assisted in the design criteria, hydraulic modeling, and sewer system improvements to meet the sewage collection and conveyance demands of the approved FPA Specific Plan Land Use. The FPA is a mixed-use master planned development area south of Highway 50 in Folsom, CA. The project contemplates the phased development of sewer infrastructure to convey up to 6.9 MGD Average Dry Weather Flow (ADWF) and 15.88 MGD Peak Wet Weather Flow (PWWF). The original FPA specific plan included two lift stations; however, working with the Developers, Water Works and the City identified a design revision that eliminated one of the stations. This sewer master plan was completed to support project level environmental documents needed for the proposed development.

Silver Springs Wastewater Lift Station Evaluation and Water System Hydraulic Model – Shingle Springs, CA - Mr. Baltazar completed an evaluation of the proposed water distribution system for TLA Engineering and Planning, Inc.’s Silver Springs development. This included design criteria, hydraulic modeling, and distribution system improvements to meet projected water demands for each phase of the project. The evaluation was completed using Innovyze’s InfoWater hydraulic modeling software.

Salt Lake City Permanent Flow Meters – Phase 2 & Hydraulic Model Calibration – Salt Lake City, UT - Mr. Baltazar was the design engineer for Phase 2 of the City’s Permanent Flow Meter Implementation Program, which included the installation of flow meters in nine locations throughout the City’s wastewater collection system. Mr. Baltazar was also the project engineer for the calibration of the City’s existing wastewater collection system hydraulic model. Tasks included review/update of the physical model, development of growth scenarios and associated wastewater generation rates consistent with anticipated development / CIP phasing, recent flow monitoring data.
analysis, system capacity assessment, and confirmation/update of where capital improvement projects (CIPs) are needed.

**County of San Mateo On-Call Services Pipeline Rehabilitation – Redwood City, CA** Mr. Baltazar assisted in the evaluation of identified pipeline replacement recommendations in terms of constructability, utility conflict, accessibility, permitting, property acquisition and readily identifiable potential constraints to produce a design to be bid and constructed. Design included various construction methodologies, including spot repair, cured-in-place pipe lining, pipe-bursting and traditional open cut dig and replace in same trench and new alignment. Mr. Baltazar assisted with procurement of an encroachment permit to construct a new sewer crossing of SFPUC’s Hetch Hetchy 72” and 84” water transmission lines.

**Wastewater/ Conveyance/ Sewer Lift Station Rehabilitation and Replacement**

**Elsinore Valley Municipal Water District – A2 Lift Station Rehabilitation – Lake Elsinore, CA** - Mr. Baltazar was a member of the team that led an extensive multi-discipline condition assessment that was performed by WWE including civil-site, mechanical, structural, electrical, controls, corrosion, and odor assessments personally by the engineers that designed the respective design improvements for the Project. Final design was then implemented which design detailed alternative development and analysis of (1) the required modifications within the existing restrictive valve vault, (2) permanent bypass piping and valves, (3) surge control, and (4) the maintenance of lift station operations/bypass pumping during construction.

**City of Folsom Old Town Water and Wastewater Project – Folsom, CA** - Mr. Baltazar assisted in the preliminary design for the replacement of over 6,000-LF of water distribution and wastewater collection system piping at several locations in the downtown area of Folsom. Design included replacement of over 60 service connections and appurtenance structures, and in several cases required relocation out of backyard or congested easements into the City street to provide better long-term O&M access.

**City of Folsom Easton Valley Parkway Lift Station – Folsom, CA** - Mr. Baltazar provided analysis and modeling on the design for the Folsom Plan Area Easton Valley Parkway Sewer Lift Station and Forcemain. The project included design of a 3MGD duplex submersible pump station with provisions to increase to 7 MGD at build-out. Site improvements included MCC, SCADA and emergency generator building; odor control; by-pass pumping connections; and approximately 3000-LF of forcemain, with two elevated creek crossing and a 300-LF auger bore and jack crossing of Highway 50 (eight lanes of traffic). Unique features of the project included analysis of multiple lift station design options, including vertical turbine solids handling pumps versus a grinder with submersible N-series Flygt pumps versus dry/wet pit submersible pumps. The Team also compared absorbent, air scrubber, and bio-filters to identify the odor control device that best met the long term needs of the site.

**Water Treatment/ Pumping/ Storage/Distribution**

**Paradise Irrigation District Zone A Pump Station, Transmission Main and Reservoir B Replacement – Paradise, CA** - Mr. Baltazar assisted with the design of the Paradise Irrigation District for the Zone A Pump Station, Transmission Main, and Reservoir B Replacement Project. The existing system supplies potable water to 26,000 people through a single transmission line (built in 1955) from the WTP to the distribution system through a "pinch point", Reservoir B - a lined earthen reservoir with a floating cover. The earthen reservoir has raised reliability, maintenance and operation, as well as water quality issues. Improvements include Reservoir B replacement with two 145-foot diameter, 2.3 MG bolted steel tanks; new Zone A pump station capable of pumping 2,800 gpm; and a new 16-inch diameter Zone A transmission main that is 2 miles long, connecting Zone A Pump Station to distribution Zone A.
Representative Project Experience

Master Planning / Infrastructure Assessment / GIS

South Placer Municipal Utility District Loomis Diversion Line Route Study – Loomis, CA - Mr. Lewis assisted in a route study and assessment of new wastewater infrastructure to divert flow off the South Placer Municipal Utility District (SPMUD) Loomis Trunk Line, including gravity pipeline and sanitary sewer manholes (SSMHs), and potentially new sewer pump station and forcemain. Water Works identified, analyzed, compared alternatives and recommended a preferred alignment for the SPMUD Loomis Diversion Line, approximately 8000-LF of 18” gravity pipe and/or potentially a new sewer lift station & approximately 1000-LF of forcemain.

City of Roseville Odor Control Analysis – Roseville, CA - Mr. Lewis worked closely between the WWTP and sewer collection system staff and with an environmental odor control specialist in monitoring and identifying sources of odor and airflow pressure issues within a 78” interceptor sewer line and influent pump station. The project led to recommended changes to operations of the pump station and recommended improvements along the interceptor to reduce the conditions which lead to upstream odor issues.

City of Roseville Dry Creek WWTP Sewer Collection System and Pump Station Hydraulic Investigation - Roseville, CA - Mr. Lewis provided engineering services in conducting a review of the existing City of Roseville sanitary sewer hydraulic model (in InfoWorks ICM) and developing inflow and infiltration reduction program recommendations.

Town of Colma WW Collection System Master Plan – Colma, CA - Mr. Lewis assisted in the development of a new GIS sewer system database, temporary flow monitoring program, and peak-wet-weather flow wastewater collection system model using the GIS-based InfoSewer modeling software. WaterWorks implemented the Town General Plan Update and developed growth scenarios, identified capacity deficiencies, and recommended/prioritized capital improvement projects.

City of Folsom – System Wide Sewer Hydraulic Evaluation and Capacity Assurance Plan – Folsom CA - Mr. Lewis prepared a system wide sewer hydraulic evaluation and capacity assurance plan (SECAP) for existing and future development scenarios and developed a new hydraulic model that simulated 250 miles of 6” to 54” pipeline within InfoWorks ICM 7.0 under design storm peak wet weather flow conditions. The process began with updating the existing GIS sewer network, adapting the new City General Plan into actionable development scenarios for the sewer collection system, and conducting a thorough analysis of existing flow meter data to produce a calibrated hydraulic model. Based on model simulation results a list of improvements with an associated timeline and trigger points was produced, along with a recommended inflow and infiltration reduction program to address capacity constraints within the collection system.

City of Woodland WW Hydraulic Model and Master Plan Updates – Woodland, CA - Mr. Lewis was directly involved with the City’s ongoing hydraulic model development process (2014 and 2018) which included upgrading the existing physical sanitary sewer system within Innovyze InfoSewer, precipitation analysis and recalibration of dry and wet weather flows, and new modeling scenario updates based on the City’s updated General Plan. Mr. Lewis utilized the results of the hydraulic model simulations to identify systemic capacity deficiencies and...
developed capital improvement projects (prioritized) and inflow and infiltration reduction programs to solve them.

**City of Woodland Research & Technology Park Peer Review – Woodland, CA** - In conjunction with a wastewater hydraulic model update project, Mr. Lewis provided a technical sanitary sewer peer review of a projected improvement plan for the Woodland Research & Technology Park in the Spring Lake master plan area (new development plan). Mr. Lewis also assisted the City during the draft public comment/review period for the City’s Environmental Impact Report (EIR).

**Salt Lake City Wastewater Collection System Improvements – Salt Lake City** - Mr. Lewis assisted in analyzing existing flow monitoring data and its viability for helping to develop unit hydrographs to be used in the City’s hydraulic sewer model. This analysis is needed to confirm capacity-related design criteria to be utilized later in the overall project to identify, evaluate, recommend, select, design and see through construction preferred improvements to the City’s collection system. Mr. Lewis’s work on this project included hydraulic analysis of several improvement alternatives using Innovyze InfoWorks ICM dynamic hydraulic modeling software.

**Wastewater Treatment/Collection Infrastructure**

**City of Morro Bay Water Reclamation Facility Conveyance Facilities – Morro Bay, CA** - Mr. Lewis provided preliminary design and PS&E for over three miles of joint 16”/12” sewer forcemains, 16” ocean outfall piping, 8” indirect potable reuse pipeline, and two sewer pump stations. The overall project was a part of the City’s wastewater treatment plant relocation and recycled water improvements project. The pipelines included three separate Caltrans transverse/parallel encroachments, a 100-ft utility bridge crossing of Morro Creek, and a 400-LF microtunnel trenchless crossing of the congested Morro Bay/Quintana roundabout. Services included planning; design; survey; geotechnical analysis; ROW research; and permitting (including EIR public comment review support).

**Ventura & Ferry Streets Sewer Replacement Project – Anderson, CA** - Mr. Lewis assisted in the planning, design and construction phase oversight for the City of Anderson (City) Ventura and Ferry Street Sewer Replacement Project. The project was funded by Community Development Block Grant (CDBG) from the Department of Housing and Community Development Grant No. 13-CDBG-8968 and included replacement of over 1500-LF of existing sewer gravity mains (& appurtenances) in residential and commercial streets in the City. Services included planning; design; survey; environmental analysis; and geotechnical analysis.

**City of Folsom Old Town Water and Wastewater Project – Folsom, CA** - Mr. Lewis assisted in the design for the replacement of over 3,000-LF of wastewater collection system connections and gravity mains at several locations in the historic downtown area of Folsom. Design included replacement of over 60 service connections and appurtenance structures, and in several cases required relocation out of backyard or congested easements into the City street to provide better long-term O&M access.

**City of Folsom Sewer Flow Meter Replacement Project CM – Folsom, CA** - Mr. Lewis provided construction management and construction inspection services for the Sewer Flow Meter Replacement Project, which included replacement of existing permanent system-wide sewer flow meters at six (6) different locations across the City.

**City of Shasta Lake Wastewater Treatment Plant Upgrades – Shasta Lake, CA** - Mr. Lewis assisted in the planning and design phases for the City of Shasta Lake Wastewater Treatment Facility. This project includes upgrading the plant capacity to meet buildout flows via various improvements including headworks improvements; new aeration basins, influent pump station, clarifiers, and UV disinfection. Mr. Lewis was particularly involved with developing wastewater flow projections for buildout conditions and the preliminary design of the influent pump station.
Mr. Karbakhsh is a civil/environmental Engineer-In-Training with two years of experience in the water and wastewater consulting industry, and over four years of research experience in water and wastewater treatment systems. He has worked as a staff engineer on projects ranging from developing treatment operational manuals for existing facilities, to planning and utility asset rehabilitation analysis and design. Mr. Karbakhsh’s experience also includes hydraulic modeling, as well as graphical information systems (GIS), AutoCAD Civil 3D, and hydraulic modeling software programs such as InfoWorks ICM.

**REPRESENTATIVE PROJECT EXPERIENCE**

**Wastewater Collection Infrastructure**
South Placer Municipal Utility District Foothill Trunk Sewer Replacement Rocklin, CA - Mr. Karbakhsh assisted with the Preliminary Engineering and PS&E for approximately 2275-LF new 24” gravity pipe from El Don Road, west along backyard easements adjacent to perennial creek/wetland, across the City of Rocklin/Placer County line, across Aguilar Rd., terminating west of the Creekside Village Apartment complex where it connects to the SPMUD Lower Secrete Ravine Trunk Line. Services included planning; design; environmental permitting; geotechnical investigation; trenchless feasibility assessment; survey; and services during construction.

City of Roseville DCWWTP Sewer Collection System and Influent Pump Station – Roseville CA - Mr. Karbakhsh developed a sewer hydraulic model update based on existing hydraulic model within InfoWorks ICM 7.5, for the City of Roseville sewer network. The process began with incorporating the hydraulic model results into GIS to investigate and identify potential causes of I/I and surcharging in the network. Based on model simulation results, a recommended inflow and infiltration reduction program was developed, to address capacity constraints within the collection system. In addition, Mr. Karbakhsh developed a hydraulic model for the intake pump station, to investigate causes of surcharging events. Using the hydraulic model results, a recommended modification was developed for the peak wet weather flow diversion structure at the Dry Creek Wastewater Treatment Plant.

**Sewer Lift Station Rehabilitation and Replacement**
City of Folsom Easton Valley Parkway Lift Station – Folsom, CA - Mr. Karbakhsh assisted on the design services for the Folsom Plan Area Easton Valley Parkway Sewer Lift Station and Forcemain. The project included design of a 3MGD duplex submersible pump station with provisions to increase to 7 MGD at build-out. Site improvements included MCC, SCADA and emergency generator building; odor control; by-pass pumping connections; and approximately 3000-LF of forcemain, with two elevated creek crossing and a 300-LF auger bore and jack crossing of Highway 50 (eight lanes of traffic). Unique features of the project included analysis of multiple lift station design options, including vertical turbine solids handling pumps versus a grinder with submersible N-series Flygt pumps versus dry/wet pit submersible pumps. We also compared absorbent, air scrubber, and bio-filters to identify the odor control device that best met the long term needs of the site.
**Master Planning/Infrastructure/Assessment/GIS**

City of Redding Westside Sewer Interceptor Feasibility – Redding, CA - Mr. Karbakhsh assisted with the alternatives analysis for the Phase 3 Westside Interceptor project to identify and confirm constraints for construction of approximately 3,200 feet of 48-inch gravity sewer. The work included review of existing and alternative alignments, as well as trenchless alternatives compared to conventional open-cut trenching.

City of Woodland WW Hydraulic Model and Master Plan Updates – Woodland, CA - Mr. Karbakhsh continues to assist with the City’s ongoing hydraulic model development process (2014 and 2018) which includes upgrading the existing physical sanitary sewer system within Innovyze InfoSewer, precipitation analysis and recalibration of dry and wet weather flows, and new modeling scenario updates based on the City’s updated General Plan. The results of the hydraulic model simulations were used to identify systemic capacity deficiencies and developed capital improvement projects (prioritized) and inflow and infiltration reduction programs to solve them.

City of Roseville West Side Tank and Pump Station Project – Roseville, CA - Mr. Karbakhsh assisted with the engineering design of a new pump station building, two new 6 MG partially buried AWWA D110 pre-stressed concrete water storage tanks, a new crew facility, emergency generator, hydropneumatic tank, and ancillary mechanical, electrical, controls, instrumentation, SCADA and civil improvements.

**Wastewater Treatment Infrastructure**

Arroyo Lago Wastewater System Conceptual Master Plan Review – California Water Service Company, CA The County of Alameda desired to develop a residential project adjacent to the City of Pleasanton, which was projected to generate up to 0.25 MGD of wastewater at buildout. Mr. Karbakhsh reviewed and analyzed the conceptual master plan for the Arroyo Lago wastewater collection, treatment, and recycled water system, including four development phases, with specific attention to cost estimation and phasing planning.

**Water Treatment/ Pumping/ Storage/Distribution**

San Jose Water Company Cambrian Pump Station Replacement – San Jose CA -- Mr. Karbakhsh assisted with the design and permitting of a new CMU block pump station with two 100 hp pumps and two 200 hp pumps, two 1000-gallon bladder tanks, new MCC, and associated valves and piping. Demolition of the existing pump station and other facilities on site were completed to create room for the new facilities. Hazardous materials on site were sampled for and mitigated. A historical resources report was created to ensure the new facilities did not impact the remaining historical facilities on site.

Placer County Water Agency Bowman WTP Phase 2 Improvements – Auburn, CA - Mr. Karbakhsh assisted in the development of plans and specifications for improvements to the existing 7MGD water treatment plant including retrofitting (2) 2MGD conventional gravity filters and adding a powder activated carbon (PAC) feed system. A new PAC feed facility was added, including a super-sack loading skid and volumetric feed system. The facility included a new metal building and associated electrical, instrumentation, and control improvements.

**Construction Management**

South Placer Municipal Utility District Loomis Diversion Sewer Project Loomis, CA - Mr. Karbakhsh assisted with engineering services during construction for the approximately 7200-LF of new 15” to 18” open-trench gravity sewer pipe. Services included planning; design; environmental permitting (401, 404, & 1602); ROW procurement; survey; geotechnical trenchless crossings at I-80 and Horseshoe Bar Rd. Extensive hard rock was uncovered during construction that required controlled blasting services before open trenching. During construction, services included coordinating construction meetings, reviewing submittals and responding to RFIs/RFCs, change order negotiation, pay request processing and conducting inspections.
Ms. Diego is a Civil/Environmental Engineer with a year of experience in the water and wastewater industry. She has worked as a staff engineer on projects assessing the condition and capacity of existing facilities as well as developing rehabilitation design alternatives for treatment plants, water distribution systems, and wastewater collection systems. Much of Ms. Diego’s project experience includes advanced water distribution and sanitary sewer modeling for various municipalities.

**Representative Project Experience**

**Master Planning / Infrastructure Assessment / GIS**

City of Woodland WW Hydraulic Model and Master Plan Updates – Woodland, CA - Ms. Diego assisted with the City’s ongoing hydraulic model development process which included upgrading the existing physical sanitary sewer system within Innovyze InfoSewer based GIS dynamic modeling software, precipitation analysis and recalibration of dry and wet weather flows, and new modeling scenario updates based on the City’s updated General Plan. Ms. Diego also utilized the results of the hydraulic model simulations to identify systemic capacity deficiencies and developed capital improvement projects (prioritized) and inflow and infiltration reduction programs to solve them.

City of Woodland Research & Technology Park Peer Review – Woodland, CA - In conjunction with a wastewater hydraulic model update project, Ms. Diego assisted with a technical sanitary sewer peer review of a projected improvement plan for the Woodland Research & Technology Park in the Spring Lake master plan area (new development plan).

Town of Colma WW Collection System Master Plan – Colma, CA - Ms. Diego assisted in the development of the Town’s hydraulic model using Innovyze InfoSewer software. The model was used to assess the town’s wastewater collection capacity and its ability to convey flow in the near-term and long-term during a design storm event without sanitary system overflows. The results of the model were used to develop capital improvement project (CIP) alternatives and a targeted rain derived inflow and infiltration (RDII) reduction program to address system deficiencies with the goal of ensuring the town’s compliance with the State Water Resources Control Board. Ms. Diego also assisted in the writing of a Wastewater Collection System Master Plan presenting the results of the hydraulic model, CIP alternatives, and RDII reduction program.

City of Folsom 27” Sewer Mitigation Project Phase 1 on Folsom Blvd – Folsom, CA - Ms. Diego is assisting in the preliminary design of a mitigation project for a 27” trunk sewer in the City of Folsom located in one of the City’s major thoroughways. Ms. Diego’s responsibilities include researching and evaluating several potential alignments to recommend a preferred alignment based on cost effectiveness and constructability. Identification of the preferred alignment requires Ms. Diego to coordinate information from other utility providers and geotechnical and environmental studies.
City of Millbrae Water System Upgrade Project – Millbrae, CA - The City of Millbrae is upgrading its water distribution system to meet the demand of planned developments ranging from an average day to an emergency scenario, wherein one of the City’s two aqueducts would be out of service. Ms. Diego is evaluating improvements, previously proposed as part of the City’s Master Plan, through the use of Innovyze InfoWater software to determine the specific operational conditions for pressure reducing valves, pump stations and water storage tanks to ensure the pressure requirements are satisfied throughout the complex distribution system.

City of Roseville West Side Tank and Pump Station Design and CM – Roseville, CA - Ms. Diego assisted with design, plans and specifications for two pre-stressed concrete tanks, booster pump station, and new crew facility. The water tanks and pump station were delivered using the City’s design assist CM at Risk project delivery method and the crew build as design- build. Improvements to the greenfield site included:

- Two 6 MG partially buried AWWA D110 Type I pre-stressed concrete tank(s).
- Booster Pump Station – four 3800 GPM @ 170’ TDH vertical turbine pumps and controls.
- CMU block building with pump, E&IC and chemical feed rooms
- Site design to minimize material off-haul and provide post construction drainage
  water quality enhancements
- Mechanical stabilized earth foundation improvements under tank to minimize differential settlement
- Crew building with office, training, lavatory, showers, kitchen and shop to support water operations and maintenance staff
- Architectural features of the site followed master planned community CC&Rs.

Water Treatment
California Water Service Company – Kernville Treatment Study – Kernville, CA - Ms. Diego assisted with the analysis of the Kernville Water Treatment Plant and distribution system’s water quality data to determine root causes of the formation of disinfection byproducts (DBP) in the system. The results of this analysis were used to develop project alternatives to reduce the formation of DBPs. The project alternatives were inclusive of anticipated treatment effectiveness, sizing, and high level cost estimates.
APPENDIX 2 – COST PROPOSAL
## El Dorado Irrigation District
### El Dorado Hills Collection System
#### Wastewater Modeling Professional Services

**Cost Proposal**

<table>
<thead>
<tr>
<th>No.</th>
<th>Task Description</th>
<th>Water Works Engineers</th>
<th>Project Budget Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E5</td>
<td>E4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mike F.</td>
<td>Joe Z.</td>
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<tr>
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<td>3.0</td>
<td>Validation of Existing Flow Data</td>
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<td>4.0</td>
<td>Calibration of Peak Wet Weather Flow (ALLOWANCE)</td>
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<td>5.0</td>
<td>Technical Reports</td>
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<tr>
<td>6.0</td>
<td>Hydraulic Model of Future Wastewater System</td>
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<tr>
<td>7.0</td>
<td>Final Report</td>
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</table>

### Project Totals

- **Project Totals Excluding Optional Tasks and Allowances**: $72,858 (478)
- **Project Totals Including Task 4.0 Allowance**: $79,076 (524)
- **Project Totals Including Task 4.0 Allowance and Optional Task**: $92,920 (616)
<table>
<thead>
<tr>
<th>Classification</th>
<th>Title</th>
<th>Hourly Rate</th>
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<tr>
<td>AA</td>
<td>Administrative</td>
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<tr>
<td>T1</td>
<td>Drafter/Jr. Technician</td>
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<tr>
<td>T2</td>
<td>Designer/Sr. Technician</td>
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<td>T3</td>
<td>Senior Designer</td>
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<tr>
<td>I1</td>
<td>Field Inspector</td>
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<td>I2</td>
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<td>Staff Engineer</td>
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<td>E2</td>
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<td>E3</td>
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<td>Senior Project Engineer</td>
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<tr>
<td>E5</td>
<td>Principal Engineer</td>
<td>$235</td>
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</table>

**Notes:**
1. Rate effective through December 31, 2019. A 3% increase will be added for any services performed in each year thereafter.
2. No miscellaneous expenses will be charged for this project.
### Project Number: 15036
### Project Name: Silva Valley - El Dorado Hills Sewerline
### 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" sewerline along Silva Valley Road and 4,500 feet of 18" sewerline between Silva Valley Rd and the EDH Wastewater Treatment Plant as needing capacity upsizing in the future. In order to further refine the extent and timing of improvements required, flow monitoring and survey work to determine manhole invert and ground elevations was completed under Project 14001 and 14002 in 2014. Flow monitoring and survey data has been incorporated into the District collection system model to determine remaining pipeline capacity. The current capacity analysis indicates the peak wet weather flow rate in 12,000 feet of pipeline exceeds design capacity and of that 4,700 feet is in a surcharged condition, i.e. water backing up into manholes. Additional wet weather flow data has been collected to calibrate the model further.

Preparation of a Basis of Design Report (BODR) will begin in 2019 that will further develop the project considering wet weather flow data. The BODR will address project phasing, and provide more refined project cost estimates by phase. Because project development is conceptual at this time, construction expenditures are not shown within this CIP planning horizon but are expected to be in the range of $6 M. The 2019 expenditures are for a BODR only.

### Basis for Priority:

The collection system model identified these gravity sewerlines as having 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:

<table>
<thead>
<tr>
<th>Funded to Date:</th>
<th>$ 50,000</th>
<th>Expenditures through end of year:</th>
<th>$ 31,481</th>
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<tbody>
<tr>
<td>Spent to Date:</td>
<td>$ 23,481</td>
<td>2019 - 2023 Planned Expenditures:</td>
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<tr>
<td>Cash flow through end of year:</td>
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<td>Total Project Estimate:</td>
<td>$ 131,481</td>
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<td>Project Balance</td>
<td>$ 18,519</td>
<td>Additional Funding Required</td>
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### Description of Work

<table>
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<tr>
<td></td>
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<tr>
<td>Study/Planning</td>
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<tr>
<td>Design/Env/CM</td>
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<tr>
<td>Construction</td>
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<td><strong>TOTAL</strong></td>
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### Estimated Funding Sources

<table>
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<tr>
<th>Sources</th>
<th>Percentage</th>
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<tr>
<td>Wastewater FCCs</td>
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<td></td>
<td>$81,481</td>
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<tr>
<td>Wastewater Rates</td>
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<td></td>
<td>$0</td>
</tr>
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</table>

**Funding Comments:** The project provides capacity for new wastewater customers, therefore is funded with wastewater FCCs.
EL DORADO IRRIGATION DISTRICT

Subject: Consideration of acceptance of the negotiated Memorandum of Understanding between the El Dorado Irrigation District and the El Dorado Irrigation District Managers and Supervisors Employee Association for the term of January 1, 2019 to December 31, 2021.

Previous Board Action
None.

Board Policies (BP), Administrative Regulations (AR) and Board Authority
The Meyers-Milias-Brown Act requires the Board of Directors accept or reject the tentative agreement reached by the authorized representatives of the public agency and a recognized employee organization. (Government Code § 3505.1.)

Summary of Issue
The District’s designated labor negotiating team has reached a tentative agreement with the El Dorado Irrigation District Managers and Supervisors Employee Association (“MSA”). The MSA’s membership voted and subsequently ratified the tentative agreement on June 28, 2019. The agreement observes the direction of the Board. Therefore, the District’s negotiating team recommends the Board accept the tentative agreement.

Background/Discussion
The MSA initially organized in the fall of 2018. On December 12, 2018, the District formally recognized the MSA as an Exclusively Recognized Employee Organization, as set forth in the District’s employer-employee relations resolution, Resolution No. 2010-025. The MSA is the District’s first labor organization to represent manager and supervisor employees. The Meyers-Milias-Brown Act (Gov. Code §§ 3500, et seq.) governs labor-management relationships within California local government. That statute requires the District and the MSA to meet and confer in good faith and to endeavor to reach agreement on all matters relating to employment conditions and employer-employee relations, including, but not limited to, wages, hours, and other terms and conditions of employment. (Gov. Code § 3504.)

Beginning in December of 2018, the District and the MSA, through their designated negotiating teams, began negotiating on an initial labor agreement. Simultaneously, the District was negotiating a separate labor agreement with the El Dorado Irrigation District Employees Association (“Employees Association”). During the course of negotiating both agreements, the District’s negotiating team met with the District’s Board of Directors on numerous occasions to solicit direction and negotiation authority. On March 11, 2019, the Board approved a new MOU with the Employees Association. The District and the MSA continued negotiating and on June 19, 2019, the parties reached tentative agreement on all outstanding terms of an initial agreement. The majority of the terms negotiated in the tentative agreement with the MSA closely follow the terms included in the Board-approved MOU for the Employees Association. A brief description of the tentatively agreed upon economic provisions and/or provisions which differ from those included in the Employees Association MOU follows:
Wages
The agreement provides that the District will increase base wages 5.0% effective the first full pay period in January 2019. In 2020 and 2021, the District will increase base wages a minimum of 2.0% and a maximum of 5.0% based on the Federal Bureau of Labor Statistics CPI-W (All Urban and Clerical Workers). This provision is identical to the provision on wages in the MOU with the Employees Association.

The agreement also recognizes that the need to increase wages for certain classifications may arise as a result of recruitment and/or retention problems or because of reclassifications or organizational changes. The agreement, therefore, requires the District to analyze comparable market data for all classifications within the MSA within ninety days of the Board’s approval of the agreement, and implement market-based equity adjustments as necessary, provided that the District first meets and confers with the MSA. The General Manager has the authority to implement the market-based equity adjustments. Thereafter, the District will periodically study a proportional percentage of classifications among both the MSA and Employees Association and implement market-based equity increases as necessary during the term of the agreements.

To incentivize excellent performance, the agreement also allows the General Manager to make a one-time payment to employees who exceed their job standards and are already at the top step of their pay-scale. This provision currently exists in the Employee Handbook. This agreement, however, will require the parties to meet and confer within thirty days of the approval of the MOU to develop criteria for achieving this one-time performance payment.

Life Insurance
The agreement provides that the District will pay for a life insurance benefit for each MSA employee that is equivalent to one-year’s base wages.

Paid Time Off
The agreement clarifies that employees may not voluntarily convert paid time off from Bank A to Bank B, in order to be consistent with CalPERS regulations. The agreement also adds a provision that will allow employees to cash out unused paid time off at the end of the year, subject to limitations based upon an employee’s accrual rate. This provision is identical to the provision on paid time off in the MOU with the Employees Association.

Additionally, the agreement increases administrative time-off for supervisors from 40 to 80 hours per year – the same amount already authorized for managers.

Layoffs
The agreement includes the same layoff provisions included in the Board-approved MOU for the Employees Association, except with one change to the order of layoffs. In this proposed agreement, the order by which layoffs are conducted will not include promotional probationary employees in the same category with initial probationary employees. All other provisions are the same.

Term
The new agreement is to become effective upon ratification by the District Board of Directors and MSA membership and continue until December 31, 2021. This provision is identical to the provision on term in the MOU with the Employees Association.

As noted above, the MSA’s membership voted and subsequently ratified the tentative agreement on June 28, 2019. Because the tentative agreement adheres to the direction of the Board, staff recommends that the Board accept the agreement.
**Board Options**

**Option 1:** Accept the negotiated Memorandum of Understanding between the El Dorado Irrigation District and the El Dorado Irrigation District Managers and Supervisors Employee Association for the term of January 1, 2019 to December 31, 2021.

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

**Option 3:** Take no action.

**Recommendation**

Option 1

**Attachments**

Attachment A: Memorandum of Understanding El Dorado Irrigation District and the El Dorado Irrigation District Managers & Supervisors Employee Association, January 1, 2019-December 31, 2021; includes Appendix A.

---

Jose Perez  
Human Resources Manager

Dan Corcoran  
Operations Director

Mark Price  
Finance Director

Brian Poulser  
General Counsel

Jim Abercrombie  
General Manager
MEMORANDUM OF UNDERSTANDING

EL DORADO IRRIGATION DISTRICT

AND THE

EL DORADO IRRIGATION DISTRICT MANAGERS & SUPERVISORS EMPLOYEE ASSOCIATION

JANUARY 1, 2019 THROUGH DECEMBER 31, 2021
EL DORADO IRRIGATION DISTRICT

AND THE

EL DORADO IRRIGATION DISTRICT MANAGERS AND SUPERVISORS EMPLOYEE ASSOCIATION

January 1, 2019 through December 31, 2021

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING has been jointly prepared by the designated representatives of EL DORADO IRRIGATION DISTRICT, a public agency within the meaning of Section 3501(c) of the Government Code of the State of California and hereinafter referred to as the (“District”), and the designated representatives of the EL DORADO IRRIGATION DISTRICT MANAGERS AND SUPERVISORS EMPLOYEE ASSOCIATION, a recognized employee organization within the meaning of Section 3501 (b) of the Government Code of the State of California and hereinafter referred to as the (“Association”); to define the relationship between the District and the Association and to establish conditions of employment for members of the unit.

The District is engaged in rendering services to the public; therefore, District and Association recognize their mutual obligation for the continuous rendition and availability of uninterrupted service.

The scope of representation covered by the Memorandum of Understanding (“MOU”) shall include all matters relating to employment conditions and employer-employee relations, including, but not limited to wages, hours, and other terms and conditions of employment, except, however, that the scope of representation shall not include consideration of the merits, necessity, or organization of any service or activity provided by law or executive order.
One-Time Performance Payment........................................................................... 9

ARTICLE 6  MEDICAL BENEFITS........................................................................... 10

ARTICLE 7  PENSION................................................................................................. 13

A.  Employees Covered ......................................................................................... 13

B.  Pension Formulas............................................................................................. 13

   1.  Employees Hired Prior to January 1, 2010 – Tier 1, Classic Members: ............................................. 14

   2.  Employees Hired On or After January 1, 2010 – Tier 2, Classic Members: ............................................. 14

   3.  Employees Hired On or After January 1, 2013 – Tier 3, New Members: ............................................. 14

ARTICLE 8  LIFE INSURANCE.................................................................................. 14

ARTICLE 9  SENIORITY .......................................................................................... 15

ARTICLE 10  PAID TIME OFF............................................................................... 15

A.  Definition.......................................................................................................... 15

B.  Accrual Rates.................................................................................................... 15

C.  Scheduling PTO................................................................................................ 16

   1.  Scheduled PTO ................................................................................................. 16

   2.  Non-Scheduled PTO ....................................................................................... 16

D.  PTO Accrual Maximums.................................................................................... 17

   1.  Bank A .............................................................................................................. 17

   2.  Bank B .............................................................................................................. 17

E.  PTO Compensation at Separation................................................................. 17

F.  PTO Donation.................................................................................................... 18

G.  Return to Work Medical Certification ............................................................ 18

H.  Coordination with Workers’ Compensation................................................... 18

I.  Coordination with State Disability Insurance................................................ 18

J.  PTO Bank A Cash Out....................................................................................... 19

ARTICLE 11  MISCELLANEOUS LEAVES............................................................ 19

A.  Leaves Contained in the Employee Handbook............................................... 19

B.  Executive Administrative Leave....................................................................... 19

ARTICLE 12  ADMINISTRATIVE LEAVE .......................................................... 20

ARTICLE 13  MILITARY LEAVE.......................................................................... 20
ARTICLE 14  HOLIDAYS ................................................................................. 20
   A. Recognized Holidays ............................................................................... 20
   B. Holidays Observed ................................................................................... 21
   C. Holiday Compensation............................................................................. 21
   D. Personal Business Day ............................................................................. 21
ARTICLE 15  EXPENSE REIMBURSEMENT ................................................. 21
   A. Personal Vehicle Use ............................................................................... 21
   B. Training Expenses .................................................................................... 22
   C. Professional Requirements....................................................................... 22
ARTICLE 16  GIFTS AND NEPOTISM ............................................................ 22
   A. Gifts.......................................................................................................... 22
   B. Nepotism .................................................................................................. 22
      1. Definitions.................................................................................... 22
      2. Prohibition of Nepotism....................................................................... 23
ARTICLE 17  APPEARANCE AND UNIFORMS ............................................ 23
   A. Appearance .............................................................................................. 23
   B. Uniforms .................................................................................................. 23
ARTICLE 18  OFF-DUTY WORK ..................................................................... 24
   A. Outside Employment Restriction ............................................................. 24
   B. Conflict of Interest ................................................................................... 24
   C. Use of District Equipment and/or Materials Not Authorized .................. 24
   D. Scheduling Conflicts ................................................................................ 24
ARTICLE 19  SAFETY MEETINGS ................................................................. 24
ARTICLE 20  JOB POSTINGS AND TRANSFERS ......................................... 25
   A. Posting of Vacancies................................................................................ 25
   B. Content and Period of Posting ................................................................. 25
   C. Applying for Vacancies ........................................................................... 25
   D. Notice of Vacancy Filled ......................................................................... 25
   E. Involuntary Transfer ................................................................................. 25
   F. Job Trade .................................................................................................. 26
ARTICLE 21  REDuctions IN Force ................................................................. 26
   A. Layoff Plan ................................................................................................ 26
   B. Layoff List ................................................................................................ 26
ARTICLE 30  SEVERABILITY OF PROVISIONS ........................................... 46
ARTICLE 31  DURATION OF AGREEMENT ........................................... 46

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]
Article 1  Recognition

A.  Scope of Agreement

The El Dorado Irrigation District and the El Dorado Irrigation District Managers and Supervisors Employee Association negotiated this Memorandum of Understanding in good faith in compliance with the Meyers-Milias-Brown Act. This Agreement describes wages, hours, terms and conditions of employment for job classifications represented by the Association.

B.  Recognition

District Recognition

Acting under the authority of the Board of Directors, the District’s General Manager, or any person or organization duly authorized by the General Manager, is the representative of the El Dorado Irrigation District, hereinafter referred to as the “District,” in employer-employee relations.

Association Recognition

The El Dorado Irrigation District Managers and Supervisors Employee Association, hereinafter referred to as the “Association,” is the exclusive recognized employee organization for all full-time and part-time regular and probationary employees in the Managers and Supervisors Employee Unit. Appendix A to this MOU list the classifications represented by the Association. The Association does not represent any confidential or temporary employees.

Article 2  Employment Status

A.  Regular Status Employment

A “regular” employee is a full-time or part-time employee who has successfully completed the District’s full hiring process including an initial probationary period.
B. Probationary Employment

1. Purpose of Probation

A “probationary” employee is an employee who has been hired on an at-will basis as the final part of the regular employee hiring process. The purpose of the probationary period is to determine if the employee meets all of the qualifications and requirements for regular employment status. Probation provides the District with the opportunity to: 1) closely observe the employee's work and conduct, 2) provide intensive formal and informal training, and 3) reject any probationary employee whose performance and/or behavior does not, in the District’s opinion, meet the standards for regular status.

2. Length of Probation

The probationary period for new District employees in all classifications represented by the Association is twelve (12) months. The probationary period for an employee promoted by the District to a classification within the bargaining unit is six (6) months. Notwithstanding these baseline probationary periods, the District may, with written notice to the employee, extend an employee’s probationary period by up to six (6) additional months plus the duration of any absences as provided in subsection B(5) below. There will not be a probationary period for an employee laterally transferred, demoted or reclassified.

3. Dismissal from Probationary Employment

The District may terminate a probationary employee’s employment at any time during the probationary period for any lawful reason. An employee may not appeal, grieve or in any way challenge the District’s decision to terminate the probationary employment. However, an employee who fails probation on a promotion will be returned to the job classification that the employee held prior to promotion.

4. Accrual of Leaves

New-hire probationary employees do not accrue Paid Time Off (“PTO”) or any other form of negotiated paid leave during the probationary period. New-hire probationary employees may use up to 8 hours of PTO leave due to illness each month of probation subject to District policy. The District may require a doctor’s note after three (3) days of absence during
probation. If a new-hire probationary employee successfully completes probation and obtains regular status, the District will credit to the employee twelve (12) months’ worth of PTO accrual at the lowest accrual tier minus any PTO leave hours used during the probationary period. Promotional probation shall not affect an employee’s leave accruals except as otherwise described in this MOU.

5. **Effect of Absences from Work**

An employee’s probationary period will be extended by the aggregate total of any absences from work in excess of forty (40) hours during the probationary period.

### Article 3  FLSA Work Period, Overtime and Partial Day Absence

**A. FLSA Work Period**

All employees will work a standard work week schedule subject to the requirements of the Fair Labor Standards Act (FLSA). The FLSA work period for employees is a consecutive seven day period beginning at 12:00 a.m. each Saturday and ends at 11:59 p.m. the next following Friday.

1. **Standard Work Week Schedule**

FLSA exempt employees perform a given role, and are paid on a salaried basis. Nonetheless, the District expects that exempt employees work a minimum of a standard full-time work week.

Regular or probationary employees may be designated as part-time employees if they are scheduled to work fewer than 40 hours per week.

**B. Overtime**

Employees are required to accurately report all time worked on their timesheets. However, all unit FLSA exempt employees are paid on a salary basis and are therefore not eligible to receive additional compensation for overtime worked.
C. Partial Day Absences for Exempt Employees

Except on recognized holidays, exempt employees shall not be required to use PTO or other accrued leave hours for partial day absences. Exempt employees work on a salaried basis and are therefore expected to work as many hours as necessary to complete their duties. However, whole days off are charged to PTO, exempt employee administrative leave, or other approved leave(s), if available.

Article 4 Wages

A. Wage Schedule

The lists of job classifications and corresponding wage rates for represented employees are set forth in Appendix A.

B. Wage Step Plan

(1) Each wage range consists of (5) five steps, Steps 1 through 5. The wage at each step shall be five percent (5%) higher than the immediately preceding step. Changes made to a wage range will be implemented by adjusting the top step of the wage range. The new wage shall be adjusted to maintain the five percent (5%) difference between steps.

(2) Step 1 shall normally be paid upon initial employment. In cases where an employee possesses exceptional qualifications or there have been recruitment or retention difficulties for the classification, the General Manager may authorize appointment above Step 1.

(3) Except for an employee who is already at or “Y” rated above the top step for the employee’s classification, an employee shall receive an annual five percent (5%) step increase not to exceed the top step for the classification if the employee 1) receives an overall “Meets Job Standards” or “Exceeds Job Standards” rating on the employee’s performance evaluation for the current year and 2) if the employee did not receive a disciplinary unpaid suspension, disciplinary reduction in pay and/or disciplinary demotion during that one-year appraisal period.
(4) Accelerated step increases within the established wage range may be granted by the General Manager in addition to those above.

C. Wage Adjustments

The District shall increase pursuant to subsection B (1) above the base wage for all classifications represented by the Association during the term of this MOU as follows:

The District will increase base wages 5.0% effective the first full pay period in January 2019.

The District will increase base wages a minimum of 2.0% and a maximum of 5.0% effective the first full pay period in January, 2020 based on the Federal Bureau of Labor Statistics CPI-W (All Urban and Clerical Workers) comparing October 2018 and October 2019 figures.

The District will increase base wages a minimum of 2.0% and a maximum of 5.0% effective the first full pay period in January, 2021 based on the Federal Bureau of Labor Statistics CPI-W (All Urban and Clerical Workers) comparing October 2019 and October 2020 figures.

D. Paychecks

The District shall date and issue paychecks every other Friday. However, when the Friday payday falls on a recognized holiday, the paycheck shall be dated and issued on the immediately preceding business day. The District shall offer (but not require) direct deposits of paychecks. Paychecks shall be issued no later than one week following completion of the pay period.

E. New and Revised Classifications, Titles and Descriptions

The District may establish new classifications, titles and descriptions and revise existing classifications, titles and descriptions within bargaining units represented by the Association due to changes in operations or the requirements of the District, provided the District first meets and confers with the Association on impact to employees as a result of the changes.
F. Equity Wage Increases

The District and the Association recognize that there may be a need for equity wage increases for classifications represented by the Association as a result of recruitment problems, retention problems, reclassifications or organizational changes. The District will, within ninety (90) days from ratification of this Agreement, analyze comparable market data for all classifications within the Association and implement market-based equity adjustments, provided it first meets and confers with the Association. It is the District’s goal to achieve a 70% match when benchmarking bargaining unit job classifications to positions at the external agencies.

Thereafter, the District will periodically study a proportional percentage of classifications among all units and implement market-based equity increases during the term of this Agreement, provided the District first meets and confers with the Association before implementation.

G. Temporary Work

1. Lower Classification

When the District temporarily assigns an employee to work in a classification having a lower pay range, the employee’s rate of pay shall not be reduced, unless agreed upon between the District and the Association.

2. Higher Classification

When the District formally assigns an employee to work four (4) or more consecutive days on a temporary basis to perform at least fifty percent (50%) of assigned duties in a classification having a higher pay range, the employee shall receive either Step 1 of the higher pay range or five percent (5%) above the employee’s current pay, whichever is greater, but not to exceed the maximum of the range established for the higher classification. The District shall not divide the higher level duties among two or more employees for the sole reason of avoiding compensation for temporary work in a higher classification.

H. Reclassifications

An employee may seek a reclassification pursuant the following process:
Generally, career advancement and promotional opportunities within the District should be filled by a competitive recruitment process rather than by reclassification. However, the District may evaluate and compare the actual duties and responsibilities of a given job against the duties and responsibilities as described in the classification specification to assure employees remain appropriately classified.

Reclassifications will normally be considered, reviewed and approved during the annual performance evaluation process. On an exception basis, they may be recommended at other times during the year. If an employee or his or her manager believes the employee’s job has changed significantly over time through the assumption of higher-level duties, the manager may recommend reclassification to the next higher level position. A position justification letter or checklist (if applicable) must be submitted with the request to the Department Director and Human Resources.

Reclassifications are to be based on an evaluation of the level of assigned responsibilities and the duties detailed in the existing and proposed classification specifications. An incumbent who is reclassified must possess the minimum qualification of the classification to which he or she is assigned. When considering upward reclassification, a prime consideration will be the gradual assumption of higher-level responsibilities that may have occurred over time or from organizational or other changes. Also, the preponderance of work time must be spent on the higher level work tasks and responsibilities as detailed in the class specification.

Considerations not to be taken into account are volume of work or financial need. A reclassification must be approved by the Department Director, Human Resources Director and General Manager. The reclassification will be effective the first day of the pay period following approval.

A regular employee who is reclassified will receive the wage set forth below:
(a) If reclassified to a classification with the same wage range, the employee’s wage will not change; or

(b) If reclassified to a classification with a higher wage range, the employee’s wage will be increased by exactly five percent (5%) regardless of the wage step, but neither less than the lowest step nor more than the maximum of the range established for the new classification; or

(c) If reclassified to a classification with a lower wage range, the wage will be determined in the same manner as a voluntary demotion.

(6) Any applicable pay adjustment that occurs due to a reclassification will not reduce the annual increase available as part of the performance evaluation process.

I. Promotions

(1) Promotions occur when an existing employee is selected by competitive recruitment process for appointment to a classification having a top step above the top step of the employee’s current classification.

(2) An employee shall be eligible to apply for an available promotional position if: 1) the employee has completed at least one year of active service in the employee’s present job, 2) the employee meets the minimum qualifications for the promotional position and 3) the employee did not receive a disciplinary unpaid suspension, disciplinary reduction in pay and/or disciplinary demotion within the year preceding the employee’s application for promotion.

(3) Upon promotion, an employee shall receive a five percent (5%) increase but neither less than the lowest step or the maximum of the wage range established for the new classification. This promotional increase will not reduce the annual step increase available as part of the performance evaluation process.
J. Demotions

(1) Demotions occur when an existing employee is appointed to a classification having a top step lower than the top step of the employee’s current classification.

(2) An employee who voluntarily demotes to a lower paying classification or who demotes in lieu of layoff under the layoff procedure shall receive the pay step in the lower range nearest but not more than that which was received prior to demotion.

(3) In all cases of demotion for cause, the General Manager shall set a wage within the pay range of the class to which the employee has been demoted.

K. Transfers

(1) A lateral transfer is a change between classifications where the wage range for each classification is the same and/or for which the employee was not selected by competitive recruitment process. Generally, career opportunities within the District should be filled by a competitive recruitment process rather than by transfer.

(2) An employee may request a voluntary transfer. A voluntary transfer must be approved by the Director of Human Resources and the Director(s) of the employee’s current and new department(s).

(3) Upon transfer, an employee shall receive the step in the new range most closely comparable to the employee’s current wage without a reduction in pay.

Article 5 Performance Appraisals

One-Time Performance Payment

A one-time performance payment may be granted with the approval of the General Manager to represented employees who “Exceeds Job Standards” and are at or “Y” rated above the top step.
The parties will meet and confer within thirty (30) days of the approval of MOU to develop criteria for achieving the bonus under this program.

**Article 6  Medical Benefits**

A. **Active Employee Health Benefit**

1. Employees covered by this MOU shall be eligible to receive the insurance benefits outlined below. The summary plan descriptions and/or formal plan documents for these benefit programs are available from the District and are hereby incorporated by reference into this MOU.

   a. **Medical Insurance**

   The District shall contract for medical insurance from CalPERS under the Public Employees' Medical and Hospital Care Act (PEMHCA). The District's contribution for medical insurance premiums shall be the lesser of: i) one-hundred percent (100%) of the employee-only monthly premium for the lowest-cost Health Maintenance Organization available to District employees in the 95667 Zip Code (Benchmark Plan), or ii) the employee-only monthly premium of the employee's chosen medical insurance plan. If the employee also elects coverage for a spouse/domestic partner or a family, the District shall also contribute as follows the lesser of i) eighty five percent (85%) of the difference between the Benchmark Plan's employee-only monthly premium and its employee plus spouse/domestic partner or employee plus family monthly premium, as applicable, or ii) eighty five percent (85%) of the difference between the employee-only monthly premium and the employee plus spouse/domestic partner or employee plus family monthly premium, as applicable, of the employee's chosen medical insurance plan. The employee's share of the premium, if any, may be paid each pay period using pre-tax money in accordance with Section 125 of the Internal Revenue Code and associated regulations.
b. **Opting Out of Medical Insurance Coverage**

Employees who receive medical benefits coverage through another source may opt out of District-provided medical insurance coverage and instead receive a District contribution of $275 per month, which the employee may elect to either (i) receive all or part in cash subject to applicable withholdings, or (ii) place all or part into a Flexible Spending Arrangement in accordance with Section 125 of the Internal Revenue Code and associated regulations. Employees who opt out must annually provide the District with evidence of health benefits coverage through another source.

c. **Vision/Dental/Orthodontia Benefits**

The District shall continue to self-insure for vision, dental, and orthodontia benefits. The District shall contribute one-hundred percent (100%) of the employee-only monthly cost for this coverage. If the employee also elects coverage for a spouse/domestic partner or a family, the District shall also contribute eighty five percent (85%) of the difference between the employee-only monthly cost and the employee plus spouse/domestic partner or employee plus family monthly cost, as applicable. The employee's share of the monthly cost, if any, may be paid each pay period using pre-tax money in accordance with Section 125 of the Internal Revenue Code and associated regulations. For purposes of this paragraph, "monthly cost" means the COBRA rates (excluding administration fees) set annually by the carriers for these insurance policies.

B. **Retiree Medical Benefit**

1. To be one-hundred percent (100%) vested to receive the District-paid retiree medical benefits specified in Section B(3) of this Article below, an employee hired before January 1, 2010 must have a minimum of five (5) years of service, as defined by Government Code section 20962, with EID and/or other CalPERS member agencies. Employees
hired before January 1, 2010 who do not meet this requirement are not eligible for District-paid retiree medical benefits.

2. To begin vesting in the District's retiree medical benefits, an employee hired on or after January 1, 2010 must have a minimum of ten (10) years of credited service as defined by Government Code section 20962, of which a minimum of five (5) years must be service with the District. Thereafter, the percentage of vesting gradually increases as more full years of service with the District are credited, according to the following vesting schedule.

<table>
<thead>
<tr>
<th>Years of Service (Five of which must be with the District)</th>
<th>% of Account Vested</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years</td>
<td>100%</td>
</tr>
<tr>
<td>19 years</td>
<td>95%</td>
</tr>
<tr>
<td>18 years</td>
<td>90%</td>
</tr>
<tr>
<td>17 years</td>
<td>85%</td>
</tr>
<tr>
<td>16 years</td>
<td>80%</td>
</tr>
<tr>
<td>15 years</td>
<td>75%</td>
</tr>
<tr>
<td>14 years</td>
<td>70%</td>
</tr>
<tr>
<td>13 years</td>
<td>65%</td>
</tr>
<tr>
<td>12 years</td>
<td>60%</td>
</tr>
<tr>
<td>11 years</td>
<td>55%</td>
</tr>
<tr>
<td>10 years</td>
<td>50%</td>
</tr>
<tr>
<td>Less than 10 years</td>
<td>0%</td>
</tr>
</tbody>
</table>

3. The District shall contract for medical insurance from CalPERS under PEMHCA (contract inception 1993). The District shall contribute to each vested retiree's medical insurance costs, including dependent coverage, according to the following formulas.

a. If the retiree elects retiree-only coverage, the District shall contribute the lesser of i) one-hundred percent (100%) of the retiree-only monthly premium for the Benchmark Plan, or ii) the retiree-only monthly premium of the retiree's chosen medical insurance plan. However, for employees hired on or after January 1, 2010, this premium contribution percentage shall be multiplied by the applicable value in the "% of Account
Vesting" column of the vesting schedule contained in Section B(2) of this Article above.

b. If the retiree also elects coverage for a spouse/domestic partner or a family, the District shall also contribute the lesser of i) eighty five percent (85%) of the difference between the Benchmark Plan's retiree-only monthly premium and its retiree plus spouse/domestic partner or retiree plus family monthly premium, as applicable, or ii) eighty five percent (85%) of the difference between the retiree-only monthly premium and the retiree plus spouse/domestic partner or retiree plus family monthly premium, as applicable, of the retiree's chosen medical insurance plan. However, for employees hired on or after January 1, 2010, these premium contribution percentages shall be multiplied by the applicable value in the "% of Account Vesting" column of the vesting schedule contained in Section B(2) of this Article above.

c. Notwithstanding any provision of this section B(3), in no event shall the District's contribution exceed the lesser of the retiree's actual monthly premium cost or the amount required by Government Code section 22892, subdivision (c).

C. Legislative Changes

In the event that the Federal and/or State government pass legislation during the term of this MOU requiring employer-financed health benefits, the District may immediately re-open negotiations on this Article to discuss the impact of the legislation on the current District health benefits for employees and/or retirees.

Article 7 Pension

A. Employees Covered

Employees covered by this MOU shall be eligible to receive the pension benefits outlined below. The District’s contract with CalPERS describing the retirement plan in more detail is available from the District and is hereby incorporated by reference into this MOU.

B. Pension Formulas

The pension benefit is tiered based upon date of hire as follows:
1. Employees Hired Prior to January 1, 2010 – Tier 1, Classic Members:

Employees hired prior to January 1, 2010 are subject to the CalPERS 2.7% at age 55 retirement plan. Employees shall pay, on a pre-tax basis, the lesser of 50% of the total normal cost rate (as defined by California Government Code section 7522.04(g) and calculated by CalPERS in the District’s annual valuation report), rounded to the nearest one quarter of one percent, or 8% of reportable compensation. Retirement pension will be calculated based on the employee’s highest single year of District compensation.

2. Employees Hired On or After January 1, 2010 – Tier 2, Classic Members:

Employees hired on or after January 1, 2010 are subject to the CalPERS 2.0% at age 55 retirement plan. Employees shall pay, on a pre-tax basis, the lesser of 50% of the total normal cost rate (as defined by California Government Code section 7522.04(g) and calculated by CalPERS in the District’s annual valuation report), rounded to the nearest one quarter of one percent, or 8% of reportable compensation. Retirement pension will be calculated based on final compensation as defined by California Government Code Section 20037.

3. Employees Hired On or After January 1, 2013 – Tier 3, New Members:

Employees hired on or after January 1, 2013 are subject to the CalPERS 2.0% at age 62 retirement plan. Employees shall pay, on a pre-tax basis, 50% of the total normal cost rate (as defined by California Government Code section 7522.04(g) and calculated by CalPERS in the District’s annual valuation report), rounded to the nearest one quarter of one percent. Retirement pension will be calculated based on final compensation as defined by California Government Code section 20037.

Article 8 Life Insurance

The District will pay for a life insurance benefit for each employee subject to this MOU. The benefit shall be equivalent to employee’s annual base wage. Represented employees may purchase additional life insurance
for themselves and their family for an additional premium to be paid by the
employee via a payroll deduction.

**Article 9  Seniority**

Seniority is an employee’s total length of probationary and regular
status employment while in any form of paid status. Except as required by
law, an employee stops accruing seniority when the employee is in an
unpaid status or when the employee’s District employment ends for any
reason. An employee may continue to accrue seniority if the District
reinstates the employee within one year following a layoff. A reinstated
employee shall not accrue seniority during the period of layoff. The District
shall post a seniority list at each work location on or about November 1 of
each year.

**Article 10  Paid Time Off**

A. **Definition**

Paid Time Off (PTO) is paid leave earned by employees that may be
used for personal or family illness or vacation subject to the provisions of
this Article.

B. **Accrual Rates**

All regular employees subject to this MOU shall accrue PTO. Employees may only accrue PTO when they are in a regular paid status. Regular employees covered by this Agreement shall accrue PTO each pay
period to be credited to the employee’s Bank A in relation to their seniority
as follows:

<table>
<thead>
<tr>
<th>District Seniority</th>
<th>Annual Accrual Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 3 Years</td>
<td>176</td>
</tr>
<tr>
<td>4 to 9 Years</td>
<td>216</td>
</tr>
<tr>
<td>10 to 14 Years</td>
<td>256</td>
</tr>
<tr>
<td>15 or More Years</td>
<td>296</td>
</tr>
</tbody>
</table>

Crediting of accrued PTO following successful completion of new
hire probation is governed by Article 2(B)(4).
C. Scheduling PTO

The number of hours of PTO deducted from an employee’s PTO leave bank for a full-day absence will equal the number of hours that the employee works under the employee’s current work schedule.

PTO may be taken in either of two methods, scheduled and non-scheduled, as follows:

1. Scheduled PTO

Scheduled PTO is identical to traditional vacation and anticipated medical leave and may be taken following completion of new employee probationary employment and if the employee has accrued PTO hours in the employee’s Bank A sufficient to cover the period of the absence. An employee will apply for scheduled PTO to take a vacation and/or for any planned medical procedure requiring up to two work weeks of leave. All scheduled PTO must be taken from the employee’s Bank A, except that an employee may use Bank B PTO for approved absences beginning with the first day following at least two (2) continuous work weeks of absence from the work place due to 1) personal illness, 2) family illness or 3) for any other qualifying leave under FMLA/CFRA.

All scheduled PTO must be taken with prior written approval from the employee’s department head or designee. An employee may only take scheduled PTO at times when the District can maintain its desired level of public service without the employee. Approval of non-medical scheduled PTO requests will be based on seniority when multiple employees simultaneously request the same period of absence and the District cannot accommodate all of the requests.

2. Non-Scheduled PTO

All employees may take non-scheduled PTO for personal or family illness or emergency. Employees must provide notice of non-scheduled PTO no later than one hour before the beginning of the employee’s scheduled shift or as soon thereafter as the employee is aware of the need for leave.

Non-scheduled PTO will first be deducted from the employee’s Bank A. Beginning with the first day following at least two (2) continuous work
weeks of absence from the workplace due to 1) personal illness, 2) family illness or 3) for any other qualifying leave under FMLA/CFRA, an employee may take non-scheduled PTO using the employee’s Bank B.

D. **PTO Accrual Maximums**

Each employee will have two PTO banks labeled Bank A and Bank B with the following accrual maximums.

1. **Bank A**

An employee may only carry PTO hours in Bank A from one calendar year to the next calendar year based on the following maximums:

<table>
<thead>
<tr>
<th>District Seniority</th>
<th>Year-End Bank A Maximum Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 3 Years</td>
<td>160</td>
</tr>
<tr>
<td>4 to 9 Years</td>
<td>200</td>
</tr>
<tr>
<td>10 to 14 Years</td>
<td>240</td>
</tr>
<tr>
<td>15 or More Years</td>
<td>280</td>
</tr>
</tbody>
</table>

An employee may accrue unlimited PTO in Bank A during each calendar year. All PTO hours in Bank A over the employee’s maximum described in the chart above will be transferred on or about January 1st of each year to the employee’s Bank B.

2. **Bank B**

An employee may have an unlimited number of PTO in Bank B. However, employees may not voluntarily convert PTO A Bank hours to Bank B hours.

E. **PTO Compensation at Separation**

PTO in Bank A has the character of and is deemed to be accrued vacation leave time upon separation of employment. An employee will be paid for all PTO hours in the employee’s Bank A at the employee’s base pay rate at the time of separation. To the extent allowed by law, an employee may on a one-time basis convert up to 2,000 Bank B PTO hours to CalPERS service credit at the rate of .004 years of service for each day of unused PTO in Bank B. An employee will not be paid for and/or may not donate any
PTO hours in the employee’s Bank B upon separation and may only convert
that time to CalPERS’ service credit upon service retirement from the District.

F. **PTO Donation**

An employee may donate PTO from the employee’s Bank A to another District employee who has experienced an FMLA qualifying personal or family serious health condition that is not fully covered by the employee’s PTO and/or other District leave programs. The recipient employee must have exhausted all paid leave time before the recipient employee may accept donations. Any donated hours that remain in the recipient’s bank after the employee’s return to work from the qualifying illness or injury will be reimbursed to donating employees’ PTO banks on a prorated basis based on the amount of leave each employee donated.

G. **Return to Work Medical Certification**

The District may require a medical certification for any employee using PTO to verify a personal illness or injury after three (3) or more days of non-scheduled PTO. However, the District may require a medical certification if there is any suspicious use of personal and/or family non-scheduled PTO. The District will decide whether to require a medical certification from the employee’s healthcare provider or a healthcare provider selected and compensated by the District.

H. **Coordination with Workers’ Compensation**

An employee may use PTO in Bank A or Bank B to supplement workers’ compensation disability benefits. The combined workers’ compensation disability benefits and PTO may not exceed the employee’s regular rate of pay immediately before the work injury.

I. **Coordination with State Disability Insurance**

Employees receive State Disability Insurance (SDI) benefits via a payroll deduction which is expressly and irrevocably authorized without individual employee acknowledgements. An employee may use PTO in Bank A or Bank B to supplement SDI benefits. The combined SDI benefits and PTO may not exceed the employee’s base wage immediately before the non-work injury.
J. PTO Bank A Cash Out

Employees who have accrued one hundred and sixty (160) hours of PTO A may sell back hours beyond one hundred and forty (140) up to a maximum of ten (10) hours per calendar year.

Employees who have accrued two hundred (200) hours of PTO A may sell back hours beyond one hundred and sixty (160) up to a maximum of twenty (20) hours per calendar year.

Employees who have accrued two hundred and forty (240) hours of PTO A may sell back hours beyond two hundred (200) up to a maximum of thirty (30) hours per calendar year.

Employees who have accrued two hundred and eighty (280) hours of PTO A may sell back hours beyond two hundred and forty (240) up to a maximum of forty (40) hours per calendar year.

PTO Bank A Cash Out requests must be submitted on approved District forms and must be received by the Human Resources department commencing December 1st but no later than December 15th of each year. Eligible employees may elect to take the PTO A Cash Out in the form of cash, deferred compensation or a combination of the two.

Article 11 Miscellaneous Leaves

A. Leaves Contained in the Employee Handbook

Leaves other than PTO, probationary sick leave, military leave and paid administrative leave are memorialized in the Employee Handbook and those leave provisions are incorporated by reference into this MOU. Represented employees do not accrue FLSA compensatory leave time.

B. Executive Administrative Leave

The purpose of executive administrative leave is to provide leave for represented exempt employees because they do not receive compensation for overtime hours worked. Exempt employees accrue their entire year’s allotment of executive administrative leave hours on January 1 of each year. If an employee becomes eligible for exempt employee administrative leave after January 1, the participant receives a pro-rated number of leave hours,
based upon the date the employee becomes eligible. Executive administrative leave must be used within the calendar year in which it is earned. Unused executive administrative leave hours do not carry over from one calendar year to the next. Exempt employees represented by the Association receive eighty (80) hours of executive administrative leave on January 1 of each year.

**Article 12 Administrative Leave**

The District may place an employee in a paid administrative leave status with written notice to the employee. The written notice may require the employee to be available to be contacted by the District during hours the employee might work and/or to return to work for purposes of an investigation or emergency. The District will give the employee 24 hours’ notice that the paid administrative leave is ending and that the employee will return to the employee’s regular work schedule.

**Article 13 Military Leave**

Military Leave shall be granted and compensated in accordance with the provisions of the State of California Military and Veterans Code, Section 394 and 395, and pursuant to the Uniform Services Employment and Reemployment Rights Act (USERRA).

A copy of the official order(s) must be submitted to the District as soon as received by the employee for each leave request.

**Article 14 Holidays**

A. **Recognized Holidays**

1. January 1     New Year’s Day
2. Third Monday in January     Martin Luther King Jr.
3. Third Monday in February     President’s Day
4. Last Monday in May     Memorial Day
5. July 4     Independence Day
6. First Monday in September     Labor Day
7. Second Monday in October     Columbus Day
8. November 11     Veteran’s Day
9. Fourth Thursday in November     Thanksgiving
10. Fourth Friday in November     Day After Thanksgiving
B. Holidays Observed

When a recognized holiday falls on a Saturday, the recognized holiday shall be observed the preceding Friday. When a recognized holiday falls on a Sunday, the recognized holiday shall be observed the following Monday.

C. Holiday Compensation

Holiday pay shall be guaranteed and administered as follows:

(1) Regular part-time employees, who work at least 50% time, shall receive holiday pay on a pro-rata basis from the District.

(2) The District does not change the salaries of exempt employees during work periods that include paid holidays. Exempt employees are generally not required to work on holidays, except in unusual circumstances.

D. Personal Business Day

The Personal Business Day shall be granted for use on any work day (eight (8) hours) with prior supervisor approval. Approval will be granted if the District can maintain the desired level of public service without the employee. This day must be used during the calendar year or will be forfeited. If an employee resigns or is terminated and has not used his or her Personal Business Day, he or she will not be paid for the holiday.

Article 15 Expense Reimbursement

A. Personal Vehicle Use

When the District requires an employee to use the employee’s personal vehicle for District business, the District will reimburse the employee at the IRS mileage rate in effect at the time of the personal vehicle use.
B. **Training Expenses**

When an employee has been assigned or is required or mandated to receive training or attend a conference or seminar away from his/her normal workstation, or attend training that is offered by the District, the District will pay for reasonable expenses including meals, fees, tuition, transportation, lodging, bridge tolls, parking fees and other approved, related expenses.

C. **Professional Requirements**

The District will pay registration, certification, continuing education and licensing fees required for an employee’s current job except for a Class C driver’s license. This includes but is not limited to, registered engineers, water and wastewater treatment plant operators and supervisors.

**Article 16  Gifts and Nepotism**

A. **Gifts**

In the interest of holding to the highest standards of integrity and impartiality, employees shall not solicit nor accept favors or gifts from the public served by the District, or from persons who seek to sell goods or services to the District, or from other person or corporation. The only exception shall be an unsolicited, non-monetary gift of merchandise or other token of appreciation with a retail value of less than $25.00 per year.

B. **Nepotism**

1. **Definitions**

Nepotism is the direct or indirect hiring or supervision of one family member by another family member.

Family members include each employee’s husband, wife, domestic partner as defined by Federal and State law, children, dependents, brothers, sisters, grandfathers, grandmothers, aunts, uncles, cousins, nieces and nephews and all “step” and “in-law” relations associated with any of these family relations.

Hiring includes any participation in the hiring process, including but not limited to, review of employment applications and related documents,
determination of eligibility for employment, interviewing, testing, reference checking, review of medical testing results and review of probationary performance.

Supervision includes, but is not limited to, performance evaluation, coaching, training, day-to-day direction, promotion, discipline of any kind, employment termination for any reason, approving any type of leave and administering employment pursuant to this MOU, District policy and/or law.

2. Prohibition of Nepotism

The District prohibits nepotism in the hiring and supervision processes at all levels of leadership from first-line supervisors to elected officials. The District will not hire an existing employee’s family member if it cannot reasonably ensure that there has not been nepotism in the hiring process and will not be nepotism in the supervision process. The District will transfer or reassign – and if transfer or reassignment is not possible terminate – the least senior employee who has a family member in the employee’s chain of command, unless the District and the family members reach a mutually acceptable alternative solution that eliminates the nepotism.

Article 17 Appearance and Uniforms

A. Appearance

The District and the Association agree that conduct, dress and appearance of employees are important to the success of both. Therefore, employees will be neat in appearance and dress, wear their District uniform during work hours, and conduct themselves in accordance with reasonable standards of behavior. Employees will dress appropriately and consistent with the job site and location, job responsibilities, and safety issues or hazardous conditions that may exist.

B. Uniforms

The District will provide the following uniform and safety apparel on an as needed basis depending upon the work to be performed:

(1) Standard Issue: Rain Gear, Jacket with hood, Pants, T-shirts, Baseball Cap, Long Sleeve Shirt(s), Short Sleeve Shirt(s), Hard Hat, and Leather Gloves.
(2) Optional Issue: Knee Boots, Hip Boots, Rubber Gloves, Snow Boots, Disposable Coveralls, and Regular Gloves.

**Article 18 Off-Duty Work**

A. **Outside Employment Restriction**

   District employees will not engage in non-District employment of any kind which conflicts with District employment. District employees who engage in non-District employment should, but are not required to, inform the General Manager about their outside employment to determine if their outside employment conflicts with District employment. The General Manager may find that an employee’s non-District employment conflicts with the employee’s District employment 1) in writing and 2) based on an objective basis including, but not limited to, conflict with District work schedule, conflict between the nature of the employee’s District service and the non-District employment. Once the General Manager has approved an employee’s specific non-District employment the District may not subsequently withdraw that approval unless required to do so by law.

B. **Conflict of Interest**

   Employees of the District will not perform any task for another party when the other party has a current or pending relationship with the District involving a contract permit, license, etc.

C. **Use of District Equipment and/or Materials Not Authorized**

   At no time will an employee utilize District equipment or materials to perform non-EID work.

D. **Scheduling Conflicts**

   At no time will an employee arrange or accept outside work schedules which conflict with District needs or affects his/her work performance.

**Article 19 Safety Meetings**

Regular “tailgate” safety meetings will be held on a bi-weekly basis. Attendance is mandatory for those employees designated to attend, unless excused by the employee’s supervisor.
Article 20  Job Postings and Transfers

A.  Posting of Vacancies

When a unit job is to be filled and no eligibility list for that classification exists, the District shall post vacancy notices on all bulletin boards and a copy shall be emailed to the Association.

B.  Content and Period of Posting

Vacancy notices shall be posted for a period of at least five (5) working days and shall include the date of posting, the location of the job, the job description and the rate of pay.

C.  Applying for Vacancies

Employees may apply for vacancies on a District-provided application within the posting period. The District will consider the information provided by the employee on the application as well as any accompanying resume and cover letter. Applicants meeting the minimum qualifications for the job may participate in the next step in the hiring process.

D.  Notice of Vacancy Filled

Within two (2) working days after the vacancy is filled, the District shall post a notice regarding the disposition of the posted vacancy. The notice shall set forth the name of the successful applicant and a copy shall be sent to the Association.

E.  Involuntary Transfer

The General Manager may transfer an employee at any time from one position or location to another position or location in the same classification. The General Manager may order a transfer for the purposes of economy, efficiency or for reasons related to the best interests of the District with at least two weeks advance notice to the employee. The General Manager will review any written Association concern that a transfer may have been requested by a supervisor or manager for purposes of favoritism or to circumvent the competitive promotion process.
F. **Job Trade**

Two or more employees occupying the same classification may mutually agree to swap work assignments and/or work locations upon approval of the General Manager or his/her designee provided each employee meets the minimum qualifications for the new work assignment.

**Article 21  Reductions in Force**

A. **Layoff Plan**

When it becomes necessary for reasons of economy, lack of work, lack of funds, or for operational reasons to reduce the number of employees, the District shall prepare a layoff plan that addresses the particular situation in accordance with the procedures provided for in this Article. The District shall communicate its layoff plan to the affected employees and meet and confer with the Association at least four (4) weeks before implementation to negotiate the impacts of the layoffs.

B. **Layoff List**

1. The District shall prepare a layoff list by classification within each department. The District shall communicate the layoff list as part of its layoff plan to the Association’s bargaining representatives and the affected employees at least four (4) weeks before implementation.

2. No bargaining unit employee having regular status shall be laid off while employees working as contract, seasonal, temporary, provisional, part-time, retired annuitant, or probationary employees are retained in the same classification series or job family in the same Department as the regular employee to be laid off.

3. The order of layoff by classification shall be:

   First—contract, seasonal, temporary, part-time, and provisional employees;
   Second—retired annuitants;
   Third—probationers (excluding promotional probationary);
   Fourth—employees under a last-chance agreement and regular-status part-time employees;
Fifth—regular status full-time (including promotional probationary) employees based on Service Points composed of Seniority Points and Performance Points as follows:

**Seniority Points (50% weight):**

Employees shall be credited with one (1) Service Point for each completed year of seniority as defined in Section 9 of this MOU. Hours an employee is away from work under a District unpaid leave of absence shall not be counted towards seniority points unless required by law. For the purposes of this Section, PTO shall be counted as time served.

**Performance Points (50% weight):**

Employees shall be credited for Performance Points based on the total points they have scored on their performance evaluations and disciplinary history over the five (5) years preceding the layoff, calculated as follows.

<table>
<thead>
<tr>
<th>Performance Evaluation or Discipline</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below standards overall annual performance evaluation</td>
<td>0</td>
</tr>
<tr>
<td>Meets standards overall annual performance evaluation or no evaluation received</td>
<td>2</td>
</tr>
<tr>
<td>Exceeds standards overall annual performance evaluation</td>
<td>4</td>
</tr>
<tr>
<td>Written reprimand or final written reprimand</td>
<td>-1</td>
</tr>
<tr>
<td>Disciplinary unpaid suspension</td>
<td>-2</td>
</tr>
<tr>
<td>Disciplinary reduction in pay</td>
<td>-2</td>
</tr>
</tbody>
</table>
Disciplinary demotion

C. Contents of Layoff Notice

The General Manager shall give notice personally or in writing to the last known address to each employee affected by a layoff at least four (4) weeks prior to the effective date of such action. The notice shall include, at a minimum: (i) the reason(s) for the layoff; (ii) classifications or positions to which the employee may transfer or demote, if any; (iii) the effective date of the action; (iv) an explanation of reinstatement rights; and (v) an explanation of the employee’s appeal rights.

D. Bumping Rights

The employee with the fewest Service Points occupying the classification designated for layoff shall be the first laid-off from that classification. The bumping rights described below are limited in that an unrepresented employee may not bump a represented employee and a represented employee may not bump an unrepresented employee. An employee receiving a notice of layoff may bump an employee with less Service Points in the following order:

1. Displacing the employee with the fewest Service Points occupying the same classification in the employee’s Department.

2. Displacing the employee with the fewest Service Points occupying a classification within the employee’s Department in the same job family or classification series for which the employee is qualified or can become qualified before the effective date of the layoff.

3. Demoting or transferring to another classification within the unit in which the employee previously held regular status and for which the employee meets all current minimum qualifications, thus displacing the employee with the fewest Service Points working in that classification.
E. Reinstatement Rights

(1) The District shall continuously maintain a reinstatement list. Ranking on the reinstatement list shall be based on seniority.

(2) Subject to the limitations below, all laid off regular employees shall be automatically placed on the reinstatement list for two (2) years, during which time the employee shall be entitled to reemployment in any vacancy for which he or she is qualified or capable of becoming qualified before the effective date of hire.

(3) When a vacancy exists and employees are to be recalled, notice of the opening(s) shall be sent by certified mail to the last known address for each employee on the reinstatement list. Employees who fail to respond to the notice of the opening(s) within fourteen (14) calendar days shall forfeit their right to recall for that opening.

(4) If there are a greater number of employees responding to the notice of opening(s) than there are vacancies, employees shall be selected for reinstatement by competitive recruitment process. Preference shall be given to employees who have previously held regular status in the vacant position, or in a position in the same job family or classification series. Thereafter, preference shall be given to more senior employees.

(5) Any reinstated employee shall serve an initial probationary period as specified in Article 2 (Probation) if hired into a position for which the employee has not previously attained regular status.

(6) Reinstated employees shall be subject to a pre-employment medical examination and drug screen.

F. Dispute Resolution

When the Association and the District cannot agree upon whether the District’s layoff plan conforms to the criteria found in this Article, the dispute shall be submitted to a mutually agreed upon expert in labor relations appointed to make a recommendation on the matter to the General Manager. The cost of the labor relations expert shall be shared equally by the Association and the District. If the dispute remains unresolved, it may
be submitted under the grievance procedure contained at Article 24 of this Agreement.

G. Classification Series and Job Family

(1) For the purposes of this Agreement, classification series means a grouping of two or more job classifications performing the same kind of work but with ascending levels of difficulty and complexity.

(2) For the purposes of this Agreement, job family means an occupational area within a department not limited to a classification series. In a job family, the same or relatively similar work is performed, a similar skill set is required, and it is possible to move within the family with minimal training.

Article 22 District Rights

Except as specifically abridged, delegated, granted or modified by this Memorandum of Understanding, or any supplemental agreements that may hereafter be made, all the rights, powers and authority the District has prior to the signing of this Memorandum of Understanding, are retained by the District, and remain exclusively and without limitation within the rights of management which are not subject to grievance procedure and/or arbitration. The rights retained as exclusive District rights include, but are not limited to the following rights provided, however, the exercise of these rights does not preclude employees and the Association from consulting or raising grievances about practical consequences that decision on these matters may have on wages, hours, and other terms and conditions of employment:

A. Determine its mission and the mission of its constituent departments;

B. Set standards and levels of service;

C. Determine the procedures, qualifications and standards of selection or employment and promotions;

D. Establish, modify, determine, or eliminate job classifications, class titles, and the proper inclusion or assignment of District positions into such classifications;
E. Direct and supervise the work of its employees, including the right to require overtime, to hire, promote, demote, transfer, suspend and discipline or discharge employees;

F. Determine the methods and means to relieve its employees from duty, including but not limited to furloughs and layoffs, because of lack of work, lack of funds, fiscal emergency, operational needs, or other lawful reasons;

G. Maintain the efficiency of District operations;

H. Determine the methods, means and numbers and kinds of personnel by which District operations are to be conducted;

I. Determine the content, intent and titles of job classifications;

J. Determine and set methods of financing, adoption of budgetary and financial plans that support the sustainability of District operations and the right to operate in a fiscal emergency;

K. Determine style and/or types of District-issued wearing apparel;

L. Determine and/or change the facilities, methods, technology, means, organizational structure and size and composition of the work force;

M. Determine and change the number of locations, relocation and types of operations, processes and materials to be used in carrying out all District functions including, but not limited to, the right to contract for or subcontract any work or operations of the District;

N. Assign work to and schedule employees in accordance with requirements as determined by the District and to establish and change work schedules and assignments upon reasonable notice;

O. Establish and modify productivity and performance programs and standards including determination of meritorious service and rewards therefore;

P. Plan, organize, direct and control all operations;
Q.  Make such changes as are required by law during the contract period; and

R.  Prepare for and declare both an emergency or fiscal emergency and operate in such a status, as determined solely by the Board.

**Article 23  Association Rights**

A.  **Access**

(1) Association representatives shall be granted access at times that do not interfere with District operations and/or any work in progress to areas, except restricted areas, in which District employees work. Association representatives will provide reasonable notice of visits to the District and comply with District visitor and behavior policies.

(2) Association representatives and members shall be granted use, without charge, of District buildings and facilities at reasonable times for Association matters. Except for normal wear and tear, the Association shall be responsible for any damage to District property caused by such use.

(3) The Association shall be granted use, without charge, of reasonable space on any District bulletin boards for Association matters. The Association may provide additional bulletin boards for placement in areas where District-supplied bulletin boards are not available. Placement of Association provided bulletin boards shall be decided by mutual agreement. The District may remove posted notices that are obscene and/or defamatory and shall promptly notify the Association of such removal. The District may remove posted notices of a political nature, unrelated to internal Association elections or business after first consulting with the Association. Only reasonable use of employer equipment, materials or supplies shall be permitted for the preparation, reproduction, or distribution of notices, during regular working time.

(4) The Association shall be granted use, without charge, of any District interoffice communications systems for transmission of
information concerning Association matters. Such use shall not extend to use of the U.S. Mail. Electronic communications must comply with the District’s electronic devices policy.

(5) The Association shall be granted review, at reasonable times, of any public material in the possession of the District.

B. **Voluntary Dues Deduction**

(1) Bargaining unit employees may sign up for payroll deductions of Association dues, fees, and assessments with the Association. Any voluntary initiation fee, periodic dues, and general assessments of the Association shall be authorized and collected from Association members by payroll deduction and distributed to the Association on a biweekly basis pursuant to California law.

C. **Paid Release Time**

(1) As required by Government Code 3505.3, the District will allow a reasonable number of Association employee representatives reasonable time off without loss of compensation or other benefits when they are participating in any one of the following activities:

a. Formally meeting and conferring with representatives of the District on matters within the scope of representation including negotiations for a successor MOU, side-letter to an MOU, disciplinary due process and appeal meetings and hearings, and informal and formal grievance resolution meetings;

b. Testifying or appearing as the designated representative of the Association in conferences, hearings, or other proceedings before the Public Employment Relations Board, or an agent thereof, in matters relating to a charge filed by the Association or its member(s) against the District or by the District against the Association.
c. Testifying or appearing as the designated representative of the Association in matters before a personnel or merit commission.

(2) Association employees requesting release time will provide reasonable notification to the District.

(3) For the purposes of this section, “designated representative” means an officer of the Association or a member serving in proxy of the Association.

(4) The District and Association agree that a reasonable number of Association members who can participate on paid release time in formal negotiations with District representatives will not exceed five (5). On duty employees are responsible for reporting back to work promptly after the conclusion of any formal meet and confer sessions and approved caucuses.

**Article 24 Grievances**

A. Definitions

A grievance is an allegation that the District did not comply with a provision of this MOU, the Employee Handbook or a past-practice as defined by Article 29 and violated one or more employee’s rights provided by the MOU provision, the Employee Handbook and/or past-practice as defined and limited by Article 29.

A grievant is an employee and/or the Employee Association alleging a grievance.

The grievant may not grieve hiring or promotion decisions, disciplinary actions, performance evaluations, any issue that is not a negotiable subject concerning employee wages, hours or working conditions or any exercise of District Rights under Article 22.

B. Process

The District and grievant shall seek to resolve any and all grievances at the lowest level possible.
1. Informal Grievance Process

The employee grievant must notify the employee’s immediate supervisor within ten (10) work days of when the employee knew or should have known that the District violated the employee’s rights under the MOU. The employee must notify the supervisor of the MOU article at issue and the employee’s specific injury. The supervisor shall meet with the employee, investigate the alleged grievance, and provide the employee a response within fifteen (15) work days of the employee’s notice.

2. Formal Grievance Process

The employee and/or Employee Association grievant may advance the grievance to the formal process if the employee is not able to resolve the grievance using the informal grievance process.

Step 1. Written Grievance

The employee and/or Employee Association grievant must submit the grievance in writing to the District’s Human Resources Director within ten (10) work days of receiving the immediate supervisor’s response under the informal grievance process. The written grievance must identify:

1) The employee or employees harmed by the alleged violation(s),
2) The MOU article, handbook section and/or past-practice allegedly violated,
3) The action which allegedly violated the specified MOU article, handbook section and/or past-practice,
4) The specific injury to one or more employees caused by the alleged violation,
5) The date of the alleged injury,
6) The remedy sought by the grievant,
7) The identity of the Employee Association’s representative if any,
8) The date of submittal to the Human Resources Director, and
9) The grievant’s signature.

The Human Resources Director will conduct whatever review of the grievance the Director deems necessary to respond to the grievance. This includes but is not limited to, one or more meetings with the grievant, one or more meetings with District employees and review of bargaining history.
The grievant may submit information, evidence, statements from other employees and written comment to the Human Resources Director which will be reviewed as part of the Step 1 process.

The Human Resources Director may offer proposed solutions to the grievance to the Employee Association during the review process. The Human Resources Director will provide a formal written response to the grievant within fifteen (15) work days of receiving the written grievance unless the parties have already resolved the grievance or the Human Resources Director needs additional time to review the grievance.

Step 2. Mediation

If the grievance is not resolved at Step 1, the Employee Association must submit to the Human Resources Director a written request for mediation within ten (10) work days of receiving the Human Resources Director’s formal written response to the grievance. The District will thereafter secure the services of a professional mediator from the State of California Mediation and Conciliation Service (“CMCS”) or other agreed-upon source. The mediator, grievant and Human Resources Director shall schedule a mutually satisfactory time to meet at the District’s headquarters to mediate the grievance. The parties shall mediate the grievance in good faith, including but not limited to submitting relevant information to the mediator and other party, discussing the grievance in a professional manner during the mediation and seeking the plain meaning of the MOU article at issue.

Step 3. Administrative Law Judge Hearing

If the grievance is not resolved at Step 2, the Employee Association must submit to the Human Resources Director a written request for an evidentiary hearing within ten (10) work days of the mediation. The District will thereafter secure the services of an Administrative Law Judge (ALJ) from the California Office of Administrative Hearings (OAH) who will conduct an evidentiary hearing under the California Administrative Procedures Act (APA). The parties shall conduct the evidentiary hearing in good faith. The appeal hearing is informal and is not subject to the technical rules of evidence. The parties may stipulate to facts, the admission of exhibits and other matters to speed the hearing process. At the conclusion of the evidentiary hearing, the ALJ shall prepare an advisory ruling and submit
it to the District’s General Manager. The parties will each pay half of the ALJ’s fee.

Step 4. General Manager Review

The General Manager or the General Manager’s designee will receive and review the ALJ’s advisory ruling and a copy of the record developed during the evidentiary hearing process and will conduct whatever review of the grievance the General Manager or designee deems necessary to make a final determination. This includes but is not limited to, one or more meetings with the grievant, one or more meetings with other District employees and review of bargaining history.

The General Manager or designee may offer proposed solutions to the grievance during the review process. The General Manager or designee will provide a formal written response to the grievant within fifteen (15) work days of receiving the written request for a final determination unless the parties have already resolved the grievance or the General Manager or designee needs additional time to make a final determination.

C. Grievant’s Rights

A grievant may obtain assistance from a representative of the grievant’s choice with the filing and presentation of a grievance at any stage of this procedure.

No grievant shall be subject to restraint, coercion or reprisal as a result of filing a grievance under this procedure or participating in the grievance process.

A grievant may request that the District extend a deadline under this Article. The District’s agreement to extend any deadline must be in writing.

D. District Grievance Rights

The District may obtain assistance from a representative of the District’s choice with the review and response to a grievance at any stage of this procedure.
The District is not required to review and/or respond to a grievance that is untimely at any stage of the Informal Grievance Process and/or Formal Grievance Process.

The District may request to extend its deadline to act under this Article as necessary to seek to resolve, review or respond to the grievance. The Employee Association’s agreement to extend any deadline must be in writing.

**Article 25 Discipline**

A. **Grounds for Discipline**

The District has the right to discipline any employee for any of the following grounds:

1. Dishonesty.
2. Insubordination.
3. Misuse and/or theft of District property.
4. Being under the influence of drugs and/or alcohol at work.
5. Incompetence.
6. Misuse and/or excessive use of PTO and/or any other leave.
7. Harassment, discrimination and/or retaliation.
8. Failure to perform work as required.
9. Unsafe actions.
10. Violence and/or threats of violence.
11. Unlawful actions.
12. Violation of any provision of the Employee Handbook and/or any other District MOU, policy, procedure and/or rule.
13. Outside employment that conflicts with District employment.
15. Strikes, work stoppages and/or work slowdowns.
16. Refusal to work a scheduled shift and/or overtime.
17. Encouraging and/or ordering another employee to engage in misconduct.
18. Conducting outside employment during District work hours.
19. Horseplay during work hours and/or on District property.
20. Fraud.
21. Submission of a false and/or inaccurate timecard.
22. Failure to timely provide notice of leave.
(23) Any other action which harms the District, a customer, a District contractor and/or another District employee.

B. Disciplinary Penalties

The District may impose discipline on a progressive basis for any disciplinary ground. Progressive discipline means that the penalty for misconduct will usually begin with a lower-level penalty and progress to higher-level penalties for subsequent violations. However, the District may impose any penalty up to and including employment termination within its lawful discretion for any disciplinary ground.

The District may impose the following disciplinary penalties:

(1) Verbal reprimand.
(2) Written reprimand.
(3) Unpaid Suspension.
(4) Reduction in pay and/or wage step.
(5) Demotion with or without eligibility to promote in the future.
(6) Termination without right of rehire to the District.

The District may impose any other penalty and/or corrective action within its lawful discretion in addition to or instead of those included in the list of progressive penalties. Disciplinary actions are documented and placed in employee personnel files. The District will not characterize a disciplinary document as both a reprimand and a monetary disciplinary action.

C. Disciplinary Appeals

1. Appeals for Lesser Disciplinary Actions

An employee receiving a written reprimand, reduction in pay equal to or less than three work days pay, suspension without pay equal to or less than three work days and/or any other non-monetary written disciplinary penalty may, within ten (10) working days, appeal the disciplinary action to the employee’s department head or the department head’s designee. The appeal shall constitute an opportunity to be heard by the department head or designee and receive from the department head or designee of a written ruling on the appeal within thirty (30) work days, unless the response deadline is extended by mutual agreement. An employee may submit a
written response to the notice of intent to discipline instead and/or in addition to having an in-person appeal meeting.

2. Appeals for Major Disciplinary Actions

An employee receiving a disciplinary penalty that includes a reduction in pay of more than three work days pay, suspension without pay of more than three work days, demotion and/or termination will receive the following due process.

a. Pre-Disciplinary Due Process

Step 1: Notice of Intent to Discipline

The District will provide a written notice of intent to discipline to the employee which shall include: 1) description of the proposed disciplinary penalty, 2) identification of the grounds for discipline, 3) description of the employee’s misconduct, 4) identification of the evidence upon which the proposed discipline is based, and 5) description of the employee’s pre-disciplinary Skelly meeting rights, including the date of the Skelly meeting, which shall be scheduled no earlier than ten (10) work days following the date on which the disciplinary notice is received by the employee, unless an earlier date is mutually agreed upon.

Step 2: Pre-Disciplinary Presentation

The Skelly meeting shall be heard by the employee’s department head or the department head’s designee unless the department head investigated the alleged misconduct, is a witness to the misconduct and/or is a victim of the misconduct. If the department head is disqualified from hearing the employee’s pre-disciplinary appeal, the Skelly meeting shall be heard by the General Manager’s designee. A Skelly meeting hearing officer designated by a department head or the General Manager may be another District employee or a non-District employee.

The Skelly meeting is not an evidentiary appeal hearing and shall be afforded to the employee to the extent required by law. The Skelly meeting may be audio recorded by the District and/or employee. An employee may submit a written response to the notice of intent to discipline instead and/or in addition to having a Skelly meeting.
b. Post-Disciplinary Due Process for Major Unpaid Suspensions, Major Disciplinary Reductions in Pay and Disciplinary Demotions

Step 1: Notice of Discipline

After completion of pre-disciplinary due process, if the District decides to impose discipline on the employee, the District will provide a written notice of discipline to the employee which shall include: 1) description of the disciplinary penalty, 2) identification of the grounds for discipline, 3) description of the employee’s misconduct, 4) identification of the evidence upon which the proposed discipline is based, and 5) description of the employee’s post-disciplinary appeal right.

Step 2: Employee Appeal

Within ten (10) work days of service of the notice of discipline the employee may request a post-disciplinary appeal hearing by submitting a written appeal to the General Manager.

Step 3: Appeal Hearing

Following receipt of the employee’s written appeal, the District shall contract the California Office of Administrative Hearings to schedule the employee’s post-disciplinary appeal hearing with an Administrative Law Judge.

The issues to be addressed by the Administrative Law Judge are 1) does a preponderance of evidence prove the grounds for discipline and 2) does the penalty imposed constitute an abuse of discretion by management.

The appeal hearing is informal and is not subject to the technical rules of evidence. The District and the employee may have a representative of their choice, may present witnesses, cross-examine witnesses and submit written and/or other physical evidence. The District has the burden of proving the grounds for discipline and the employee has the burden of proving any affirmative defenses. The District has the right to present a rebuttal case. The appeal hearing shall be memorialized by a certified court reporter.
Following the presentation of evidence, each party may submit a verbal or written closing argument. Closing arguments should include proposed findings of fact and argument concerning the two issues to be addressed by the Administrative Law Judge. Written closing arguments shall be received by the Administrative Law Judge based on a schedule that is discussed with the parties. The District has the right to submit a rebuttal closing argument.

After the hearing and post-hearing argument process is complete, the Administrative Law Judge shall submit to the District’s Board: 1) findings of fact, 2) a recommendation as to whether the preponderance of the evidence proves the grounds for discipline and 3) a recommendation as to whether the penalty imposed constitutes an abuse of discretion by management. The General Manger shall simultaneously forward copies of the Administrative Law Judge’s submittal to the employee and District official who prosecuted the disciplinary action.

The District shall pay one hundred percent (100%) of the Administrative Law Judge’s fee and the parties will each pay fifty percent (50%) of the certified court reporter’s fee. Each party may request a copy of the transcript of the appeal hearing at its own cost.

Step 4: District Board Ruling

The District’s Governing Board shall meet in closed session to review the submittal from the Administrative Law Judge, the parties’ closing arguments to the Administrative Law Judge, any written, and/or to the extent allowed by the Brown Act, verbal argument from the employee and/or management commenting on the Administrative Law Judge’s submittal, and the evidentiary record of the appeal. The Governing Board shall issue a final written administrative decision which shall include: 1) findings of fact, 2) a determination as to whether the preponderance of the evidence proves the grounds for discipline and 3) a description of the penalty, if any, imposed by the Board.

The Governing Board may have legal counsel independent of the District’s representative at the administrative appeal to assist the Governing Board with preparation of the final ruling.
The Governing Board’s final written administrative decision is subject to timely superior court administrative mandamus review.

c. Post-Disciplinary Due Process for Employment Terminations

Step 1: Notice of Discipline

After completion of pre-disciplinary due process, if the District decides to impose termination on the employee, the District will provide a written notice of discipline to the employee which shall include: 1) description of the disciplinary penalty, 2) identification of the grounds for discipline, 3) description of the employee’s misconduct, 4) identification of the evidence upon which the proposed discipline is based, and 5) description of the employee’s post-disciplinary appeal right.

Step 2: Employee Appeal

Within ten (10) work days of service of the notice of discipline the employee may request a post-disciplinary appeal hearing by submitting a written appeal to the General Manager. The employee may request arbitration, or an ALJ advisory hearing with a final decision by the District’s Governing Board as described in steps 3 and 4 of subsection C(2)(b) above.

Step 3: Appeal Hearing

Following receipt of the employee’s written appeal requesting arbitration, the District shall request a list of seven arbitrators from the California State Mediation and Conciliation Service (CSMCS). The parties may select an arbitrator from a list from CSMCS or stipulate to an arbitrator. The District and Association shall each pay fifty percent (50%) of both the Arbitrator’s fee and the certified court reporter’s fee.

The issue to be addressed by the Arbitrator is whether there is just cause for the discipline imposed on the employee and, if not, what remedy if any is appropriate.

The arbitration hearing is informal and is not subject to the technical rules of evidence. The District and the employee may have a representative of their choice, may present witnesses, cross-examine witnesses and submit written and/or other physical evidence. The District has the burden of
proving the grounds for discipline and the employee has the burden of proving any affirmative defenses. The District has the right to present a rebuttal case. The appeal hearing shall be memorialized by a certified court reporter.

Following the presentation of evidence, each party may submit a verbal or written closing argument. Closing arguments should include argument concerning the two issues to be addressed by the arbitrator. Written closing arguments shall be received by the arbitrator based on a schedule that is discussed with the parties. The District has the right to submit a rebuttal closing argument. The arbitrator’s ruling shall be final.

Article 26  Contracting Out

Should the District decide to contract-out a current service which results in the layoff of one or more employees, it will notify the Association in advance of implementation of the layoff(s) and, if requested within five (5) days, meet and confer over the impacts of the layoff(s). The parties shall meet and confer as needed until reaching agreement on impacts during the four-week layoff notice period. Either party may declare impasse during or at the end of the four-week layoff notice period and the impasse procedure will then be invoked. Nothing in this Agreement shall prevent the District from implementing its decision to contract-out on schedule, implementing the lay-off(s) on schedule or assigning the subject employee(s) at their current pay rates to other work while the impacts meet and confer process is underway.

Article 27  Strikes and Lockouts

There shall be no strikes, slowdown, or stoppages of work by the Association, or by the employees, and there shall be no lockouts by the District during the term of this Memorandum of Understanding because any such actions may threaten the public health.

Article 28  Labor Management Communication

Management representatives from the District’s departments will meet approximately once per month during regular work hours with a proportional number of employees subject to this MOU and other exclusive representative units, including representatives of the Association’s Executive Board, to discuss any matter relevant to labor-management relations. The
Association shall select its member participants. Unrepresented employees may also participate in LMC meetings. Meeting locations will rotate to various District work sites. Subjects that may be discussed include but are not limited to, District finances, employment policies and practices, training, safety, security, public relations or service-level issues. The purpose of these meetings is to provide an open communication forum for employees and managers. These meetings are not meet and confer labor negotiation meetings. All participants shall conduct themselves in a professional manner. Employees shall attend meetings on paid time.

**Article 29  Full Understanding, Modification and Waiver**

A. **Full Understanding**

   It is intended that this Agreement sets forth the full and entire understanding of the parties regarding the matters set forth herein and all other topics subject to bargaining, and therefore any other prior or existing understanding or Agreement by the parties, whether formal or informal, written or unwritten, regarding such matters is hereby superseded or terminated in its entirety.

B. **No Interim Bargaining**

   It is agreed and understood that during the negotiations which culminated in this Agreement, each party enjoyed and exercised without restraint, except as provided by law, the right and opportunity to make demands and proposals or counter-proposals with respect to any matter subject to bargaining and that the understandings and agreements arrived at as a result of the exercise of that right are set forth in this Agreement. The parties agree, therefore, that the other shall not be required to negotiate with respect to any subject or matter, whether referred to or not in this Agreement during the term of this Agreement unless either party requests bargaining due to: 1) a change in law and/or legal judgment directly altering a provision of this Agreement or 2) a State mandate requiring a transfer of District funds to the State enacted into law following January 1, 2019.

C. **Modification**

   Any agreement, alteration, understanding, waiver or modification of any of the terms or provisions contained in this Agreement shall not be binding on the parties unless made and signed in writing by all of the parties
to this Agreement, and if required, approved and implemented by the District’s Board of Directors.

D. **Waiver**

The waiver of any breach, term or condition of this Agreement by either party shall not constitute a precedent in the future enforcement of all its terms and provisions. Regarding matters not covered by this Agreement, the Association agrees that it has specifically waived any further right to bargain during the term of this Agreement on any subject discussed in bargaining or listed in the District Rights clause.

E. **Superseding Effect of Agreement**

This Memorandum of Understanding takes precedence over any conflicting District policy or rule. The definition of a past practice is one that is unequivocal; clearly enunciated and acted upon; and readily ascertainable over a reasonable period of time as a fixed and established practice.

**Article 30  Severability of Provisions**

Should any Section, Clause or Provision of this Memorandum of Understanding be declared illegal by final judgment of a court of competent jurisdiction, such invalidation of such Section, Clause or Provision shall not invalidate the remaining portion hereof, and such remaining portions shall remain in full force and effect for the duration of this Memorandum of Understanding.

**Article 31  Duration of Agreement**

This Memorandum of Understanding between the District and the Association shall become effective following ratification by the Board of Directors and the Association membership and shall continue in full force and effect until midnight, December 31, 2021, at which time it shall expire in its entirety. Except as otherwise provided in this MOU, either party may give written notice to the other party ninety (90) days prior to the expiration of this MOU requiring commencement of negotiations on a successor MOU. The parties shall begin meeting and conferring as soon as reasonably possible after such notice has been given.
IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding effective January 1, 2019, through December 31, 2021.

### Association of El Dorado Irrigation District Employees

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<tr>
<td>Elizabeth Dawson</td>
<td>Jim Abercrombie</td>
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<td>Its: President</td>
<td>Its: General Manager</td>
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<tr>
<td>Jennifer Downey</td>
<td>Brian D. Poulsen</td>
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<tr>
<td>Its: Vice President</td>
<td>Its: General Counsel</td>
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<tr>
<td>Michael Brink</td>
<td>Mark Price</td>
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<tr>
<td>Its: Secretary</td>
<td>Its: Director of Finance</td>
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<tr>
<td>Jason Warden</td>
<td>Jose C. Perez</td>
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<tr>
<td>Its: Executive Board Member</td>
<td>Its: Human Resources Manager</td>
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<tr>
<td>Mathew Heape</td>
<td>Daniel Corcoran</td>
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<td>Its: Operations Director</td>
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### El Dorado Irrigation District

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<td>Liebert Cassidy Whitmore</td>
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<td>Kim Gillinghan</td>
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### Appendix A

**EL DORADO IRRIGATION DISTRICT**  
**2019 CLASS/PAY LISTING**  
**MANAGERS AND SUPERVISORS ASSOCIATION CLASSIFICATIONS**

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EL DORADO IRRIGATION DISTRICT

Subject: Consideration to adopt a Mitigated Negative Declaration for the El Dorado Irrigation District Vegetation Management Project, Project Nos. Grant12.01, Grant13.01 and Grant14.01.

Previous Board Action
October 22, 2018 - Board adopted Resolution Nos. 2018-015, 2018-016, and 2018-017 approving agreements for three grants awarded to EID by the California Department of Forestry and Fire Protection (Cal Fire) to conduct hazardous fuels reduction work at EID facilities.

Board Policies (BP), Administrative Regulations (AR), and Board Authority
BP 5050 Watershed Management

Prior to approving a project, EID must consider the potential environmental effects as required by the California Environmental Quality Act (CEQA), CEQA Guidelines, and EID’s procedures for implementing CEQA.

Summary of Issue
Staff is requesting that the Board adopt a Mitigated Negative Declaration (MND) for EID’s Vegetation Management Project (Project) to satisfy the requirements of CEQA. The Project involves a combination of mechanical mastication and hand treatments to reduce fuel loads at four different EID facilities: Weber Reservoir, Sly Park Recreation Area, Camp 5, and Flume 46. Prior to approving the Project, EID must consider the potential environmental impacts of implementing the Project under CEQA. Staff has evaluated the potential impacts of the Project in the attached Initial Study (IS). Staff recommends that the Board adopt the MND and the accompanying Mitigation Monitoring and Reporting Program (MMRP) to satisfy the requirements of CEQA.

Background/Discussion
On September 25, 2018, EID received three grants totaling $1,963,005 from Cal Fire under the California Climate Investments Fire Prevention Grant Program to conduct hazardous fuels reduction work at District facilities. The Project would implement vegetation management activities on approximately 522 acres at four facilities to reduce the risk of wildfire: Weber Reservoir (365 acres), Sly Park Recreation Area (118 acres), Camp 5 Maintenance Yard (20 acres), and Flume 46 on the El Dorado Canal (26 acres). Vegetation management would be accomplished through a variety of treatments and prescriptions such as mechanical mastication and hand treatments, removal of fuel ladders, and tree removal and pruning to inhibit vertical fire spread and the potential for crown fire. The Project is scheduled for bidding in July of 2019 and staff anticipates presenting a contract or contracts for Board consideration in September 2019. The Camp 5 and Flume 46 sites have been prioritized and work at these sites is scheduled to start in the fall of 2019. Work at Weber Reservoir and Sly Park is scheduled to start in the fall of 2020 and extend through the end of the grant period in March 2022.

Environmental Review
EID, as lead CEQA agency, has reviewed and evaluated the Project in the attached IS/MND (Attachment A). Where potentially significant environmental impacts of the Project were identified, mitigation measures were developed to reduce potentially significant impacts to levels that are less-than-significant. The potential impacts and associated mitigation measures are summarized in the MMRP (Appendix D of the IS/MND).
The IS/MND for the Project was circulated for a 30-day public review period from June 10, 2019 to July 10, 2019. Public notice was provided as follows: State Clearinghouse, interested parties, 46 single-family residences and other property owners adjacent to the Project areas, Rancho del Sol Home Owner’s Association, Rancho del Sol Fire Safe Council, Camino Elementary School, responsible and trustee agencies, Mountain Democrat, El Dorado County Recorder-Clerk, EID website, local libraries, EID headquarters, and at the four Project sites.

During the IS/MND public review period, EID received comments from three agencies: Cal Fire, California Department of Fish and Wildlife (CDFW), and Central Valley Regional Water Quality Control Board. No comments received identified any new, significant potential environmental effects. The correspondence received and staff’s responses to comments are provided in Attachment B.

In order to address comments from the CDFW, EID made minor changes to the text of Mitigation Measure BIO-2: Conduct Pre-Construction Surveys for Raptors and Migratory Birds. The revised mitigation measure is equivalent to or more effective than the previous mitigation measure. The revised measure would require additional actions by EID and would not cause any new potentially significant effect on the environment. No recirculation of the proposed MND is required because the changes to the mitigation measure are incorporated into the project approval.

Staff recommends the Board adopt the MND/MMRP. Adoption of the MND/MMRP does not commit EID to proceed with the Project. Rather, adoption of the MND/MMRP demonstrates that the Board has considered the MND/MMRP and comments received prior to approving the Project.

**Board Options**

**Option 1:**
- Adopt the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
- Make the following findings pursuant to the California Environmental Quality Act:
  - Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
  - The Mitigated Negative Declaration reflects EID’s independent judgment and analysis.
  - The revised mitigation measure (BIO-2) is equivalent to or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.
  - Specify that documents or other material, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at El Dorado Irrigation District Headquarters.
- Approve the Project in accordance with the California Environmental Quality Act.

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

**Option 3:** Take no action.

**Recommendation**

Option 1
Attachments
Attachment A: Initial Study/Mitigated Negative Declaration
Attachment B: Comment Letters and the District’s Responses

Doug Venable
Environmental Review Analyst

Brian Deason
Environmental Resources Supervisor

Dan Gibson
Hydroelectric Manager

Greg Hawkins
Parks and Recreation Manager

Dan Corcoran
Operations Director

Brian Mueller
Engineering Director

Elizabeth Leeper
Deputy General Counsel

Jim Abercrombie
General Manager
INITIAL STUDY / MITIGATED NEGATIVE DECLARATION – EL DORADO IRRIGATION DISTRICT VEGETATION MANAGEMENT PROJECT

Direct Website Link: https://www.eid.org/home/showdocument?id=12771
Response to Comments on the Initial Study/Mitigated Negative Declaration

El Dorado Irrigation District
Vegetation Management Project

El Dorado Irrigation District
July 2019
Response to Comments on the Initial Study/Mitigated Negative Declaration

El Dorado Irrigation District

Vegetation Management Project

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA, 95667

Contact:
Doug Venable
Environmental Review Analyst
(530) 642-4187

July 2019
# Contents

**Response to Comments** .............................................................2

1.1 Introduction ..................................................................................2

1.2 Comments and Responses ..........................................................2

1.2.1 California Department of Forestry and Fire Protection .................2

1.2.2 California Department of Fish and Wildlife ................................3

1.2.3 Central Valley Regional Water Quality Control Board .................4

1.3 Revisions to the Proposed Mitigated Negative Declaration ..................9

1.4 Comment Letters ......................................................................12
1.1 Introduction

The El Dorado Irrigation District (EID or District) received comments on the Initial Study/Mitigated Negative Declaration (IS/MND) for the EID Vegetation Management Project (Project) from three agencies:

- California Department of Forestry and Fire Protection (Cal Fire)
- California Department of Fish and Wildlife (CDFW)
- Central Valley Regional Water Quality Control Board (CVRWQCB)

1.2 Comments and Responses

1.2.1 California Department of Forestry and Fire Protection

Comment 1

Email received from Michael McGuirt, Senior State Archeologist with Cal Fire

On the basis of my review of your June 2019 draft Initial Study/Mitigated Negative Declaration, El Dorado Irrigation District Vegetation Management Project (MND) and recent correspondence between you and I, I am presently unable to concur in EID’s finding that the implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the potentially significant impacts of the proposed projects on cultural resources to a less than significant level (p. 3-58, MND). The project description in the MND and the cultural resources inventory information in that document are an insufficient evidentiary basis for CAL FIRE’s Cultural Resources Program to be able to concur in your finding. As the pass-through agency for CCI Fire Prevention grant funds and a responsible agency under CEQA, our Cultural Resources Program will not object to EID’s adoption of this draft MND, as the document relates to the consideration of cultural resources and tribal cultural resources.

Response 1

Comment noted. District staff attempted to contact the commenter for clarification of this comment. No response was received. When unable to contact the commenter directly, Staff consulted with the local Cal Fire contact for the Project, who advised EID to proceed with the Project. Mitigation measures CUL-1 and CUL-2 are standard measures that the District implements to reduce or avoid impacts to undiscovered historic properties, undiscovered archaeological resources, and undiscovered burials. The findings in Section 3.5 of the MND conclude that implementation of these mitigation measures would reduce potential effects to these resources to a less than significant level. Additionally, the commenter does not provide
or specifically refer to readily available information and does not explain the relevance of evidence to support their comment. Therefore, no further response required.

1.2.2 California Department of Fish and Wildlife

Comment 1

Invasive Plants

Invasive plant species can significantly degrade wildlife habitat by crowding out native species. Vegetation management activities can often spread invasive plant infestations to previously un-infested areas by carrying seeds and plant fragments on equipment and clothing. Because many invasive plants are adapted to growing in disturbed areas, removal of existing vegetation often creates favorable conditions for invasives to germinate and become established. In order to minimize the risk of spreading invasive plants, the Department recommends that the District prepare and implement a plan to implement vegetation management activities in a manner that prevents the introduction, transfer, and spread of invasive species from one work site to another. The California Invasive Plant Council has developed a list of Best Management Practices for land managers which may be ordered or downloaded here: https://www.cal-ipc.org/resources/library/publications/landmanagers/.

Response 1

EID is also concerned about the spread and establishment of invasive plant species. To help minimize the potential spread of invasive plants, the contract documents for the Project include requirements for all off-road equipment to be washed and free of invasive plants and other debris that could contain plant matter before entering the project area. The contract documents also require visually inspections of all off-road equipment for soil, seed, and other such debris before entering the project area.

Item 8 in Exhibit D - General Specifications Applicable to all Projects states:

Washing Equipment. In order to prevent the spread of invasive plants into the Project Area, Contractor shall be required to clean all off-road equipment prior to entry on to the Project Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only equipment so cleaned and inspected by the District will be allowed to operate within the Project Area. All subsequent move-ins of equipment to the Project Area shall be treated in the same manner as the initial move in. “Equipment” includes all mastication and chipping machinery, except for service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

Contractor shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of invasive plants. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.
Nesting Bird surveys

Migratory non-game native bird species are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish & G. Code also afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish & G. Code or any regulation made pursuant thereto; section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish & G. Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Mitigation Measure BIO-2 requires a nesting bird survey prior to removing vegetation if vegetation is removed between February 15 and August 15. The Department recommends that this survey be scheduled no more than three (3) days prior to starting construction. Many bird species may initiate nest-building and begin laying eggs very rapidly, and some bird species may construct a nest in as few as two or three days (Baepler 1968, Newman 1970, and Badyaev 2012).

Please note that the MBTA and Fish & G. Code apply regardless of the time of year. If an active nest is discovered outside of the typical nesting season, it should be avoided using the same avoidance measures that would be applied during the typical nesting season until such time as the young have fully fledged and are foraging independently of their parents.

Response 2

EID has revised Mitigation Measure BIO-2 in the proposed Mitigated Negative Declaration and the Mitigation, Monitoring, and Reporting Program in accordance with Section 15074.1 of the State CEQA Guidelines and incorporated the CDFW comments recommending that nesting bird surveys be scheduled no more than three days prior to starting construction and discovered active nest sites will be avoided at all times of the year during Project activities. The revised Mitigation Measure BIO-2 is detailed in Section 1.3 below.

1.2.3 Central Valley Regional Water Quality Control Board

This comment letter provides general regulatory information and permitting requirements. The letter does not identify any specific comments related to the Project or the analysis contained in the IS/MND, nor is any additional information requested from EID. Section II of the letter identifies permitting requirements; the following responses identify permitting expectations specific to the Project.

Comment 1

Construction Storm Water General Permit
Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Response 1

The Project does not involve soil disturbance of one or more acres; therefore, a Storm Water Pollution Prevention Plan is not required.

Comment 2

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase IMS4 Permit this project applies to, visit the Central Valley Water Board website at:


For more information on the Phase I MS4 permit and who it applies to, visit the State Water Resources Control Board at:


Response 2

The Project does not involve municipal storm sewer systems; therefore, neither a Phase I nor II MS4 permit is required.

Comment 3

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
Response 3

The Project does not involve storm water discharges associated with industrial sites; therefore, an Industrial Storm Water General Permit is not required.

Comment 4

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Response 4

The Project does not include discharge of dredge or fill material in navigable waters.

Comment 5

Clean Water Act Section 401 Permit - Water Quality Certification

If an USACE permit, or any other federal permit, is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Response 5

The Project does not require an USACE permit, or any other federal permit, for the disturbance of waters of the United States. No waters of the United States will be impacted by the Project; therefore, no Water Quality Certification is required.

Comment 6

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters Of the State) are present in the proposed project area, the proposed project will require, a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the
State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:


**Response 6**

The Project does not involve discharges to non-Federal waters; therefore, a Waste Discharge Requirement permit is not required.

**Comment 7**

**Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:


For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:


**Response 7**

The project does not involve construction dewatering and it is not necessary to discharge groundwater to waters of the United States; therefore, the Project does not require coverage under a National Pollutant Discharge Elimination System permit.

**Comment 8**

**Regulatory Compliance for Commercially Irrigated Agriculture**

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.
There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board’s website at:

   https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/for_growers/coalition_groups/ or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-01 00.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 11-100 acres are currently $1,277 +$8.53/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

**Response 8**

The Project does not include commercially irrigated agriculture; therefore, the project does not require coverage under the Irrigated Lands Regulatory Program.

**Comment 9**

**Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order.

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

Response 9
The Project does not involve construction dewatering and it is not necessary to discharge groundwater to waters of the United States; therefore, the Project does not require coverage under a National Pollutant Discharge Elimination System permit.

Comment 10

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

Response 10
The Project will not discharge wastes that could affect the quality of surface waters of the State; therefore, the Project does not require coverage under a National Pollutant Discharge Elimination System permit.

1.3 Revisions to the Proposed Mitigated Negative Declaration

Section 15074.1 of the State CEQA Guidelines provides a process for substituting mitigation measures in a proposed mitigated negative declaration:

(a) As a result of the public review process for a proposed mitigated negative declaration, including any administrative decisions or public hearings conducted on the project prior to its approval, the lead agency may conclude that certain mitigation measures identified in the mitigated negative declaration are infeasible or otherwise undesirable. Prior to approving the project, the lead agency may, in accordance with this section, delete those mitigation measures and substitute for them other measures which the lead agency determines are equivalent or more effective.

(b) Prior to deleting and substituting for a mitigation measure, the lead agency shall do both of the following:

(1) Hold a public hearing on the matter. Where a public hearing is to be held in order to consider the project, the public hearing required by this section may be combined with that hearing. Where no public hearing would otherwise be held to consider the project, then a public hearing shall be required before a mitigation measure may be deleted and a new measure adopted in its place.
(2) Adopt a written finding that the new measure is equivalent or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.

(c) No recirculation of the proposed mitigated negative declaration pursuant to Section 15072 is required where the new mitigation measures are made conditions of, or are otherwise incorporated into, project approval in accordance with this section.

(d) "Equivalent or more effective" means that the new measure will avoid or reduce the significant effect to at least the same degree as, or to a greater degree than, the original measure and will create no more adverse effect of its own than would have the original measure.

EID has revised Mitigation Measure BIO-2 in the proposed Mitigated Negative Declaration and the Mitigation, Monitoring, and Reporting Program in accordance with Section 15074.1 of the State CEQA Guidelines by incorporating the CDFW comments recommending that nesting bird surveys be conducted no more than three days prior to starting construction and discovered active nest sites will be avoided at all times of the year during Project activities. The proposed changes are shown in underlined text below:

BIO-2: Conduct Pre-Construction Surveys for Raptors and Migratory Birds

Trees and vegetation are planned to be removed outside the nesting season, August 16 through February 14. If construction occurs between February 15 and August 15, EID will conduct preconstruction surveys for active nests of special-status and MBTA protected birds before the start of any project activities. Surveys for nesting raptors will be conducted no more than three days prior to starting construction and in accordance with established CDFW raptor survey protocols. If active nests are found during surveys or at any time of the year during Project activities, EID will establish avoidance buffers around nests that are sufficient so that breeding is not likely to be disrupted or adversely affected by project activities. An avoidance buffer will constitute an area where project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur. Typical avoidance buffers during the nesting season will be 100 feet for nesting passerine birds and 500 feet for nesting raptors unless a qualified biologist determines that smaller buffers will be sufficient to avoid impacts on nesting raptors and/or other birds. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. A qualified biologist will monitor any active nests during construction, to ensure that the species is not being harmed or harassed by the noise or activity resulting from project-related activities. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant on the nest or parental care for survival.

Timing: Surveys completed before vegetation clearance activities begin.

Responsibility: EID and contractor.

The proposed substitute text is equivalent or more effective than the measure proposed in the IS/MND because all of the actions required by the original measure would still be required, but
additional measures (nesting bird surveys will be conducted no more than three days prior to starting construction and discovered active nest sites will be avoided at all times of the year during project activities) are required. These additional measures would not themselves have any significant physical effect on the environment, and no recirculation of the proposed MND is required because the new mitigation measure is incorporated into the Project approval.
1.4 Comment Letters

From:            McGuirt, Michael@CALFIRE
To:              Venable, Doug
Cc:              Browder, Chris@CALFIRE; Mcdaniel, Patrick@CALFIRE
Subject:         Cultural Resources Review of Three El Dorado Irrigation District (EID) Vegetation Management Projects (CCI Fire Prevention Grant Application Nos. 17-FP-AEU-2043, 17-FP-AEU-2044, 17-FP-AEU-2045), El Dorado County, CA
Date:            Thursday, June 13, 2019 3:07:37 PM

Doug,

Thank you for the opportunity to review and comment on the cultural resources documentation for EID’s Sly Park, Camp 5/Flume 46, and Weber Lake Vegetation Management projects, CCI Fire Prevention Grant Program-funded projects.

On the basis of my review of your June 2019 draft Initial Study/Mitigated Negative Declaration, El Dorado Irrigation District Vegetation Management Project (MND) and recent correspondence between you and I, I am presently unable to concur in EID’s finding that the implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the potentially significant impacts of the proposed projects on cultural resources to a less than significant level (p. 3-58, MND). The project description in the MND and the cultural resources inventory information in that document are an insufficient evidentiary basis for CAL FIRE’s Cultural Resources Program to be able to concur in your finding. As the pass-through agency for CCI Fire Prevention grant funds and a responsible agency under CEQA, our Cultural Resources Program will not object to EID’s adoption of this draft MND, as the document relates to the consideration of cultural resources and tribal cultural resources.

Please don’t hesitate to contact me should you have any questions or concerns.

Mike

Michael D McGuirt, RPA
Senior State Archeologist | CCI Cultural Resources Lead
CAL FIRE Sacramento HQ
Resource Management
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O  916.263.3374
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Michael.McGuirt@fire.ca.gov

Response to Comments
El Dorado Irrigation District Vegetation Management Project
Dear Mr. Venable:

The California Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Initial Study and Mitigated Negative Declaration (IS/MND) for the El Dorado Irrigation District Vegetation Management Project (project) (SCH No. 2019069040). The Department is responding to the IS/MND as a Trustee Agency for fish and wildlife resources (California Fish and Game Code [Fish & G. Code] sections 711.7 and 1802, and the California Environmental Quality Act [CEQA] Guidelines section 15386), and as a potential Responsible Agency regarding any discretionary actions (CEQA Guidelines section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (Fish & G. Code sections 1600 et seq.) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (Fish & G. Code sections 2080 and 2080.1).

Project Location and Description

The project is located in four areas of El Dorado Irrigation District (District) owned property at Weber Reservoir, Sly Park Recreation Area, Camp 5 Maintenance Yard, and Flume 46 on the El Dorado Canal, in El Dorado County, California. The four project areas cover a combined total of 570 acres.

The project proposes to reduce fuel load and reduce the risk of wildfire by implementing a vegetation management strategy which will include hand-cutting and piling, hand-thinning and chipping, pruning/removing ladder fuel, and mastication.

Comments and Recommendations

The Department offers the comments and recommendations presented below to assist the El Dorado Irrigation District (EID; the CEQA Lead Agency) in adequately identifying and mitigating the project’s significant, or potentially significant, impacts on biological resources.

Invasive Plants

Invasive plant species can significantly degrade wildlife habitat by crowding out native species. Vegetation management activities can often spread invasive plant infestations to previously uninfested areas by carrying seeds and plant fragments on equipment and clothing. Because many invasive plants are adapted to growing in disturbed areas, removal of existing vegetation often creates favorable conditions for invasives to germinate and become established. In order to minimize the risk of spreading invasive plants, the Department recommends that the District prepare and implement a plan to implement vegetation management activities in a manner that prevents the introduction, transfer, and spread of invasive species from one work site to another. The California Invasive Plant Council has developed a list of Best Management Practices for land...
Nesting Bird Surveys

Migratory non-game native bird species are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish & G. Code also afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish & G. Code or any regulation made pursuant thereto; section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish & G. Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Mitigation Measure BIO-2 requires a nesting bird survey prior to removing vegetation if vegetation is removed between February 15 and August 15. The Department recommends that this survey be scheduled no more than three (3) days prior to starting construction. Many bird species may initiate nest-building and begin laying eggs very rapidly, and some bird species may construct a nest in as few as two or three days (Baepler 1968, Newman 1970, and Badyaev 2012).

Please note that the MBTA and Fish & G. Code apply regardless of the time of year. If an active nest is discovered outside of the typical nesting season, it should be avoided using the same avoidance measures that would be applied during the typical nesting season until such time as the young have fully fledged and are foraging independently of their parents.

Further Coordination

The Department appreciates the opportunity to comment on the IS/MND for the El Dorado Irrigation District Vegetation Management Project (SCH No. 2019069040), and requests that EID address the Department’s comments prior to adopting the MND. If you have any questions pertaining to these comments, please contact me at (916) 358-2955 or gabriele.quillman@wildlife.ca.gov.

Sincerely,

Gabriele (Gabe) Quillman
California Department of Fish and Wildlife – North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95816
(916) 358-2955
Literature Cited


9 July 2019

Doug Venable
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

CERTIFIED MAIL
7017 2620 0001 1359 0956

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, EL DORADO IRRIGATION DISTRICT VEGETATION MANAGEMENT PROJECT, SCH#2019069040, EL DORADO COUNTY

Pursuant to the State Clearinghouse’s 10 June 2019 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the Request for Review for the Mitigated Negative Declaration for the El Dorado Irrigation District Vegetation Management Project, located in El Dorado County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

**Basin Plan**

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State’s water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board
has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

**Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

**II. Permitting Requirements**

**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-
DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

**Phase I and II Municipal Separate Storm Sewer System (MS4) Permits**

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

**Industrial Storm Water General Permit**

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

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1 Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

**Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

**Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

For more information on the Water Quality Certification, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

**Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:
Waste Discharge Requirements – Discharges to Land
Pursuant to the State Board’s Onsite Wastewater Treatment Systems Policy, the regulation of the septic system may be regulated under the local agency’s management program.

For more information on waste discharges to land, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_land/index.shtml

Dewatering Permit
If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

Regulatory Compliance for Commercially Irrigated Agriculture
If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.

There are two options to comply:

1. Obtain Coverage Under a Coalition Group. Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its
growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board’s website at: https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/for_growers/coalition_groups/ or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 11-100 acres are currently $1,277 + $8.53/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

**Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order.

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

**NPDES Permit**

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.
For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4812 or Jordan.Hensley@waterboards.ca.gov.

Original Signed By:

Jordan Hensley
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento
El Dorado Irrigation District
Vegetation Management Project

Consideration of
Mitigated Negative Declaration
Public Hearing – July 22, 2019
Presentation Outline

• Project background and summary
• Environmental review process
• Comments received on the environmental document
• Board consideration to adopt the environmental document
Previous Board Actions

- October 22, 2018- The Board adopted Resolution Nos. 2018-015, 2018-016, and 2018-017
  - Approve agreements for three grants awarded to EID by the California Department of Forestry and Fire Protection (Cal Fire)
  - Conduct hazardous fuels reduction work at EID facilities
Project Background

- August 2018- Cal Fire selected three EID grants totaling $1,963,005 to conduct hazardous fuels reduction work at four EID facilities
  - California Climate Investments Initiative- AB 32
  - Cal Fire- Fire Prevention Grant Program
## Project Background

<table>
<thead>
<tr>
<th>Facility</th>
<th>Acreage</th>
<th>Grant Award</th>
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<td>$1,279,080</td>
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<td>Sly Park</td>
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Project Background
Project Background

- Cal Fire Grant Period
  - November 2018 to March 2022
  - Bid scheduled July 2019
  - Board for consideration to award September 2019

- Camp 5 & Flume 46
  - Fall 2019

- Weber Reservoir
  - Fall 2020

- Sly Park
  - Fall 2020
Project Objectives

• Prevent wildfires and protect EID infrastructure within the wildland-urban interface
• Reduce the rate of spread, duration and intensity of wildfire
• Reduce fuel ignition into forest crowns
• Increase fire resilient landscape and promote long-term storage of carbon in trees and soils
Sly Park Recreation Area
Camp 5 Maintenance Yard
Flume 46 Vegetation Management
Project Treatments

• Remove dead and dying trees
• Remove woody brush and small trees 10-inches in diameter and smaller
• Cut ingrowth around trees and prune up to 12 feet
• 20 foot spacing for larger trees
Environmental Review Process

- Prior to approving a project, EID must consider the potential environmental effects of implementing the project
  - California Environmental Quality Act (CEQA)
  - CEQA Guidelines
  - EID’s procedures to implement CEQA
CEQA Overview

• CEQA Process
  • Describe potential environmental impacts
  • Identify ways to avoid or lessen those impacts
  • Promote coordination with public agencies
  • Encourage public participation
Environmental Review Process

• EID is lead agency under CEQA
• Staff prepared an Initial Study/Mitigated Negative Declaration (MND)
  • Evaluate potential environmental effects associated with the Project
Environmental Review Process

- Staff prepared a Mitigation, Monitoring, and Reporting Program (MMRP)
  - Identified feasible mitigation measures that avoid, mitigate, or reduce potential environmental effects to a less than significant level
Mitigation Measures

- Biological Resources
  - Conduct pre-construction surveys for special-status plants
  - Conduct pre-construction surveys for raptors and migratory birds
  - Avoid disturbance to roosting bat species
  - Develop and implement worker environmental awareness training
  - Protect riparian habitat
Mitigation Measures

- Cultural & Tribal Cultural Resources
  - Undiscovered historic properties
  - Undiscovered burials
Environmental Review Process

- Public Review
  - Initial Study and proposed MND released for public and agency review June 10, 2019 - July 10, 2019
Environmental Review Process

- Public Notices Distribution
  - State Clearinghouse
  - 46 single-family residences and other property owners adjacent the Project areas
  - Rancho del Sol Home Owner’s Association
  - Rancho del Sol Fire Safe Council
  - Camino Elementary School
Environmental Review Process

• Public Notices Distribution (continued)
  • Responsible and trustee agencies
  • Mountain Democrat
  • El Dorado County Recorder-Clerk
  • Local libraries
  • EID Website and EID Headquarters
  • Four Project locations
Public Comments Received

• Staff received comments from three agencies

• Cal Fire Cultural Resources Program
  • Did not concur with the IS/MND findings related to undiscovered cultural or archaeological resources
  • Cal Fire Cultural Resources Program will not object with the adoption of the MND
Public Comments Received

• Cal Fire Cultural Resources Program
  • MND contains mitigation measures to reduce or avoid impacts to undiscovered historic properties, archaeological resources, and burials
  • Implementation of these mitigation measures would reduce potential effects to these resources to a less than significant level
  • Commenter did not provide or specifically refer to readily available information and does not explain the relevance of evidence to support the comment
  • No further response required
Public Comments Cont’d

- California Department of Fish and Wildlife
  - Spread or introduction of invasive plant species
    - Contract documents require equipment washing to remove plant matter and EID inspection
  - Nesting bird surveys
    - Bird surveys be scheduled no more than three days prior to Project activities
    - Active nest sites will be avoided at all times of the year during Project activities
Public Comments Cont’d

- Revised the text of Mitigation Measure BIO-2 to incorporate CDFW comments
  - Surveys for nesting raptors will be conducted no more than three days prior to starting construction and in accordance with established CDFW raptor survey protocols. If active nests are found during surveys or at any time of the year during project activities, EID will establish avoidance buffers around nests that are sufficient so that breeding is not likely to be disrupted or adversely affected by project activities.
Public Comments Cont’d

- Central Valley Regional Water Quality Control Board
  - General circulation letter outlining potential permitting requirements
  - Staff provided a response documenting the rationale for why the permits referenced are not required for the Project.
Findings of the MND

- No comments received require a substantial revisions to the MND/MMRP
- No new avoidable significant effects were identified
- Mitigation measures defined in MMRP are adequate to reduce all potential impacts to less-than-significant impact
Completing CEQA Review

- Adopt MND and MMRP
  - Completes CEQA environmental review for the Project
  - Adoption of the MND/MMRP does not commit EID to proceed with the Project
  - Adoption demonstrates the Board has considered the MND/MMRP and comments received prior to approving the Project
Board Options

- **Option 1:**
  - Adopt the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
  - Make the following findings pursuant to the California Environmental Quality Act:
    - Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
    - The Mitigated Negative Declaration reflects EID’s independent judgment and analysis.
    - The revised mitigation measure (BIO-2) is equivalent to or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.
    - Specify that documents or other materials, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at EID Headquarters.
  - Approve the Project in accordance with CEQA
Board Options

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

- **Option 3**: Take no action.
Recommendation

- Option 1
Questions?
EL DORADO IRRIGATION DISTRICT

Subject: Update regarding preparation for Pacific Gas and Electric Company Public Safety Power Shutoff program power outages.

Previous Board Action
None

Board Policies (BP), Administrative Regulations (AR) and Board Authority
BP 0010 District Mission Statement

Summary of Issue
Director Osborne requested an update regarding how staff is preparing to respond to Pacific Gas and Electric Company’s (PG&E) 2019 expanded Public Safety Power Shutoff (PSPS) program.

Background/Discussion
In spring and summer of 2018, PG&E initiated its Community Wildfire Safety Program and associated PSPS program. Under the PSPS program, PG&E will intentionally shut off power when temperature, wind, and humidity thresholds are exceeded. Furthermore, these intentional shut downs may extend for prolonged periods while triggering conditions persist. PG&E has stated its PSPS program is necessary due to increasing hazards from wildfires and increased threat to loss of life.

Unfortunately, while attempting to address hazards associated with wildfire risk, new hazards are generated through the PSPS program by eliminating power to those facilities providing key public health and safety functions such as water and wastewater conveyance and treatment, as well as fire flow protection. Additionally, the outages may impact Project 184 hydroelectric power generation and has the potential to impact operations at Sly Park Recreation Area.

The District maintains 168 separate electrical service connections with PG&E throughout El Dorado County. A portion of the District’s water, wastewater, and hydro facilities are equipped with backup power generators for the purposes of providing uninterrupted service during disruptions to PG&E’s utility grid power supply. As a result of the District’s PSPS project and with the Board’s support, staff is working to install additional generators to minimize the potential for water and wastewater service interruptions, maintain water supplies for fire suppression, and avoid sanitary sewer overflows. The Board authorized a series of purchases in late 2018 and early 2019 and last month also authorized the submittal of a grant application to fund 75% of the cost of 22 additional generators for key water and wastewater facilities.

Backup power supplies are designed to perform minimal operations for short periods of time (i.e., hours) on occasion while the utility grid power is restored. While backup power generators may not provide sufficient power to maintain full capacity and normal operations, these generators will help provide fire flow protection and maintain a safe water supply and wastewater collection in order to protect public health until utility power is restored. More details on these efforts are discussed below.
**Recent Developments**

In 2019, PG&E significantly expanded its PSPS program and stated all 5.4 million electrical service accounts representing some 16 million customers across California should be prepared for service interruptions under the PSPS program if conditions warrant. According to PG&E’s annual Wildfire Mitigation Plan required by Senate Bill 901, which was filed with the California Public Utility Commission (CPUC) on February 6, 2019, the number of customers potentially affected by PSPS in 2019 increased tenfold over 2018. The PSPS will directly affect customers, including most of the District’s service accounts, located within Tier 2 and Tier 3 of the CPUC’s wildfire risk mapping during 2019 whereas in 2018 only the highest risk areas in Tier 3 were directly affected. As staff will illustrate during the Board meeting presentation, the overwhelming majority of the District’s service area is located within Tier 2 or Tier 3 and much of the balance of the service area (primarily in portions of El Dorado Hills and Cameron Park) is served water and wastewater services by District facilities located within Tier 2 and 3 areas.

Due to this expansion, the amount of PG&E transmission and distribution lines potentially affected also increased significantly compared to last year, with 25,200 miles of distribution lines (vs 7,100 in 2018) and 5,500 miles of transmission lines (vs 370 in 2018) affected. The latter is notable because customers not located in the high fire risk area are subject to losing power if the transmission line sending power to the localized distribution line traverses a higher risk area (Tiers 2 and 3). This is the reason why PG&E has stated all 5.4 million electrical service accounts could be affected under certain conditions. As such, while the Tier 2 and Tier 3 mapping helps staff with planning the areas mostly likely to be affected by PSPS, the District (like all other PG&E customers) must be ready for a plausible scenario where all 168 service connections are de-energized.

In early June 2019, PG&E initiated a PSPS event within the Sierra foothills and north San Francisco Bay areas. Although portions of El Dorado County were slated for potential de-energization, fortunately the portion of the county served by the District was spared. Initiating a PSPS event this early in the fire season is a clear sign that PG&E will be erring on the side of caution and the District must be prepared for more frequent interruptions of power. While the District was able to avoid service disruptions during the October 2018 PSPS affecting portions of the District service area, the expanded program will bring new challenges both in terms of geographic area affected and number of PG&E service connections impacted. Since PG&E’s announcement of the expanded program early this year, staff has been working to complete installation of the new generators approved by the Board late last year and early this year, and identify what additional resources need to be allocated (e.g., generator rentals, system reconfiguration) to respond to the expanded area of direct impact. Although the October 2018 PSPS was focused on the eastern portions of the service area, in 2019 the District must be prepared for essentially the entire 220-square-mile service area to be impacted.

**Effects to District Operations**

Wide-scale outages will place significant strain across a broad portion of the District’s service area. The eastern portion of the service area, which was historically more typically associated with power outages due to inclement weather, is better equipped with backup power. Conversely, the western portion of the service area at the lower elevations (and highest customer densities) has fewer backup power resources available. Additionally, while Folsom Reservoir is capable of meeting a portion of summer demands, much of the water supplies for the customers located in the lower elevations are provided by Jenkinson Lake and Project 184, more than 30 miles to the east.
For the drinking water system, this risk is particularly acute during the summer and early fall when system demand increases and available storage in treated water reservoirs has the potential to be vacated quickly. Although outages caused by winter storm damage are challenging, prolonged wind or fire-driven outages during warm periods with higher water demands pose the most significant risk to the District’s ability to provide safe and adequate service to the public.

In addition to jeopardizing the District’s ability to maintain water and wastewater services to its customers, these outages jeopardize the safe, reliable operation of the District’s hydroelectric power conveyance system in Project 184 as well as recreational operations at Sly Park Recreation Area due to loss of Supervisory Control and Data Acquisition (SCADA) observation and communication capabilities during outages.

In order to help improve the District’s readiness to respond to this expanding challenge from PG&E, there are twenty-two additional sites (10 drinking water pump stations and 12 wastewater collection lift stations) beyond those approved by the Board that have been selected as a high priority for the addition of permanent generators. The sites provide flow and pressure to fire hydrants for fire flow purposes, maintain drinking water supplies, and convey sewage for proper treatment and disposal. At these locations staff either manually bypass pump if possible to maintain minimal water service, work to manually install temporary generation, or—in the case of wastewater lift stations—may utilize mobile equipment to pump down wet wells. Staff completed a sub-application with California Governor’s Office of Emergency Services (CalOES) on July 3, 2019, for final consideration of Federal Emergency Management Agency (FEMA) funding in excess of $1.8M for design, purchase, and installation of these generators and associated electrical components. Staff anticipates receiving the CalOES and FEMA responses during fall/winter 2019. If approved, staff will work during 2020 to install the equipment to be prepared for the 2021 PSPS season. Therefore, for the next two seasons staff must work with the resources currently available.

Staff will provide an evaluation of preparedness by operational area (Headquarters Administration, Drinking Water Operations, Wastewater/Recycled Water Operations, Hydroelectric Operations, and Recreation Operations) during the Board meeting. A summary of highlights for each operational area that will be discussed is provided below.

**Headquarters Administration**

In response to conditions observed during last fall’s PSPS, staff has modified which circuits are supplied by backup power to prioritize key areas to maintain operations within the Headquarters building (including an EOC if necessary) and made corresponding changes to outlet identification. Additionally, staff has worked to map designated temporary workstations within conference rooms and other locations to accommodate laptops for those key headquarters staff whose normal work stations are not supplied with backup power.

**Drinking Water Operations**

Staff has developed Standard Operating Procedures (SOP) for each treatment facility to implement specific actions following notification of a PSPS within the District’s service area to minimize potential disruptions to drinking water and fire suppression supplies. For example, immediately upon notification from PG&E regarding a potential PSPS, staff will make appropriate adjustments to maximize all available storage within the District 36 treated water reservoirs. Typically to manage water age and the formation of disinfection byproducts (DBP), especially during periods low demand, storage is managed at key levels below maximum. A temporary change in storage strategy is not anticipated to result in changes to the District’s ability to meet applicable DBP regulatory limits.
Additionally, staff will immediately contact generator rental companies from a pre-designated vendor list using a pre-identified list of needed equipment to secure backup power capabilities where existing District generators do not exist. Due to the anticipated demand for these limited resources, this has been identified as a critical step in preparedness and will be implemented immediately upon notification from PG&E. Staff are currently working to install the recently purchased generators at some of these facilities, but as described below there have been some challenges encountered that have extended the schedule of this work. As such, some of these sites may also need temporary rentals until permanent facilities are operational later this year.

Finally, staff will discontinue supplementation of drinking water to the recycled water system until/unless storage in the drinking water system has been maximized prior to the outage, since recycled water is not a public health and safety matter. Once the PSPS outage is implemented, supplementation will be discontinued until utility grid power is restored so that all backup power is focused on producing potable water for drinking and fire suppression purposes. Since treatment and pumping facilities will be operating on backup power with reduced capabilities, the District will remain focused on meeting public health and safety needs. As discussed under Customer Outreach below, extensive outreach and conservation by customers will be key on this aspect.

Wastewater/ Recycled Water Operations
Similar to drinking water operations, staff has developed SOPs for each wastewater treatment facility to implement specific actions following notification of a PSPS within the District’s service area to minimize impacts to treatment capabilities.

Staff has completed installation of the recently approved generators at two lift stations to improve the response during a widespread PSPS. With 60 lift stations and only approximately half with backup power, the balance will need to be maintained with a portable generator to periodically pump down wet wells, or if necessary, mobile equipment to pump down wet wells and transport the sewage to alternative locations.

Hydroelectric Operations
Since this division typically encounters widespread outages during storms, the facilities are prepared to operate on backup power. The biggest challenge, which is new for 2019, is the potential de-energization of transmission lines and potential effects to powerhouse operations. Staff is working to ensure that water released from upstream reservoirs can be recaptured and if a shutdown of the powerhouse is necessary due to transmission line shutdown it can be conducted safely. During the summer/fall period, until the fall outage, when most of the hydropower generation is provided by reservoir releases, it will be important to minimize releases up to 48 hours in advance of anticipated PSPS to avoid/minimize spilling and wasting water. Since notifications from PG&E may not occur within that timeframe, operational adjustments will occur as soon as notification is received. For example, the District received about 22 hours of notification last fall and the PSPS that occurred in June 2019 included about 36 hours advanced notice to affected customers.

In addition to wasted water and lost hydro generation opportunities, staff also must ensure a smooth shutdown of the powerhouse to avoid and potential for facility damage associated with a hard shutdown. Staff follows a standard procedure for cool down and pressure management during scheduled shutdowns.
Recreation Operations
The focus areas of Recreation staff are safe and orderly processing of customers at the gatehouse during high use times and communication among staff in the event of an emergency. Recently, District electricians assisted with rewiring of the ranger station at Sly Park to allow backup generator power for communication and computing needs. During an outage, similar to what occurred during last winter’s storms, staff manually connect a generator to keep phones and computers operational.

Additionally, staff has developed a small generator connection to allow fuel to be pumped from the onsite above-ground storage tank. In addition to maintaining fuel for ranger and maintenance vehicles within the park, this facility is also used by drinking water staff working in the area in the event of a power outage.

Finally, telecommunication staff has increased the backup battery power capabilities of the radio communication system in the area to allow up to five days of use without the need for recharging. Not only does this station service the ranger and maintenance staff, but this communication hub also supports key drinking water and hydroelectric communication infrastructure in the area.

Challenges Encountered
It is also important to inform the Board regarding challenges staff have encountered - both anticipated and unanticipated – in implementing actions in response to an after-action review of last year’s PSPS event and the expanding PSPS in 2019.

First, due to the increased demand for generators, delivery of the products purchased by the Board in December and January occurred later than anticipated and one of the generators has yet to be delivered. Portions of the installation process – permitting and load bank testing by the vendor – were likewise delayed. The design of permanent electrical components such as automatic transfer switches (ATS) will not be ready to be bid and installed in time for the 2019 PSPS season. Therefore, staff has implemented alternative strategies to install concrete pads under separate contracts and have staff electricians (if available) or contract electricians install manual transfer switches until the ATSs can be installed late 2019 or early 2020.

Due to the ongoing economic conditions, it has been difficult to acquire bids for electrical and concrete work from contractors. Many of those that have been responsive are fully committed to other projects for the remainder of the construction season. Therefore, staff has closely evaluated the limited bids received to ensure pricing was reasonable.

For staff resources, this work has resulted in reprioritization and/or delay of key preventative maintenance items, which may result in other long term challenges associated with unanticipated equipment failure. However, knowing the increasingly likelihood of one or more PSPS events and resultant public health and safety challenges, staff believes this is the most prudent course of action.

Finally, perhaps the greatest challenge has been the changes in PG&E service connections subject to PSPS between 2018 and 2019. The overall number of connections subject to PSPS remained about the same (118 vs. 119), but 24 of the service connections subject to PSPS in 2018 were removed and another approximately 25 were added. Notwithstanding these changes, PG&E has also stated that the District must be ready for the entire service area to be without power for up to 5 days. With a moving target of area(s) potentially impacted, staff must adjust its
strategies to respond to potential de-energizing. It is important to understand when a pump station or lift station is impacted, staff must not only consider the impacts to that facility, but the facilities in series either upstream or downstream that are fed by or fed from the facility.

**Customer Outreach**
In addition to strategic operational decisions and deployment of backup power resources, responses to calls for conservation from our customers will be vital to minimizing any impacts to drinking water and fire suppression supplies and wastewater conveyance services provided by the District. Therefore, the Board will see a focused outreach effort leading up to and especially during the event to stress the importance of conservation from all customers who are provided water supplies and wastewater treatment through the District’s complex integrated systems.

Staff has also initiated targeted outreach at the onset of this fire season regarding necessary preparations for PSPS. Illustrating the statewide attention to this PSPS challenge, the contents of that news release were ultimately utilized by ACWA outreach staff toward their member agencies and the San Francisco Chronicle cited the District’s preparedness efforts in a recent article due in part of the news release and recognition among the state of the District’s efforts to meet the community’s health and safety needs for water and wastewater conveyance in response to this growing challenge.

One important outreach area that staff will focus on is outdoor irrigation. This type of customer demand can be easily curtailed with support and response from our customers. It is vital for our customers to understand that even if their home, business, or immediate community is not affected by a PSPS, it is highly likely that their water and wastewater service is being affected due to the integrated nature of EID’s service infrastructure and their efforts are critical to minimizing service disruptions. Therefore, staff will be asking customers to manually turn off irrigation timers to avoid using critically limited drinking water and fire suppression supplies for irrigation purposes.

**Summary**
The particular challenges of each PSPS event will not be known until the specific locations are identified by PG&E following analysis of weather forecasts, but overall staff has invested significant effort since last fall to increase the District’s preparedness level to this expanding challenge. Maintaining communication with our customers will be important to minimizing service disruptions. While avoiding disruptions may not be possible during a wide scale and/or prolonged PSPS affecting a broad (or entire) portion of the District service area, staff believes we have taken all possible steps to face this expanding challenge and during the incident(s) all staff will be dedicated to maintain service for our customers.

**Board Options**
None – Information only

**Recommendation**
Information only

**Attachments**
None
Update regarding preparation for PG&E Public Safety Power Shutoff program power outages

July 22, 2019
Summary

- Director Osborne requested update regarding Public Safety Power Shutoff preparations
Background

- Public Safety Power Shutoff Program (PSPS) initiated 2018
  - Shut off power when temperature, wind, and humidity thresholds exceeded
  - May extend for prolonged periods
  - Increasing hazards from wildfires and threat to loss of life
- PSPS eliminates power to key public health and safety functions
  - Drinking water and wastewater conveyance/treatment
  - Fire flow protection
- Potential impact to Project 184 hydroelectric power generation
- Potential impact to Sly Park Recreation Area operations
October 2018 PSPS avoided service disruptions

- Extensive planning key to success
- Affected eastern portion of service area
168 PG&E electrical service connections

- Some equipped with backup power
- Installing additional generators
  - Minimize water and wastewater service interruptions
  - Maintain water supplies for fire suppression
  - Avoid sanitary sewer overflows
- Board authorized purchases in late 2018/early 2019
- Board authorized submittal of OES grant application
Backup power supplies
- Perform minimal operations for short periods
- Not designed to maintain full capacity and normal operations
- Maintain safe water supply and wastewater collection
- Provide fire flow protection
Recent Developments

- PG&E significantly expanded PSPS program
  - 5.4 million electrical service accounts
- PG&E’s annual Wildfire Mitigation Plan
  - Required by Senate Bill 901
  - Number of PSPS customers increased tenfold
- 2019 PSPS
  - Only included Tier 3 CPUC Mapping in 2018
  - Almost entire District service area within Tier 2/3
    - Tier 1 areas may be served from Tier 2/3 area facilities
- Scale of PSPS expansion
  - 25,200 miles of distribution lines (vs 7,100 in 2018)
  - 5,500 miles of transmission lines (vs 370 in 2018)
- Transmission lines to potentially affect Tier 1
  - Balance of District service area
- Priority of planning focused on Tier 2/3
  - Potential for all 168 connections to be de-energized
2018 PSPS Sites
2019 PSPS Sites

- PSPS Sites 2019 (119)
- EID Service Area
- CPUC Fire Threat Tier 2
- CPUC Fire Threat Tier 3

June 2019 PG&E PSPS event

- Sierra foothills and north San Francisco Bay areas
- Conservative approach by PG&E
- Must be prepared for more frequent outages

Expanded program brings new challenges

- Geographic area affected
- Number of PG&E service connections impacted
Additional Staff Actions

- Install new generators approved by Board
- Plans for system reconfiguration/bypass
- Identify additional resources needed
  - Generator rentals
  - Seek additional generator funding
Governor’s Office of Emergency Services
$1.8M Grant Application

- 22 sites high priority for generators
  - 10 drinking water pump stations
  - 12 wastewater collection lift stations
  - Pump station bypass or temporary generators
  - Wastewater lift station pumping
- Design, purchase, and installation
  - District cost share would be $600k
  - Targeted installation 2020 for 2021 PSPS season
Effects to District Operations

- Wide-scale outages jeopardize service
- Eastern service area more backup power
  - Historically more outages due to weather
- Less resources for Western service area
  - Jenkinson Lake and Project 184 30 miles east
- During summer/early fall storage in treated water reservoirs can be exhausted quickly
Potential for sanitary sewer overflows (SSOs)
Outages create other challenges
- Jeopardize safe, reliable Project 184 operation
- Potential impacts to Sly Park Recreation Area
Headquarters Administration

- Modified circuits supplied by backup power to prioritize key areas
  - Including an Emergency Operations Center if necessary
  - Corresponding changes to outlet identification
- Mapped designated temporary workstations
Drinking Water Operations

- Standard Operating Procedures (SOP) for each treatment facility
  - Maximize storage within 36 reservoirs
  - Contact generator rental companies
    - Vendor list using pre-identified equipment list
    - Anticipated high demand for limited resources
    - Temporary rentals until permanent facilities operational
- **Discontinue supplementation to recycled water system**
  - Focus on drinking and fire suppression supplies
  - Treatment and pumping facilities on backup power with reduced capabilities
  - May resume if storage has been maximized prior to outage
  - Recycled water not a public health and safety matter
  - Extensive outreach and conservation by customers will be key
Wastewater Operations

- SOP for each treatment facility
- Portable backup power to pump down lift station wet wells
  - Locations without backup power
  - Pre-determined routing
- Mobile pumping capability to move sewage if necessary
  - Less efficient use of limited staff resources
Hydro Operations

- Potential for transmission line shutdown
  - Safe shutdown of powerhouse
  - Efficient use of reservoir releases to avoid wasted water

- Impact to hydro generation

- Verify Forebay Reservoir is full to supply Res 1 water treatment plant
Recreation Operations

- Safe, orderly customer check in process at Sly Park gatehouse
  - Backup generator to maintain power
- Maintain radio communication
  - Increased repeater battery backup power
- Back up generator for above ground fuel storage tank
  - Fueling station used by Recreation and Drinking water staff
Challenges Encountered

- Both anticipated and unanticipated
  - After-action review items from 2018 PSPS
  - Expanding scope of PSPS in 2019
- Delivery of generators delayed
  - One generator yet to be delivered
- Portions of the installation process affected by external controls
  - Permitting
  - Vendor load bank testing
Challenges Encountered

- Permanent automatic transfer switches (ATS) not ready for 2019 PSPS season
  - Install manual transfer switches for later conversion to ATS
- Install concrete pads under separate contracts
- Challenging bidding environment for electrical and concrete work
  - Many fully committed for the season
  - Closely evaluated limited bids
Reprioritization and/or delay of key capital projects and preventative maintenance items

- May contribute to other long term challenges
- Prudent due increasing likelihood of PSPS
Changes to scope and scale of PSPS between 2018 and 2019

- 24 connections removed and 25 added
- Potential for entire service to be without power
- Ongoing adjustments to strategies

Cascading effect of losing power to pump stations and lift stations
Customer Outreach

- Customer conservation response vital
  - May ultimately determine whether water service disrupted
- Focused outreach effort leading up to and especially during PSPS
  - Working with industry partners (e.g., ACWA)
  - HOAs, CSDs, Chambers of Commerce
  - Email, web and social distribution
- Key area of focus will be outdoor irrigation
  - Demand easily curtailed with support from our customers
- Vital for customers to understand entire District affected by PSPS
  - Those not directly affected by outage likely served by affected District facilities
  - Integrated nature of EID’s service infrastructure
Summary

- Particular challenges of each PSPS not known until specific locations identified by PG&E

- Significant effort since last fall to increase preparedness level

- Customer communication and response important to minimizing service disruptions
  - Avoiding disruptions may not be possible

- Taken all possible steps to face expanding challenge

- During the incident(s) all staff dedicated to maintain service for our customers
Questions?
EL DORADO IRRIGATION DISTRICT

Subject: Overview of Lead Sampling of Drinking Water in California Schools.

Previous Board Action
None

Board Policies (BP), Administrative Regulations (AR) and Board Authority
BP 0010 District Mission Statement
BP5010 Water Supply Management

Summary of Issue
California Assembly Bill (AB) 746, which became effective January 1, 2018, required community water systems to test, by July 1, 2019, lead levels in drinking water at all California public, K-12 school sites constructed prior to January 1, 2010. AB 746 superseded an earlier school request-based sampling program required by California State Water Resources Control Board Division of Drinking Water (DDW), which was enacted in 2017. El Dorado Irrigation District (District) has completed the required testing of all public K-12 schools located within its service area boundaries.

Background/Discussion
Recent events in the United States such as the Flint, Michigan story, which received significant media attention, have shown lead in drinking water remains an ongoing public health concern, particularly for children. Lead rarely occurs naturally in California's drinking water sources, but may become present when water passes through older plumbing fixtures or solder containing lead that connects plumbing. Schools served by a public water system are not required to test their water for lead under the current Lead and Copper Rule. Instead, under state law this obligation is borne by the community water systems, such as the District.

In order to safeguard water quality in California’s’ K-12 schools, DDW amended community water systems’ permits mandating lead sampling of schools meeting the requisite criteria. Permit amendment 2017PA-SCHOOLS-0910001, received by the District on January 17, 2017, established “requirements for lead monitoring and lead sample result interpretation at Kindergarten to 12th grade (K-12) schools served by your water system that have submitted a written request for lead sampling related assistance.” To ensure all requests for sampling were fulfilled within the required timeframe, the District established a working group that tracked all requests, conducted the sampling, and communicated the results of the analyses. The working group identified all schools in the District and provided them a letter explaining how to request sampling assistance. Ten of the 35 public schools within the District’s service area responded and were sampled under the permit amendment.

AB 746 then superseded the permit amendment and required testing of all K-12 public schools. AB 746, which amended Health and Safety Code (HSC) §116277, established basic sampling protocols, limits and requirements if sample results exceeded limits. The District working group issued a second letter to all public schools regarding the change to testing requirements. Staff informed each school or school district of the testing protocols, responsibilities of the school and the District, reporting requirements, and subsequent required actions if any sample result exceeded the action limit. At this time a tentative date to conduct sampling was also scheduled.
The remaining 25 public schools were then tested under AB 746 requirements. All schools that had been tested under the permit amendment were considered to have met the requirements of AB 746 and no further action was required for those schools. In accordance with AB 746 requirements, the District sampled five sites at each of the 35 public schools for a total 175 samples. One sample exceeded the action limit of 15 parts per billion (ppb) set forth in HSC §116277. The one sample site that exceeded the action limit was immediately taken out of service by the school upon notification by the District, and the building was subsequently decommissioned.

To ensure equitable treatment for all customers, the District also offered to perform the same testing of all 11 private schools in the District’s service area. Four schools agreed to testing, four refused testing, and three did not respond or were no longer in operation. Sampling of the four schools agreeing to the testing resulted in 18 samples, which were all below 5 ppb. One school was a single family residence and only three sample sites were available for testing on the premises. Five samples were collected at each of the other three schools.

Gold Oak Elementary (Gold Oak) Building D Exterior Drinking Fountain was the only sample site to exceed the action limit of 15 parts per billion or micrograms per liter (ug/L) with an initial result of 19 ug/L. Per sampling protocols a repeat sample was analyzed with a result of 24 ug/L. Per HSC §116277 Gold Oak reported to the District that it immediately took this drinking fountain out of service and notified parents and guardians of the students attending the school. At the time of sampling only one classroom was occupied. Gold Oak reported that the students occupying Building D were immediately relocated and the entire building water supply was secured by school staff.

After the initial sample result was received, a study was conducted by District staff in consultation with Gold Oak in order to identify the source of the lead contamination. By changing the sampling protocol from a single 1.0 liter first draw sample to a series of 250 milliliter distinct samples of the drinking fountain it was determined that the most likely cause for the lead contamination was the drinking fountain and not an endemic issue with the Building D plumbing. This was based on the first sample have a result of 21 ug/L and all subsequent samples from same location and time having results less than 5 ug/L. Gold Oak reported that Building D was scheduled for decommissioning and has since been decommissioned.

Summary
Overall, lead contamination in current schools within the District’s service area is below action limits and comparable with statewide figures. The only recorded source of lead contamination in any school within the District’s service area was promptly taken out of service. Data indicates that the District does not have an issue with lead contamination in school drinking water, and the requirements of the District’s permit and AB 746 have been met. The total cost for all lead sample laboratory analysis was $3,100 and staff expended approximately 410 hours meeting this regulatory requirement.

<table>
<thead>
<tr>
<th>Board Options</th>
<th>None. Information only.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Information only.</th>
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</table>

<table>
<thead>
<tr>
<th>Attachments</th>
<th>None</th>
</tr>
</thead>
</table>
Lead Testing in School Drinking Water System Program
The Initial Problem?
California's Initial Response

- January 2017 State Water Resources Control Board Division of Drinking Water (DDW)
  - 1200 community water systems (CWS) permits amended
  - Allowed schools to request CWS conduct water sampling and provide technical assistance
  - Testing conducted within 90 days of initial request
- Lead action limit is 15 parts per billion (ppb)
California’s Further Actions

- January 2018 - Assembly Bill (AB) 746 requires CWS to test for lead in all public schools
  - All testing completed by July 2019
- District also offered to complete sampling for all private schools
EID’s Response

Upon the change to the permit EID assembled a working group from across the District in order to establish:

I. Determining all schools served by the District
II. A procedure for schools to request District assistance
III. Workflow and tracking
IV. Procedures and forms for sampling event tasking
V. Revised workflow in order to account for AB 746
District Public School Lead Testing Results

- All 35 public schools in the district have been sampled for a total of 175 samples

Distribution of Sample Results
Sample Location: Building D Exterior Drinking Fountain
Initial result was 19 ppb, follow up result was 24 ppb
School’s immediate action plan was to shift single class to another building, and secure drinking fountain
School’s long term action plan was planned decommissioning of Building D
Gold Oak Elementary

- Additional time study conducted in order to isolate source of the lead
- Series of 250 mL samples taken at regular time intervals instead of 1 Liter first draw as would normally be sampled
- The first sample exceeded the action limit at 21 ppb and all subsequent samples were less than 5 ppb
- Confirmed source of the lead contamination was drinking fountain and not an issue endemic to the building piping
Public School Sample Results
EID vs State

EID Public School Results

- Total Samples: 179
- > 15 ppb: 0.6%
- < 15 ppb: 99.4%

California Public School Results

- Total Samples: 33574
- > 15 ppb: 0.9%
- < 15 ppb: 99.1%
District Private School Lead Testing Results

- 4 private schools in the district were tested for a total of 18 samples
- All private schools that were tested results were below 5 ppb
Private School Sample Results
EID vs State

EID Private Schools Sampled: 64% Sampled, 36% Not Sampled

California Private Schools Sampled: 89% Sampled, 11% Not Sampled
Conclusion

Total Sampling Costs - $3100

Total Staff Hours - 410 Hours
Questions?
EL DORADO IRRIGATION DISTRICT

Subject: Consideration to award contracts to BOSCO Construction in the not-to-exceed amount of $149,000 for placement of shotcrete, Jensen Precast in the not-to-exceed amount of $62,422 for purchase of Redi-Rock retaining wall material, and Gannett Fleming (SAGE) in the not-to-exceed amount of $89,583 for construction engineering services; and authorize funding of $1,475,479 for the Flume 47C Replacement, Project No. 17026.

Previous Board Action
January 28, 2019 – Board adopted the 2019-2023 CIP, which included this project subject to funding availability.

Board Policies (BP), Administrative Regulations (AR) and Board Authority
BP 3060 Contracts and Procurement
BP 8010 Hydroelectric System Management

Summary of Issue
Flume 47C is an elevated wood flume, approximately 150 feet in length, and constructed by PG&E in the mid 1950’s. The timbers are rotted and the entire flume section is in need of replacement. In 2016, District construction crews made interim repairs to ensure the continued safe operation until a complete replacement of the flume can occur. Construction of a new trapezoidal canal to replace the elevated flume is proposed to be completed by District Hydro crews with subcontracts for shotcrete placement, materials procurement and trucking of imported soil.

Background/Discussion
Flume 47C is located above Highway 50 and behind the Sacramento Municipal Utility District’s corporation yard at Fresh Pond. The flume is located within an easement on private property and the residents of Forest Road live below this section of the flume.

The proposed project will include localized road improvements to access the canal bench and full replacement of the wooden flume structure with a reinforced shotcrete canal. The canal bench and berm will be rebuilt with a mechanically stabilized earth (MSE) wall supported with precast concrete block facing. The concrete block facing provides the following benefits: speed and ease of construction, long term durability, and increased structural support. An abandoned spillway located immediately upstream of the flume will also be removed as part of this project. The new shotcrete-lined canal through the project site will resolve water turbulence and hydraulic jumps that cause freeboard and capacity issues at this section of canal, as well as provide better resistance to fire.

Reconstruction of the canal bench includes excavation to competent material for a precast concrete block MSE wall on the outboard edge of the berm. Fill material for the MSE wall is anticipated to be obtained from locally-sourced stockpiled material stored at the Sierra Pacific Industries yard.

In order to provide site access for construction equipment and materials, all weather improvements to the private access road will be completed as part of the project. This road lies within the District Project 184 canal easement and is used frequently by District personnel to access this area of the canal.
A bridge crossing the canal will be constructed about 200 feet downstream of the flume where an existing canal access ramp is located. The bridge will provide access for small equipment to the berm side of the canal for construction and future O&M maintenance needs. The bridge will be a steel structure supported on concrete footings.

Request for Proposals
This project is being constructed by the Hydro Operations group, but several requests for proposals were issued to perform specialized work and to acquire the construction materials. The table below outlines the major proposals that were sought and their associated costs.

Subcontractor and Materials Proposal Summary

<table>
<thead>
<tr>
<th>Company</th>
<th>Fee Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosco (shotcrete)</td>
<td>$149,000</td>
</tr>
<tr>
<td>Jensen Precast (Redi-Rock)</td>
<td>$62,422</td>
</tr>
<tr>
<td>Trucking (when needed)</td>
<td>$30,000</td>
</tr>
<tr>
<td>Sacramento Rebar (rebar)</td>
<td>$15,000</td>
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<tr>
<td>Soil Tech (road treatment)</td>
<td>$5,000</td>
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<tr>
<td>Miscellaneous materials</td>
<td>$13,120</td>
</tr>
<tr>
<td>(pipe, geo-grid, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$274,542</strong></td>
</tr>
</tbody>
</table>

Multiple bids were sought in each instance and the lowest cost is presented in the table. The trucking costs were calculated based on the hourly rate provided by the trucking company and is included in case it is needed, however most of the trucking will be accomplished with EID staff and vehicles.

Construction engineering services
Staff solicited a single-source professional services proposal from Gannett Fleming (previously SAGE) who is the engineer of record for this project. Gannett Fleming will be providing construction engineering services, material testing, responses to request for information, and processing submittals. Their proposed fee for this work is $89,583.

Environmental Review
The District, acting as the Lead Agency, must comply with California Environmental Quality Act (CEQA) requirements for the Flume 47C Replacement Project. Staff has determined that the proposed project falls within a Class 1 CEQA Categorical Exemption for the maintenance and repair of existing facilities involving negligible or no expansion of existing or former use (CEQA Guidelines §15301) and within a Class 4 CEQA Categorical Exemption consisting of minor public alterations in the condition of land (CEQA Guidelines §15304). Additionally, the project does not trigger any exceptions to these exemptions (see CEQA Guidelines §15300.2). Staff has prepared and filed a Notice of Exemption from CEQA with the El Dorado County Recorder-Clerk's office.

Funding
Staff is requesting funding in the amount of $1,475,479 for construction. The itemized breakdown is summarized below. The anticipated funding source is 53% water FCCs, 47% water rates.
The engineering estimate from SAGE was $2,006,865 for using an outside contractor. The District anticipates a savings of approximately $500,000 by utilizing District staff.

### Board Options

**Option 1**: Award contracts to BOSCO Construction in the not-to-exceed amount of $149,000 for placement of shotcrete, Jensen Precast in the not-to-exceed amount of $62,422 for purchase of Redi-Rock retaining wall material, and Gannett Fleming (SAGE) in the not-to-exceed amount of $89,583 for construction engineering services; and authorize funding of $1,475,479 for the Flume 47C Replacement, Project No. 17026.

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

**Option 3**: Take no action.

### Recommendation

Option 1

### Attachments

- Attachment A: BOSCO proposal
- Attachment B: Jensen Precast proposal
- Attachment C: Gannett Fleming proposal
- Attachment D: CIP Summary
Cary Mutschler  
Senior Civil Engineer

Brian Deason  
Environmental Resources Supervisor

Dan Gibson  
Hydroelectric Operations Manager

Elizabeth Dawson  
Engineering Manager

Brian Mueller  
Engineering Director

Dan Corcoran  
Operations Director

Mark Price  
Finance Director

Elizabeth Leeper  
Deputy General Counsel

Jim Abercrombie  
General Manager
SECTION 00400

BID FORM

To be submitted as part of bid by the time and date specified in SECTION 00200 (Instructions to Bidders), paragraph 1.

TO THE HONORABLE BOARD OF DIRECTORS OF THE EL DORADO IRRIGATION DISTRICT

THIS BID IS SUBMITTED BY:

Bosco Constructors, Inc.

(Firm/Company Name)

Re: SHOTCRETE FLUME 47C
PROJECT NO. 17026.01
RFB NO. P19-0015RD

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the El Dorado Irrigation District ("District") in the form included in the Contract Documents, SECTION 00520 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Contract Documents, SECTION 00100 (Advertisement for Bids), and SECTION 00200 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 90 calendar Days after the day of Bid opening.

3. In submitting this Bid, Bidder represents:

(a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

<table>
<thead>
<tr>
<th>Addendum No.</th>
<th>Addendum Date</th>
<th>Signature of Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7/1/2019</td>
<td>Patrick Robinson</td>
</tr>
</tbody>
</table>

00400 - 1
(b) Bidder has visited the Site and performed tasks, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in SECTION 00520 (Agreement), Article 5.

(c) Bidder has given District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by District is acceptable to Contractor.

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following List of Bid Prices:

**SCHEDULE OF BID PRICES**

All Bid items, including lump sums, unit prices and alternates, must be filled in completely. All items are described in Section 01200 (Measurement and Payment). Quote in figures only, unless words are specifically requested.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>ESTIMATED QUANTITY</th>
<th>UNIT</th>
<th>UNIT PRICE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bonds and Insurance</td>
<td>1</td>
<td>Lump Sum</td>
<td>$10,000</td>
<td>$10,000</td>
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<tr>
<td>2.</td>
<td>Safety Plan and Programs</td>
<td>1</td>
<td>Lump Sum</td>
<td>$5,000</td>
<td>$5,000</td>
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<tr>
<td>3.</td>
<td>Mobilization/ Demobilization</td>
<td>1</td>
<td>Lump Sum</td>
<td>$15,000</td>
<td>$15,000</td>
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<tr>
<td>4.</td>
<td>Shotcrete</td>
<td>1</td>
<td>Lump Sum</td>
<td>$119,000</td>
<td>$119,000</td>
</tr>
</tbody>
</table>

**TOTAL BID PRICE** $149,000

Total Bid Price: **One hundred forty nine thousand dollars and zero cents.**

(Words)

5. The undersigned acknowledges that District reserves the right to accept Alternate(s) within 10 calendar Days after the District signs the Agreement, or other period stated. Following any such acceptance, the undersigned will accept
and execute any change order confirming the acceptance. The amount of any change order shall be solely the amount identified above for the Alternate(s) accepted, without any additional overhead, profit, markup or other adjustment. Similarly, the exact amounts payable with respect any Unit Price Items will be confirmed by change order, and the amount of any change order shall be solely the amount identified above for the applicable Unit Prices times the final quantities, without any additional overhead, profit, markup or other adjustment. Finally, the exact amount payable with respect to any allowance item will be determined as otherwise provided in the Contract Documents.

6. **Selection of Apparent Low Bidder** The undersigned acknowledges that the Apparent Low Bidder will be the Bidder submitting the lowest combination of Bid Items 1 through 4, based on the assumptions (if any) set forth in the Schedule of Bid Prices.

7. The undersigned Bidder understands that District reserves the right to reject this Bid.

8. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this SECTION 00400 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by SECTION 00200 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, SECTION 00520 (Agreement), SECTION 00610 (Construction Performance Bond), and SECTION 00620 (Construction Labor and Material Payment Bond).

9. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.

10. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in SECTION 00200 (Instructions to Bidders), in the amount of ten percent (10%) of the Total Bid Price set forth above and made payable to "EI Dorado Irrigation District".

11. The undersigned Bidder agrees to complete all work within the time specified in SECTION 00520 (Agreement). The undersigned Bidder acknowledges that District has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges District has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.
12. The undersigned Bidder agrees that liquidated damages for failure to complete all Work in the Contract within the time specified in SECTION 00520 (Agreement) shall be as set forth in SECTION 00520 (Agreement).

13. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).
NAME OF BIDDER: Bosco Constructors, Inc.

licensed in accordance with an act for the registration of Contractors, and with license number: 972065
Expiration: 4/30/2020

California

Where incorporated, if applicable

Patrick Robinson

Principals

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature of Bidder

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address:

21353 Mayall St.
Chatsworth, CA, 91311

Officers authorized to sign contracts:

Patrick Robinson, President

Telephone Number(s):

(818) 700-0304

Fax Number(s):

(818) 700-0307

E-Mail address:

boscoconstructor@gmail.com

CA Public Works Contractor (PWC) DIR No.:

1000020320

Federal ID Number:

27-0553218

Date of Bid:

7/5/2019 - 7/8/2019

END OF SECTION
# QUOTATION

**Project Name:** FLUME 47C REPLACEMENT  
**Project Location:** PLACERVILLE, CA  
**Customer Name:** El Dorado County  
**Attn To:**  
**Phone:**  
**Quote Number:** Q-00024682  
**Quoted Date:** 6/05/2019  
**Quoted By:** Derek Goins

<table>
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<tr>
<th>ITEM</th>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>PRICE EACH</th>
<th>EXT PRICE</th>
</tr>
</thead>
</table>
| 1    | 221.00| REDI-ROCK BLR PC MIDDLE 28 LEDGESTONE  
Ship Code: F.O.B - JENSEN PRECAST YARD                                                               | $165.00    | $36,465.00 |
| 2    | 44.00 | Non-Inventory item 28" PC TOP BLOCK,  
Ship Code: F.O.B - JENSEN PRECAST YARD                                                              | $175.00    | $7,700.00  |
| 3    | 35.00 | Non-Inventory item 28" PC BOTTOM BLOCK  
Ship Code: F.O.B - JENSEN PRECAST YARD                                                                | $165.00    | $5,775.00  |
| 4    | 3.00  | Non-Inventory item SPECIAL 28" MIDDLE BLOCK WITH 4" SDR CAST THROUGH CENTER OF FACE, BELL END AT FACE FOR CONNECTION, PIPE STUBBED AT REAR FOR COUPLER TO BE INSTALLED IN THE FIELD.  
Ship Code: F.O.B - JENSEN PRECAST YARD                                                                | $255.00    | $765.00    |
| 5    | 1.00  | Non-Inventory item 8-XT GEOGRID ROLLS 16 EACH. GRID IS CUT IN 1' STRIPS,  
Ship Code: F.O.B - JENSEN PRECAST YARD                                                                | $4,016.25  | $4,016.25  |

**DELIVERY**  

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<th>NET PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,700.00</td>
</tr>
</tbody>
</table>

**Freight**  
CUSTOMER TO OFFLOAD AND STOCK PILE AT TIME OF DELIVERY, 1 HOUR OFFLOAD TIME ALLOTTED.  
STAND BY TIME AT $95 PER HOUR WILL BE ASSESSED OVER THE GIVEN TIME.

**GRAND TOTAL:** $62,421.25

ALL ORDERS ARE SUBJECT TO CREDIT APPROVAL AND ACCEPTANCE BY SELLER.  
QUOTED PRICES DO NOT INCLUDE SALES TAX ON PRECAST ITEMS.  
A 3% CREDIT CARD SERVICE FEE MAY BE ADDED FOR ALL CREDIT CARD PAYMENTS.  
DELIVERY TRIPS, SETTING TIME, OR MATERIALS NOTED ABOVE WILL BE BILLED ACCORDINGLY.  
OFFER TO SELL SUBJECT TO JENSEN PRECAST'S COMPANY POLICIES, TERMS AND CONDITIONS.  
PLEASE REFER TO https://www.jensenprecast.com/legal/Terms-And-Conditions-Sparks.pdf FOR COMPLETE TERMS AND CONDITIONS WHICH ARE HEREBY INTEGRATED INTO THIS QUOTATION.
# QUOTATION

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<thead>
<tr>
<th>Project Name:</th>
<th>FLUME 47C REPLACEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Location:</td>
<td>PLACERVILLE, CA</td>
</tr>
<tr>
<td>Customer Name:</td>
<td>El Dorado County</td>
</tr>
<tr>
<td>Attn To</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
</tr>
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</tbody>
</table>

Includes: 11.00 Special truck(s), Please allow minimum 72 hours from request for delivery to receipt of goods. This is in addition to the time required for manufacturing of the product, which will be determined upon receipt of purchase order. Delivery includes 1.00 hours of offload & set time per truck. If the material is loaded and subsequently cancelled by the customer, a minimum restocking fee of $300.00 will apply to each load.

---

**Derek Goins**

---

**BY CUSTOMER**

---

**CUSTOMER PO**

---

**CONTACT INFORMATION**

Email: dgoins@jensenprecast.com
Phone: +1 (775) 352-6379

---

**BY JENSEN PRECAST**

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ALL ORDERS ARE SUBJECT TO CREDIT APPROVAL AND ACCEPTANCE BY SELLER.
QUOTED PRICES DO NOT INCLUDE SALES TAX ON PRECAST ITEMS.
A 3% CREDIT CARD SERVICE FEE MAY BE ADDED FOR ALL CREDIT CARD PAYMENTS.
DELIVERY TRIPS, SETTING TIME, OR MATERIALS NOT NOTED ABOVE WILL BE BILLED ACCORDINGLY.
OFFER TO SELL SUBJECT TO JENSEN PRECAST’S COMPANY POLICIES, TERMS AND CONDITIONS.
PLEASE REFER TO https://www.jensenprecast.com/legal/Terms-And-Conditions-Sparks.pdf FOR COMPLETE TERMS AND CONDITIONS WHICH ARE HEREBY INCORPORATED BY REFERENCE.
ORDERING INSTRUCTIONS

Please refer to the quotation number and date on all orders. Indicate desired delivery dates, quantities and item priority if applicable. Please contact our office for delivery schedules. Delivery lead-time will be estimated upon receipt of order, and is based on actual demand at that time. Any dates discussed prior to order are non-binding estimates. Orders for non-standard products should be accompanied by specifications, and blue prints or scale drawings. Notify us as soon as possible to insure prompt delivery.

SHIPPING POLICY

1. Jensen Precast accepts responsibility for proper installation and assembly of its products when installed or supervised by its authorized representative. Any product handled, moved, or installed by others, nullifies the responsibility of Jensen Precast.

2. The customer will be prepared to receive products at the specified delivery time. Excessive unloading or stand-by time, resetting or re-delivery not caused by Jensen Precast will be charged at the hourly rate for the equipment involved.

3. The customer will be solely responsible for the following:  
   A. Finish grade, leveling, and position of product.
   
   B. Grouting, and/or sealing of vault sections, grade rings, risers, frames and covers, pipes, etc.
   
   C. Excavation, bedding, shoring, backfilling, compacting and grading.
   
   D. Water and/or flotation control.
   
   E. Setting and adjusting ladders, racking, grates or other hardware.
   
   F. All other site work not specifically referred to.

4. Equipment belonging to the company cannot be left at any jobsite for the purpose of unloading or setting by others unless previously agreed to in writing between Jensen Precast and the customer.

5. Carriers are responsible for goods lost or damaged in transit. Damages or shortages should be indicated on the carrier’s delivery receipt and any claims should be made in writing directly to the carrier.

6. All products are to be delivered in the number of trips specified. Charges will be added for additional trips.

COMPANY POLICIES TERMS AND CONDITIONS
THE POLICY TERMS AND CONDITIONS, Delineated herein shall apply to all quotations, or offers to sell.

1. **Goods To Be Provided:** Jensen Enterprises, Inc. dba Jensen Precast ("Jensen Precast") agrees to sell to Customer, on the terms and conditions stated herein, the materials and related items (the "goods") identified in Jensen Precast's quotation to Customer. Customer is solely responsible for determining whether the goods listed are the correct types and/or sufficient in number to meet Customer's needs and/or requirements. Jensen Precast's offer to sell is based on customer approval of Jensen Precast standard product drawings or submittals, and not in accordance with any plans and specifications, unless agreed to in writing by a duly authorized representative of Jensen Precast.

2. **No Additional Terms Of Sale:** Customer's acceptance of Jensen Precast's quotation is limited to these Terms and Conditions of Sale. Any new or different terms or conditions stated or proposed by Customer in its acceptance of Jensen Precast's quotation or in any accompanying or related purchase order or other document are hereby rejected by Jensen Precast and shall not be binding upon Jensen Precast. The entire contract is embodied in this writing. This writing constitutes the final expression of the parties' agreement, and it is a complete and exclusive statement of the terms of that agreement.

3. **Payment Terms:** Jensen Precast may require payment in full prior to manufacture or shipment of any goods. If Jensen Precast agrees to provide materials on a "Cash on Delivery" basis, payment in full is due upon arrival of Jensen Precast's equipment, prior to setting of product or unloading of trucks. Credit sales will be made only after receipt of a signed Jensen Precast credit application and written credit approval by Jensen Precast's credit manager. On all credit sales, payment in full is due within 30 days after Customer's receipt of materials or services. Customer agrees to pay a service charge of 1.5% per month on all invoices not paid when due. At its option, Jensen Precast may decline to make delivery or shipment to Customer if any invoice remains past due. Customer waives and releases any claim against Jensen Precast for loss or damage allegedly sustained by Customer as a result of Jensen Precast's refusal to make delivery or shipment under such circumstances. All payments shall be made in U.S. dollars and, unless otherwise designated by Jensen Precast in writing, shall be sent to Jensen Precast's Corporate Office, 825 Steneri Way, Sparks, NV 89431.

4. **Price:** The price(s) stated in Jensen Precast's quotation to Customer are firm for 30 days. The prices stated in Jensen Precast's quotation are subject to sales and use tax in accordance with Section 372 of the Nevada Revised Statutes. Customer shall reimburse Jensen Precast for all sales and use taxes imposed upon: (a) the sale of the goods; and/or, (b) the use of any materials consumed by Jensen Precast; and/or, (c) the sale of any fixtures or equipment incident to this contract. Prices are subject to delivery charges unless quoted as delivered (see shipping code definitions on quotation). Jensen Precast reserves the right to increase the cost of delivery or shipment if Customer increases mileage or number of trucks specified in the original quotation. Prices quoted are based on quantities indicated, and on customer acceptance of the entire quote. Jensen Precast reserves the right to accept or reject partial orders.

5. **Time For Performance:** Jensen Precast will endeavor to meet any reasonable shipping date(s) requested by Customer. However, Jensen Precast does not guarantee that the goods will be furnished by any particular date. All shipping dates stated or indicated are estimates only and are based upon conditions known at the time the dates were stated or indicated. Jensen Precast shall not in any event
be liable for any loss or damage sustained by Customer on account of failure to meet any delivery or
shipping date.

6. **Delivery**: Customer or its designated representative shall be prepared to unload, receive, and accept
the goods at the time specified on the order. Customer shall provide assistance in delivering the
goods, including but not limited to assisting in backing and directing Jensen Precast’s truck at the
delivery site, providing access to the delivery site that is acceptable to Jensen Precast, and providing a
setting location for the truck, crane or other delivery equipment that is acceptable to Jensen Precast.
Jensen Precast shall not be liable for any property damage arising from or related to delivery of the
goods, including without limitation damage to sidewalks, curbs, fences, valves, conduit, pipes,
concrete, asphalt, lawns, trees, or landscaping. All excessive unloading or stand-by time, resetting or
re-delivery will be charged for at the current hourly or mileage rates of the equipment involved. If for
any reason Jensen Precast cannot set the goods at the time of delivery, Customer shall be responsible
for setting the goods by other means, at no cost to Jensen Precast.

7. **Customer Responsibilities**: The Customer or its designated representative shall be solely responsible
for accomplishing the following:

   a. Finish grade, leveling and position of the goods.

   b. Grouting and/or sealing of vault sections, grade rings, risers, frames, covers, pipes or similar
structures, unless a duly authorized representative of Jensen Precast has stated in writing that Jensen
Precast will perform installation and sealing of the goods.

   c. Excavation, bedding, shoring, backfilling, compacting and grading.

   d. Water and/or flotation control.

   e. Setting and adjusting ladders, racking, grates or other hardware.

   f. Providing a one- or two-person ground crew to assist the Jensen Precast crane operator.

   g. All other site work not specified above.

8. **Returns**: The goods shall not be returned for credit without prior written authorization and
approval by a duly authorized representative of Jensen Precast. A minimum handling charge of 15%
plus actual shipping or delivery costs shall be made on all goods returned to compensate for costs of
accounting, reconditioning, restocking and delivery, except when due to fault or error of Jensen
Precast. No credits shall be allowed on used, damaged, custom, specially ordered or specially
manufactured goods. Customer shall bear the cost of any labor, damage or transportation associated
with return of the goods.

9. **Equipment**: Unless otherwise agreed to in a writing signed by a duly authorized representative
of Jensen Precast, equipment belonging to Jensen Precast cannot be left at any job site for the purpose
of unloading or setting by others.

10. **Project Information**: Customer agrees to furnish to Jensen Precast promptly upon request all
project information necessary for Jensen Precast to perfect or provide notice of its mechanic’s lien,
stop notice, and/or payment bond rights.

11. **Force Majeure**: Jensen Precast will not be liable for any delay or for failure to perform its
obligations hereunder resulting from any cause beyond Jensen Precast’s reasonable control including,
but not limited to: Customer’s failure to timely supply Jensen Precast with necessary data or specifications; any changes in such data or specifications at Customer’s request; fires; explosions; floods; acts of God; epidemics; quarantine; embargoes; strikes; work stoppages or slowdowns or other industrial disputes; accidents; riots or civil disturbances; acts of civil or military authorities; inability to obtain any license or consent necessary in respect of any the goods; inability to obtain equipment, materials, labor, fuel or supplies; and delay by suppliers or material shortages.

12. **Limited Warranty:** For a period of one year from the date of shipment or delivery to Customer, Jensen Precast warrants all of the goods which it has manufactured to be free of material defects. If any such goods are found to be materially defective during the warranty period, Jensen Precast agrees to, in its sole discretion, repair or replace the defective goods without charge to Customer. Customer’s remedy with respect to such goods is limited to repair or replacement. For goods not manufactured by Jensen Precast, Customer agrees to accept as its sole remedy the warranty, if any, offered by the manufacturer or manufacturers of such goods. **AS TO ALL GOODS SOLD BY JENSEN PRECAST TO CUSTOMER, THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. JENSEN PRECAST SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR LIQUIDATED DAMAGES OF ANY KIND, WHETHER THE CUSTOMER’S CLAIM IS BASED UPON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.**

13. **Indemnity:** Customer is solely responsible for the selection, installation, and use of the goods. Therefore, to the fullest extent permitted by law, Customer agrees to defend and indemnify Jensen Precast from and against any claim for loss or damage, including attorneys’ fees and experts’ or consultants’ fees, arising from or relating to such selection, installation, and use. This indemnity applies regardless of any active and/or passive negligent act or omission on the part of Jensen Precast or its employees; provided, however, Customer shall not be obligated to indemnify Jensen Precast for the sole negligence or willful misconduct of Jensen Precast or its employees.

14. **Risk of Loss:** The risk of loss shall pass to Customer based on the applicable shipping code:

   a. “Delivered and Set”: Risk of loss shall pass to Customer when Jensen Precast’s delivery truck has unloaded the product.


   d. “F.O.B. Jensen Precast Yard”: Risk of loss shall pass upon tender of delivery of the goods to a common carrier or Customer’s truck. Buyer shall procure and maintain insurance on the goods sufficient to protect its interests.

15. **Dispute Resolution:** All disputes arising from or relating to these Terms and Conditions of Sale and/or the furnishing of any goods by Jensen Precast to Customer shall be heard and decided exclusively in a State or Federal Court located in the state of Nevada. These Terms and Conditions of Sale shall be construed and enforced in accordance with the laws of the State of Nevada. In any legal proceedings, the prevailing party shall be entitled to recover its reasonable attorneys’ fees and costs.
16. **Submittals and Tests:** Jensen Precast reserves the right to charge customers for the cost of submittals, engineering or tests that are in addition to those customarily provided.

17. **Custom Products:** Jensen Precast will charge customer for any work completed at the time of cancellation of a custom or special order. All custom orders will be invoiced to customer if not released for delivery within 30 days past estimated date of delivery.

18. **Storage Fees:** For every month beyond the requested manufacture date that the product remains in Jensen Precast’s possession, a fee of 1% per month of total sale price of product will be added to the invoice total due upon final delivery/pick up.

19. **Invoice Date:** Customer will be invoiced for product at either, date of delivery or 60 days past date of originally requested delivery/pick up date.

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**SHIPPING CODE DEFINITIONS**

**Code #1 - DELIVERED AND SET**

Quoted prices include product delivery and setting with our boom truck subject to the following provisions:

1. Jensen Precast will provide driver/crane operator services only using Jensen Precast’s boom truck.

2. Customer will be solely responsible for all other site work associated with setting and installing this product unless specifically referred to in writing.

3. Most products require assistance from the customer in setting (generally one or two laborers). Contact Jensen Precast for the specific requirements of each product.

4. The customer will provide a properly prepared, sized and graded, excavation. Access and setting location for our boom truck must be acceptable to our driver or representative.

5. Since site conditions, products, and delivery equipment vary, the logistics must be considered to determine the best approach for setting the product. Attention must be given to the variables of the set, including:
   
a. Capacity of the Jensen Precast boom truck and truck crane to be used.

b. The maximum product weight relative to the setting distance from the center of the crane to the center of the excavation cannot exceed the boom truck rated capacity.

c. The route to the setting location must be accessible for the boom truck without towing or pushing.

d. The type of terrain, site slope, and ground conditions for outrigger footings, at the setting location.

e. Overhead restrictions and other physical constraints.
6. Any or all of the above could prevent Jensen Precast from setting the product. In cases where Jensen Precast cannot set the product, we will off load the product in accordance with shipping code definition #3 herein.

NOTE: If for any reason Jensen Precast cannot set the product, Jensen Precast will not be responsible, or charged, for setting by any other means.

Code #2 - DELIVERED - F.O.B. TRUCK:
Quoted prices include product delivery to the job site only; “Free On Board” the truck. Generally, this would be a flatbed truck without a crane or other unloading equipment subject to the following provisions:

1. The company will provide driver services only and the customer will supply means of unloading and setting products.

Code #3 - DELIVERED AND OFFLOADED:
Quoted prices include product delivery to the job site and unloaded from our truck subject to the following provisions:

1. Jensen Precast will provide driver services and a means of unloading products.

2. The customer will provide an acceptable location for unloading and storing products, and the means for setting the product in the permanent location.

Code #4 - F.O.B. - JENSEN PRECAST YARD
Quoted prices include product loading on customer or common carrier trucks in the yard subject to the following provisions:

1. Customer will be responsible for any additional charges, including charges for freight, shipping, delivery and setting.

2. Customer or common carrier will be responsible for tie down, dunnage, pallets, etc., unless specifically referred to.

3. Yard location will be addressed in section one of the quotation.

Code #5 - OTHER AS SPECIFIED
If not specified in section one of this quotation, please consult our office for more specific information or written clarification.

Code A - DELIVERED IN FULL TRUCK QUANTITIES OR A COMBINED SHIPMENT:
Quoted prices include delivery and/or setting as delineated above in codes 1, 2 or 3:

1 Delivered in combination with other products in the quotation.
2 Delivered when Jensen Precast is otherwise on the jobsite.
3 Delivered in full truckload quantities.

**Code B- Delivery Pre-Attached**

Quoted prices include item pre-attached or installed on an item that is also being delivered.

**Code C- Assembled and Sealed**

Jensen Precast will provide delivery as specified in the quote per codes 1-5 above, and will additionally provide assembly and sealing of the structural components of the vault or tank. Customer will be responsible for installing and sealing grade rings, rings and covers, and any other installation or site work required.
April 3, 2019 (Rev. 1 5/13/19)
EID Project No. 17026.01
Gannett Project No. 18-005.01

Mr. Cary Mutschler
Senior Civil Engineer
El Dorado Irrigation District
2890 Mosquito Ridge Road
Placerville, CA 95667

Re: Proposal for Post Design Services
Flume 47C Replacement
El Dorado County, CA

Dear Mr. Mutschler:

In accordance with Project Number 17026.01, SAGE Engineers, a Business Group of Gannett Fleming, Inc. (Gannett) has prepared this proposal to provide post design engineering services for the Flume 47C Replacement construction project. We summarize below our understanding of the project, and a description of our proposed scope of services, estimated project schedule, and estimated fees.

PROJECT BACKGROUND

El Dorado Irrigation District (District) owns and operates a series of dams, canals, flumes, siphons, penstock, and powerhouse, which are part of the Federal Energy Regulatory Commission (FERC) Hydroelectric Project No. 184-CA. The system includes over 22 miles of canals and flumes (a.k.a. El Dorado Ditch) along Highway 50, including the subject Flume 47C, to deliver water from the South Fork of the American River for drinking water purposes and ultimately delivers water to the District’s powerhouse which can generate 21 MW power.

Flume 47C is located along the El Dorado Ditch near District Camp 5, east of Pollock Pines in El Dorado County on the south side of U.S. 50 near Fresh Pond. Access to the site is from an unpaved residential road extending south from Old Carson Road near its intersection with Highway 50. Flume 47C is approximately 100 feet of elevated trapezoidal wood flume that is supported by a timber substructure. Upstream and downstream of the flume, the gunite-lined El Dorado Ditch constricts to match the width of the timber flume. Approximately 240 feet downstream of Flume 47C, there is an abandoned access road/ramp from the main residential access road that extends down to the canal but is overgrown with trees and vegetation.

The objectives of this project are to:

- Remove the existing timber flume;
- Rebuild the washed-out berm with a mechanically stabilized earth (MSE) wall;
- Replace the existing flume with a generally uniform width shotcrete lined canal to match the upstream and downstream sections;
- Build a light equipment bridge across the canal to provide access to the berm for maintenance utilizing an abandoned road downstream of the flume; and
- Widen the berm from the downstream end of the new shotcrete to the new bridge.

Gannett previously prepared the design documents for the Flume 47C Replacement project, dated February 25, 2019. Construction will be performed by EID’s own construction crew, referred to as Contractor herein. Construction is expected to occur during the annual ditch outage from October 01, 2019 to December 15, 2019, inclusive of weekends.

The District is seeking post design engineering services during construction including submittal review, Requests for Information (RFI) or design changes to address actual field conditions encountered, site visits during key aspects of construction, materials testing, and As-built documentation and drafting. The District has also requested that Gannett provide construction staking services. Gannett proposes to use Youngdahl Consulting Group to provide materials testing services and will retain a surveyor to provide construction staking services.

**SCOPE OF WORK**

Our proposed scope of work is provided below.

**Phase 1.0 – Post Design Services**

**Task 1.01 - Office Support**
- Gannett’s engineering office support will provide periodic consultation to review and respond to Contractor submittals before and during construction. This will also include office engineer support for minor drawing changes and preparation of Design Change Notifications (DCN), as required.
- Gannett will provide support during construction by reviewing and responding to contractor requests for information (RFI) regarding the construction documents.
- Gannett’s office support team responsible for supporting review of RFI’s and submittals will consist of one staff engineer, one senior project engineer and the engineer of record (EOR).

**Deliverables**
- Maintain and distribute weekly an RFI/DCN/submittal registry.

**Assumptions**
- Gannett has assumed a total of six Contractor RFIs through construction. We have assumed 3 hours/RFI provided by a staff engineer for review/response to the RFI, as well as, 1.5 hours/RFI for support and maintaining the RFI log provided by a Senior Project Engineer and 0.5 hour/RFI for review by EOR.
- Gannett has assumed 6 hrs/week for a staff engineer, 3 hrs/week for a Senior Project Engineer, and 1 hr/week for the EOR for reviewing and responding to Contractor submittals, maintaining a DCN/RFI/Submittal Log, reviewing submittal responses, making minor drawing changes, generating Design Change Notifications, etc (exclusive of PM and EOR QA/QC) for a total of six weeks. Submittal services are anticipated to occur over six weeks, from August 19 through September 27, 2019.
Task 1.02 – Meetings
- Gannett’s engineering team, to include the Field Engineer, Project Manager, and EOR, will attend one construction kick-off meeting.
- Gannett’s Project Manager will attend one construction coordination meeting per week for the duration of the project.

Assumptions
- The construction kick-off meeting is assumed to be 4 hours in length, including one site visit, and is assumed to occur approximately one week prior to construction.
- The weekly coordination meeting is assumed to be in person and 1 hour in length for 11 weeks. A site visit following each meeting will be combined with a periodic observation site visit under Task 1.03.

Task 1.03 – Field Engineering Services
- Gannett’s engineering team, which includes Youngdahl, will provide part-time engineering support to the District during construction. The field engineering services associated with this task include:
  - Our field engineer will work with the site foreman and District Inspector to coordinate times in which periodic observation is suitable for the project and adjust our time on-site accordingly. The purpose of our engineering support will be to aid the District and the contractor with interpretation of the plans and answer questions regarding unforeseen conditions. The field engineer will produce daily field reports for each site visit.
  - Our engineering team will include one concrete/shotcrete quality control representative that will be onsite at all times during concrete/shotcrete operations to verify the approved mix design is being used and to test the concrete for air content, temperature, slump, and to take samples for compressive strength tests.
  - Additionally, our engineering team will include one field representative for compaction testing during construction of the MSE wall.

Assumptions
- The field engineer will conduct two 4-hour site visits per week and the EOR will conduct one 4-hour site visit every two weeks during construction.
- Assume two days of shotcrete installation for the new ditch and one day of concrete installation for the two bridge abutments.
- A total of two (2) shotcrete panels and five (5) concrete cylinders will be sampled, and a total of 15 cylinders will be tested for compressive strength.
- A total of ten site visits for compaction testing; two nuclear gauge compaction tests per site visit.
- Two modified proctor tests for the engineered fill and one modified proctor tests for the native backfill material.

Task 1.04 – Construction Staking Services
- Gannett will retain a surveyor to provide construction staking services. Staking services will include:
  - One set of construction stakes delineating the new Berm Alignment Layout Line (LOL).
  - One set of construction grade stakes delineating the new MSE Wall.
o One set of construction stakes delineating the El Dorado Ditch Centerline Alignment.
  o One set of construction stakes delineating the Sawcut limits for Flume 47C.
  o Two sets of construction grade stakes delineating the new Shotcrete Canal.
  o One set of construction stakes delineating the Access Ramp limits.
  o Two sets of stakes to facilitate the construction of the new Bridge. It is anticipated that the first set of construction stakes will include grade stakes to facilitate the placement of the new Bank and Berm Abutments.

Assumptions
  o All staking will be performed pursuant to the information shown on the Flume 47C Replacement Plan, unless otherwise directed by the Engineer of Record and the District.
  o Services will be provided on a time-and-materials basis; prevailing wages apply.
  o The staking services are assumed to be conducted in up to three (3) site mobilizations.
  o After first mobilization, District will provide Gannett with a minimum 72-hour notice for subsequent staking requests.

Task 1.05 – Project Closeout
Part I: As-built Record Documentation and Drafting:
  • Gannett will compile Contractor-prepared red lines into one conformed set of “redlined” as-built documents.
  • Gannett will complete As-built drafting based on the compiled set of “redlined” drawings. Gannett has estimated the hours to accomplish this task based on previous experience of projects with similar scope. Following construction, Gannett will provide a revised As-built drafting effort based on the compiled “redline” drawings.

Part II: Administrative Closeout:
  • Gannett will compile and turn over all final project deliverables and close out the work coincident with completion of As-builts.

Task 1.06 – Project Management and Coordination
  • The following project management activities will be performed on an ongoing basis throughout the project. Each of these tasks are not necessarily discrete tasks to be estimated separately but are to be included in the overall time allotted to the Gannett’s project management.
    o Project setup, planning and invoicing: Project management and project control activities associated with project setup. Manage and coordinate the execution of the work plan. Project management and project control activities associated with invoicing
    o Staffing, budget, and schedule control: Coordinate resource staffing. Project controls activities to track and control cost and schedule.

ASSUMPTIONS
  • The District will have an inspector onsite throughout construction to observe all items on the quality control plan that do not require the EOR or representative.
  • Construction will be scheduled for 7 days a week.
  • A construction summary report is not required.
ESTIMATED SCHEDULE

A final project schedule has not yet been established and will depend on the date we receive a notice to proceed and the construction schedule. Based on our understanding of the project we have tentatively assumed the following preliminary milestone schedule.

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Milestone Date</th>
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<tbody>
<tr>
<td>Obtain Notice to Proceed</td>
<td>August 5, 2019</td>
</tr>
<tr>
<td>Submittal Review/RFIs</td>
<td>August 19, 2019 – September 27, 2019</td>
</tr>
<tr>
<td>Construction Kickoff Meeting</td>
<td>September 30, 2019</td>
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<tr>
<td>Field Engineering Services</td>
<td>October 1, 2019 – December 15, 2019</td>
</tr>
<tr>
<td>Project Closeout</td>
<td>January – February 2020</td>
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</table>

ESTIMATED FEES

Based on the Scope of Work and Estimated Schedule, Gannett estimates the following fees:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Fee Basis</th>
<th>Estimated Fees</th>
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</thead>
<tbody>
<tr>
<td>Task 1.01 – Office Support</td>
<td>Time &amp; Expenses</td>
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</tr>
<tr>
<td>Task 1.02 – Meetings</td>
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<td>Task 1.03 – Field Engineering Services</td>
<td>Time &amp; Expenses</td>
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<td>Task 1.04 – Construction Staking</td>
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<td>Task 1.06 – Project Management</td>
<td>Time &amp; Expenses</td>
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<td>Total Estimated Fee</td>
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<td>$ 89,583</td>
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A project budget backup is attached showing our expected level of effort for the above Scope of Work. Gannett proposes to submit progress invoices for its services on a monthly basis for an amount relative to the effort expended for each task. All ‘time and expenses’ work will be billed in accordance with our Schedule of Charges attached to Flume 47C Replacement Notice to Proceed dated April 6, 2018.

We will not exceed the budget presented above to perform the proposed Scope of Work. Should additional work, site visits, or meetings be required in addition to the Scope of Work above, or should significant changes be required due to reasons beyond the control of Gannett, the time required for these items will be billed on a ‘time and expenses’ basis in accordance with the contract.

We appreciate the opportunity to propose on this project and we look forward to working with you. If this proposal is acceptable, please forward a Task Order referencing this Scope of Work and its attachment. If you have any questions, please call us.

Sincerely yours,
Gannett Fleming, Inc.

Jerry S. Pascoe, PE, GE #2613
Principal Geotechnical Engineer

Attachment: Project Budget Backup
ATTACHMENT
Project Budget Backup
### SAGE Project Budget Backup - Flume 47C Post Design Services

<table>
<thead>
<tr>
<th>Task No.</th>
<th>Task Name</th>
<th>Principal Hour</th>
<th>Principal Cost</th>
<th>Senior Project Hour</th>
<th>Senior Project Cost</th>
<th>Staff Engineer Hour</th>
<th>Staff Engineer Cost</th>
<th>Senior CADD/GIS Technician Hour</th>
<th>Senior CADD/GIS Technician Cost</th>
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<td>Task 1.03</td>
<td>Field Engineering Services</td>
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<td>88</td>
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<td>0</td>
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<td>112</td>
<td>$21,848</td>
<td>$11,408</td>
<td>$33,262</td>
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<td>Task 1.04</td>
<td>Construction Staking</td>
<td>6</td>
<td>$1,038</td>
<td>0</td>
<td>$-</td>
<td>0</td>
<td>$-</td>
<td>0</td>
<td>$-</td>
<td>6</td>
<td>$1,038</td>
<td>$-</td>
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<tr>
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<td>Project Closeout</td>
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<td>$2,484</td>
<td>26</td>
<td>$4,498</td>
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<td>$-</td>
<td>30</td>
<td>$4,500</td>
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<td>$11,482</td>
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<td>23.5</td>
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<td>$-</td>
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<td>29.25</td>
<td>$5,653</td>
<td>$-</td>
<td>$5,653</td>
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<tr>
<td><strong>Project Totals</strong></td>
<td><strong>52.00</strong></td>
<td><strong>$14,283</strong></td>
<td><strong>32,092</strong></td>
<td><strong>89,583</strong></td>
<td><strong>$7,830</strong></td>
<td><strong>4,500</strong></td>
<td><strong>302.25</strong></td>
<td><strong>$58,705</strong></td>
<td><strong>29,408</strong></td>
<td><strong>$89,583</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td></td>
</tr>
</tbody>
</table>
**Project Description:**
Flume 47C is an elevated flume, approximately 150 feet in length, and constructed by PG&E in the mid 1950’s. In 2016, District construction crews made interim repairs to ensure the continued safe operation until a complete replacement of the flume can occur. The geotechnical assessment and design for the project have been completed and the project is in the process of being designed. The construction costs shown in this CIP is an estimate based on the average of prior construction bids received for prior flume replacement projects. Construction cost estimates will be refined upon completion of the design.

**Basis for Priority:**
The flume will continue to deteriorate potentially causing flume 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:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Funded to Date</th>
<th>Expenditures through end of year</th>
<th>2019 - 2023 Planned Expenditures</th>
<th>Total Project Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study/Planning/Env</td>
<td>$443,955</td>
<td>$365,261</td>
<td>$2,252,500</td>
<td>$2,617,761</td>
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<tr>
<td>Design</td>
<td>$165,261</td>
<td>2019 - 2023</td>
<td>$2,252,500</td>
<td></td>
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<tr>
<td>Cash flow through end of year</td>
<td>$200,000</td>
<td>$2,177,500</td>
<td>-</td>
<td></td>
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<tr>
<td>Project Balance</td>
<td>$78,694</td>
<td>$2,173,806</td>
<td>$2,173,806</td>
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</table>

**Description of Work**

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<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study/Planning/Env</td>
<td>$10,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$10,000</td>
</tr>
<tr>
<td>Design</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$67,500</td>
</tr>
<tr>
<td>Construction</td>
<td>$2,100,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$2,100,000</td>
</tr>
<tr>
<td>Warranty/FERC QCIP</td>
<td>$75,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$75,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$2,177,500</strong></td>
<td><strong>$75,000</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>$2,252,500</strong></td>
</tr>
</tbody>
</table>

**Estimated Funding Sources**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>2019</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Rates</td>
<td>47%</td>
<td>$986,439</td>
</tr>
<tr>
<td>Water FCCs</td>
<td>53%</td>
<td>$1,112,367</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>$2,098,806</td>
</tr>
</tbody>
</table>

**Funding Comments:**

H:\CIP\2019\Hydro\17026 Flume 47C Replacement
Consideration to Award Contracts to BOSCO Construction, Jensen Precast and Gannett Fleming for the Flume 47C Replacement Project

July 22, 2019

By: Cary Mutschler
Senior Civil Engineer
Previous Board Actions

• January 28, 2019 – The Board adopted the 2019-2023 CIP, which included this project subject to funding availability.
Summary of Issues

• Flume 47C is an elevated wood flume, approximately 150 feet in length and constructed by PG&E in the 1950’s
• Repaired in 1990
• Interim repairs in 2016
  – 2016 Repairs used lag bolts to the posts to attached liner boards
47C Looking Downstream
47C Substructure
47C Substructure
Scope of Work

• Improve the single lane private roadway that EID uses to access the canal
• Construct mechanically stabilized earth wall to support new canal sections
• Construct steel reinforced shotcrete canal
• Abandon spillway upstream of current flume section
• Install new access bridge downstream of old Flume section
Construction

• Hydro staff to construct during normal outage
  – Remove existing flume section and spillway
  – Construct MSE wall
  – Cut out canal section, install rebar and then shotcrete

• Hydro did similar shotcrete work at Alarm 5 last year
# Subcontract and Material Costs

<table>
<thead>
<tr>
<th>Company</th>
<th>Fee Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosco (Shotcrete)</td>
<td>$149,000</td>
</tr>
<tr>
<td>Jensen Precast (Redi-Rock)</td>
<td>$62,422</td>
</tr>
<tr>
<td>Trucking (When needed)</td>
<td>$30,000</td>
</tr>
<tr>
<td>Sacramento Rebar (Rebar)</td>
<td>$15,000</td>
</tr>
<tr>
<td>Soil Tech (Road Treatment)</td>
<td>$5,000</td>
</tr>
<tr>
<td>Miscellaneous Materials (pipe, geo-grid, etc.)</td>
<td>$13,120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$274,542</strong></td>
</tr>
</tbody>
</table>
# Cost Breakdown

<table>
<thead>
<tr>
<th>Flume 47C Funding Requirements</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gannett Fleming (SAGE) – Construction Engineering Services</td>
<td>$89,583</td>
</tr>
<tr>
<td>Capitalized labor – Engineering and Hydro Operations</td>
<td>$901,300</td>
</tr>
<tr>
<td>BT Consulting - SWPPP</td>
<td>$17,600</td>
</tr>
<tr>
<td>Construction Subcontractors – Shotcrete, rebar, trucking, etc.</td>
<td>$274,542</td>
</tr>
<tr>
<td>Contingency – 15%</td>
<td>$192,454</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,475,479</strong></td>
</tr>
</tbody>
</table>

Engineer’s Estimate – $2,006,865
Environmental Review

• Proposed project falls within a Class 1 CEQA Categorical Exemption as the maintenance, repair, and minor alteration of existing facilities
• Class 4 CEQA Categorical Exemption consisting of minor public alterations in the condition of land
• Staff has prepared and filed a Notice of Exemption from CEQA with the El Dorado County Recorder-Clerk's office.
Board Decision/Options

• **Option 1**: Award contracts to BOSCO Construction in the not-to-exceed amount of $149,000 for placement of shotcrete; Jensen Precast in the not-to-exceed amount of $62,422 for purchase of Redi-Rock retaining wall material; Gannett Fleming (SAGE) in the not-to-exceed amount of $89,583 for construction engineering services; and authorize funding of $1,475,479 for Flume 47C Replacement, Project No. 17026.

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

• **Option 3**: Take no action.
Staff and General Manager Recommendation

• Option 1
Questions?
Subject: Consideration to award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades Project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008.

Previous Board Action
January 28, 2019 – The Board adopted the 2019-2023 CIP, which included the Southpointe Lift Station Upgrades project.

Board Policies (BP), Administrative Regulations (AR) and Board Authority
BP 3060 Contracts and Procurement
BP 6010 Wastewater System Management

Summary of Issue
The District operates 60 wastewater lift stations within the El Dorado Hills and Deer Creek Wastewater Treatment Plants collection systems. Some of the lift stations have reached the end of their useful life and are in need of large scale upgrades or complete replacement. The Southpointe Lift Station (Southpointe) has been identified as a high priority and is proposed to be rehabilitated under this contract.

Background/Discussion
The Wastewater Facilities Master Plan adopted by the Board in 2013 included a lift station condition assessment that identified lift stations in need of priority replacement/repair. Based on that assessment and input from operations staff, Southpointe was identified as lacking reliability without substantial rehabilitation and improvements. Southpointe was constructed in 1991 and is located within the right-of-way of Fitch Way near Lakehills Drive in the northern portion of El Dorado Hills. The lift station is within 500 feet of Folsom Lake.

The site contains an eight-foot diameter, 24-foot deep fiberglass wet well. The two original pumps and their associated guide rails have experienced significant corrosion. Currently one of the pumps is physically bolted to its discharge manifold requiring the wet well to be completely dewatered and a confined space entry for pump removal and maintenance. In addition, the original controls are unreliable and replacement parts are difficult to locate.

During the upgrade project, the existing electrical and mechanical equipment will be replaced, including the emergency generator. The building roof will be rehabilitated. The fiberglass wet well will be rehabilitated, retrofitted with a new precast access hatch, and prepared for accepting new submersible pumps. Four adjacent overflow tanks will be retrofitted to accommodate bypass flows to increase operational flexibility and allow the wet well to be isolated during future repairs and maintenance.
**Construction Contract**
This project was publically advertised for bidding on May 23, 2019. Ten contractor representatives attended the mandatory pre-bid meeting and two bids were received by the District. The bids are summarized below:

<table>
<thead>
<tr>
<th>Company</th>
<th>Bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syblon Reid Construction, Inc.</td>
<td>$1,552,000</td>
</tr>
<tr>
<td>TNT Industrial Contractors</td>
<td>$1,861,007</td>
</tr>
</tbody>
</table>

Syblon Reid Construction, Inc. submitted the lowest responsive, responsible bid of $1,552,000 and is qualified to perform the work. The engineer’s estimate for the project was $1,788,000.

**Construction engineering services**
Staff solicited a contract amendment proposal from HydroScience Engineers, Inc., the design consultant and engineer of record, to perform construction engineering services for the project including review of submittals, requests for information and change order requests. Youngdahl Consulting Group, Inc. will provide compaction testing during construction under an on-call contract. District construction inspection staff will perform inspection services during construction of the project.

**Environmental Review**
The District, acting as the Lead Agency, must comply with California Environmental Quality Act (CEQA) requirements for the Southpointe Lift Station Rehabilitation Project. Staff has determined that the proposed project falls within a Class 1 CEQA Categorical Exemption for the maintenance and repair of existing facilities involving negligible or no expansion of use beyond that existing at the time of the lead agency’s determination (CEQA Guidelines §15301). Additionally, the project does not trigger any exceptions to this exemption (see CEQA Guidelines §15300.2). Staff has prepared and filed a Notice of Exemption from CEQA with the El Dorado County Recorder-Clerk’s office.

**Funding**
The project is included in the approved 2019 - 2023 Capital Improvement Plan (CIP) and the project will be funded 100% by wastewater FCCs.

The following table provides a summary of the total estimated funding required for the project.

<table>
<thead>
<tr>
<th>Construction Contract – Syblon Reid Construction, Inc.</th>
<th>$1,552,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Engineering Services – HydroScience Engineers, Inc.</td>
<td>$79,300</td>
</tr>
<tr>
<td>Compaction Testing - Youngdahl Consulting Group, Inc.,</td>
<td>$4,784</td>
</tr>
<tr>
<td>Capitalized labor – Construction management and inspection</td>
<td>$125,000</td>
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<tr>
<td>Project contingency (10%)</td>
<td>$176,108</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,937,192</strong></td>
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</tbody>
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Board Options

Option 1: Award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades Project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008.

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

Option 3: Take no action.

Recommendation
Option 1

Attachments
Attachment A: Construction bid summary
Attachment B: HydroScience Engineers, Inc. proposal
Attachment C: CIP summary
Jon Money
Senior Civil Engineer

Brian Deason
Environmental Resources Supervisor

Elizabeth Dawson
Engineering Manager

Brian Mueller
Engineering Director

Dan Corcoran
Operations Director

for

Mark Price
Finance Director

Elizabeth Leeper
Deputy General Counsel

Jim Abercrombie
General Manager
**SUMMARY OF BIDS RECEIVED**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>WORK OR MATERIAL</th>
<th>QUANTITY</th>
<th>UNIT</th>
<th>AMOUNT (FIGURES)</th>
<th>UNIT PRICE (FIGURES)</th>
<th>AMOUNT (FIGURES)</th>
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<tbody>
<tr>
<td>1</td>
<td>Bonds and Insurance</td>
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<td>LS</td>
<td>$13,000.00</td>
<td>$13,000.00</td>
<td>$25,000.00</td>
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<tr>
<td>2</td>
<td>Safety Plan and Programs</td>
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<td>LS</td>
<td>1,000.00</td>
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<td>11,131.00</td>
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<tr>
<td>3</td>
<td>Mobilization/Demobilization</td>
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<td>LS</td>
<td>70,000.00</td>
<td>70,000.00</td>
<td>80,000.00</td>
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<td>4</td>
<td>Sheeting, Shoring, and Bracing</td>
<td>1</td>
<td>LS</td>
<td>1,000.00</td>
<td>1,000.00</td>
<td>1,402.00</td>
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<tr>
<td>5</td>
<td>FRP Repair Allowance</td>
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<td>ALW</td>
<td>5,000.00</td>
<td>5,000.00</td>
<td>5,000.00</td>
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<td>6</td>
<td>Demolition</td>
<td>1</td>
<td>LS</td>
<td>40,000.00</td>
<td>40,000.00</td>
<td>47,568.00</td>
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<td>7</td>
<td>Sanitary sewer manholes, gravity piping, and isolation</td>
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<td>LS</td>
<td>55,000.00</td>
<td>55,000.00</td>
<td>66,918.00</td>
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<td>8</td>
<td>Emergency Storage Tank Rehabilitation</td>
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<td>14,000.00</td>
<td>14,000.00</td>
<td>10,522.00</td>
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<td>9</td>
<td>Wet well rehabilitation</td>
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<td>LS</td>
<td>23,000.00</td>
<td>23,000.00</td>
<td>65,476.00</td>
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<tr>
<td>10</td>
<td>Submersible pumps, discharge piping, flow meter, valves, and force main</td>
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<td>LS</td>
<td>80,000.00</td>
<td>80,000.00</td>
<td>267,839.00</td>
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<td>11</td>
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<td>580,000.00</td>
<td>553,000.00</td>
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<td>Emergency backup power system</td>
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<td>130,000.00</td>
<td>130,000.00</td>
<td>158,469.00</td>
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<td>Coatings</td>
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<td>LS</td>
<td>80,000.00</td>
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<td>Vactor Tube</td>
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<td>10,000.00</td>
<td>10,000.00</td>
<td>14,250.00</td>
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<td>15</td>
<td>Sitework including concrete and paving</td>
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<td>LS</td>
<td>120,000.00</td>
<td>120,000.00</td>
<td>65,192.00</td>
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<td>16</td>
<td>Perimeter fence and gates</td>
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<td>62,770.00</td>
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<td>28,000.00</td>
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<td>MCC building rehabilitation</td>
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<td>69,000.00</td>
<td>92,065.00</td>
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<td>19</td>
<td>Odor control system</td>
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<td>10,000.00</td>
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<td>12,736.00</td>
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<td>20</td>
<td>Startup and commissioning</td>
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<td>LS</td>
<td>28,000.00</td>
<td>28,000.00</td>
<td>31,060.00</td>
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<tr>
<td>21</td>
<td>Installation, operation, and maintenance manuals</td>
<td>1</td>
<td>LS</td>
<td>10,000.00</td>
<td>10,000.00</td>
<td>12,678.00</td>
</tr>
<tr>
<td>22</td>
<td>NOA compliance and excess spoils disposal</td>
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<td>LS</td>
<td>10,000.00</td>
<td>10,000.00</td>
<td>6,212.00</td>
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<tr>
<td>23</td>
<td>All work of Contract Documents other than work separately provided for under other Bid Items</td>
<td>1</td>
<td>LS</td>
<td>125,000.00</td>
<td>125,000.00</td>
<td>145,137.00</td>
</tr>
</tbody>
</table>

**TOTAL**

$1,552,000.00 $1,861,007.00

*This tabulation represents a true and complete summary of bids received by El Dorado Irrigation District*

**PROJECT NO. 16008.01; CONTRACT NO. E19-10**

**PREPARED BY:** Lori Bazinet/Donna Hampton
District Contract Management

**SUBMITTED BY:**

[Signature]

Jon Money, P.E., Senior Civil Engineer
July 11, 2019

Jon Money
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Subject: Engineering Services During Construction for the South Pointe Lift Station Project (EID Project No. 16008.01)

Dear Jon,

HydroScience Engineers, Inc. (HydroScience) is currently providing engineering services for the South Pointe Lift Station project. The original budget for ESDC was moved to the Design Services task to provide additional budget for increases in schedule duration, revisions to design standards, and other additional coordination requirements. Additionally, we have found that Engineering Services During Construction (ESDC) on the three previous pumps station projects exceeded budgeted quantities for submittals, RFIs and related support included in the original proposal; therefore an amendment to the ESDC budget for South Pointe Lift Station should be applied to bring the scope in line with these prior project outcomes. The purpose of this letter is to request a contract amendment augmenting ESDC budgets accordingly.

HydroScience has included the following items in the ESDC budget:

- Attend the pre-construction meeting and site inspection visits.
- Coordinate engineering services during construction, including written correspondence, phone conversations and emails. All RFI, and submittal reviews will be properly coordinated with the City’s designated Construction Manager and/or Project Inspector. A log of the submittal reviews and RFI responses will be kept. This will aid in the tracking and help ensure that these tasks are completed within the agreed upon timeframe.
- A member of our electrical engineering department will attend the Factory Acceptance Test to verify compliance with the design specifications and help correct deficiencies at the System Integrator’s facility to prevent extensive field tests. A member of our electrical engineering department will attend the Site Acceptance Test to verify operation of the Instrumentation and Control System and that it is in compliance with the design specifications.
- Respond to Requests for Information (RFIs). HydroScience will review proposed substitutions for conformance to drawings and technical specifications, if any.
- Review technical submittals from the contractors in sufficient detail to determine whether or not the submitted item conforms with the intent of the plans and specifications.
- Review and provide recommendations on proposed changes to the contracts (change orders).
- Prepare record drawings to reflect the as-built project conditions for each package. Redline drawings from the contractor and/or City Inspector will be used as the basis for preparing the as-built drawings.
• Participate in the final inspection and development of the punch lists as required by the City.

HydroScience has determined the number of RFIs, submittals, and resubmittals needed to complete the project based on our experience on similar lift station projects for EID. The anticipated submittals list for this project is provided in Attachment A. This list includes references to the specification number or drawing number where the equipment or specific submittal request is referenced and the assigned reviewer. Based on the resubmittal rate of four recently completed lift station projects, HydroScience anticipates a 50% resubmittal rate for this project. We anticipate thirty (30) RFIs based on the quantity received for the Carson Creek 1 Lift Station project and a similar quantity received for the Carson Creek 2 Lift Station project. HydroScience requests additional budget to support review of eighty-eight (88) submittals and thirty (30) RFIs.

**Fee**

This amendment would be addressed as a budget increase to Design Services during Construction (Task 8) for South Pointe Lift Station. A breakdown of the fee is shown in Attachment B. This would increase our total contract amount from $678,696 to $757,996 (increase of $79,300).

If you have any questions about this proposal, please contact me at bslenter@hydroscience.com or 916-364-1490 x115.

Sincerely,

HYDROSCIENCE ENGINEERS, INC.

Bill Stenter, P.E.
Principal
## South Pointe Lift Station Project

### Attachment A: Submittal List

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>88</td>
<td>S101</td>
<td>Lanyard Anchor</td>
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### Task Description

- **Eric Jones**: Project Manager
- **Austin Poulsen**: Project Engineer
- **Bill Slenter**: Principal-in-Charge
- **QA/QC, Tech Supp**: Mike Marandi
- **Electrical/Controls**: Mark Dudley, Electrical Engineer
- **Drafter**: Bill Slenter
- **Administration**: Austin Poulsen

### Administration Hours

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<tr>
<th>Task Description</th>
<th>Labor Classification</th>
<th>Hours</th>
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<th>Repro. and ODCs</th>
<th>Direct Charges Markup</th>
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**TOTAL AMENDMENT**: 93.5 114 4 6 84 136 16 0 453.5 $76,150 $0 $3,000 $150 $3,150 $79,300

---

a Submittal number based on attached submittal list per the Contract Documents.
b Resubmittal number based on a resubmittal per submittal percentage of 50% per similar recently completed lift station projects.
Project Number: 16008  
Project Name: South Pointe Lift Station Rehabilitation  
Project Category: Reliability & Service Level Improvements  

Project Description:  
Based on a condition assessment performed by engineering and operations this lift station, which was constructed in 1990 and serves over 65 EDU's, has reached the end of its useful life. This lift station has experienced a SSO in the recent past. This lift station's electrical system is classified as an arc flash Category 3.

New pumps and controls are required, along with associated piping, flow meters and odor controls. Based on condition assessments, it is assumed the existing fiberglass wet well can be rehabilitated and reused. A new bypass manhole is planned next to the existing wet well to increase operational flexibility. After a new roof is installed and the building trim painted, the existing building will be reused to house the controls. A new fence will be installed around the perimeter. The lift station is located in the public right of way with no formal easement. As part of the project, the District will obtain a formal encroachment agreement for the lift station from the County. The design is currently underway and staff anticipates will be ready to bid by early 2019. Construction is scheduled for 2019/2020.

Basis for Priority:  
The lift station will continue to degrade increasing the risk of potential failures in the future which could result in hazards to the public and regulatory fines.

Project Financial Summary:  

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<th>Expenditures through end of year:</th>
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<td>2019 - 2023 Planned Expenditures:</td>
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<td>Cash flow through end of year:</td>
<td>$ 4,394</td>
<td>Total Project Estimate:</td>
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Project Balance: $ (0)  
Additional Funding Required: $ 1,820,000

Description of Work  

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<th>2021</th>
<th>2022</th>
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<td>Total</td>
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Funding Comments: Project replaces an existing lift station for current customers.
Consideration of Award for the Southpointe Lift Station Upgrades Project

Project No. 16008

July 22, 2019
Previous Board Actions

• January 28, 2019 – The Board adopted the 2019-2023 CIP, which included the Southpointe Lift Station Upgrades project
Summary of Issues

- District currently maintains 60 wastewater lift stations

- Several lift stations have reached the end of their useful life
  - Pumps may no longer be reliable
  - Piping and valves are prone to failure
  - SCADA reporting and controls are limited
  - Electrical equipment no longer meets standards
  - Increased risk of sanitary sewer overflows (SSO)

- The Southpointe Lift Station has been identified as a high priority for replacement
Station Location

• Located within County right-of-way on Fitch Way in El Dorado Hills

• Services 92 EDU’s from the Southpointe Subdivision & Adjacent Lots

• Originally Constructed in 1991
Proposed Improvements

- Replace Existing Pumps
- Rehabilitate Existing Wet Well
- Replace Site Piping and Valves
- Rehabilitate and Replumb Adjacent Storage Tanks to Allow for Bypass Operations
Proposed Improvements

- Replace Electrical and Controls
- Replace Existing Generator
- Replace Existing Fencing
- Reroof Controls Building
- Resurface Site
Environmental Review

- Staff has determined that the proposed project falls within a Class 1 CEQA Categorical Exemption for the maintenance and repair of existing facilities involving negligible or no expansion of use.

- Staff has prepared and filed a Notice of Exemption from CEQA with the El Dorado County Recorder-Clerk’s Office.
## Construction Bid

### Bid Summary

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<td>Engineer’s Estimate</td>
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## Project Funding

### Bid Summary

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<td>Syblon Reid Construction, Inc.</td>
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<td>HydroScience Engineers, Inc.</td>
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<tr>
<td><strong>Total Funding Requested</strong></td>
<td><strong>$1,937,192</strong></td>
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Board Options

• Option 1:
  Award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008

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

• Option 3:
  Take no action
Recommendation

• Option 1:
  Award a contract to Syblon Reid Construction, Inc. in the not-to-exceed amount of $1,552,000 for construction of the Southpointe Lift Station Upgrades project; approve a contract amendment to HydroScience Engineers, Inc. in the not-to-exceed amount of $79,300 for construction engineering services; and authorize funding of $1,937,192 for the Southpointe Lift Station Upgrades, Project No.16008.
Conclusion

• Questions / Comments?
Subject: Consideration to approve the Sewer System Management Plan Update.

Previous Board Actions
October 22, 2007 – Board approved three elements of EID’s SSMP: Development Plan and Schedule, Goals, and Agency Organizational Structure.


Board Policies (BP), Administrative Regulations (AR), and Board Authority
BP 6010 Wastewater System Management

Summary of Issue
The Sewer System Management Plan (SSMP) is a document that describes the activities an agency undertakes to manage, operate, and maintain its wastewater collection system.

Section D.11 of the Statewide General Waste Discharge Requirements, adopted by the State Water Resources Control Board (SWRCB) in 2006, states that an SSMP “requires approval by the Enrollee’s governing board at a public meeting.”

The purpose of this agenda item is to seek Board approval of the updated SSMP in its entirety. The SWRCB requires the SSMP to be completed and certified by August 2, 2019.

Background/Discussion
Recognizing the aging infrastructure and associated problems that are characteristic of many wastewater collection systems in California, the SWRCB adopted Resolution 2004-80, which required SWRCB staff to establish a Sanitary Sewer Overflow Guidance Committee for the purpose of developing a regulatory mechanism to reduce sanitary sewer overflows (SSOs). In addition to SWRCB personnel, the committee consisted of representatives from the Regional Water Quality Control Board, U.S. Environmental Protection Agency, and non-governmental organizations. Ultimately, the committee created a reporting program that serves as the basis for consistent and appropriate management and operations of sanitary sewer systems.

On May 2, 2006, the SWRCB adopted the Statewide General Waste Discharge Requirements, also known as Sanitary Sewer Overflows-Waste Discharge Requirements (SSS-WDR). Subsequently, the Central Valley Regional Water Quality Control Board issued Waste Discharge Requirements (WDRs) for each of the District’s five wastewater treatment facilities; Deer Creek, El Dorado Hills, Camino Heights, Rancho Ponderosa, and Gold Ridge Forest. Because the Rancho Ponderosa collection system has since been tied into the Deer Creek collection system, the WDR for Rancho Ponderosa was withdrawn.
The goal of the SSMP is to formalize a plan and schedule that, taking the WDRs into account, guide the District in managing, operating, and maintaining all parts of the wastewater collection system to reduce and prevent sewer overflows. The SSMP contains a series of site-specific programs and associated timelines for compliance.

The SSMP consists of eleven elements as described below. All elements are currently employed by the District to meet the goals of proper management, operation, and maintenance of the sewer collection system.

**SSMP Elements**

1. **Goals**
   This section identifies the agency’s Mission and Goals that guide overall management of the sewer system.

2. **Organization**
   This section describes the agency’s organization, roles and responsibilities, and chain of communication for sewer management.

3. **Legal Authority**
   This section demonstrates the legal authority held by the agency to properly manage the sewer system and enforce violations.

4. **Operations and Maintenance Program**
   This section describes the agency’s ability to maintain proper records of assets, perform regularly scheduled maintenance activities, develop a short-term and long-term replacement or rehabilitation program, provide training to staff, and maintain proper resources to perform necessary duties.

5. **Design and Performance Provisions**
   This section describes how an agency ensures proper sewer design and construction inspection for new development.

6. **Overflow Emergency Response Plan**
   This section describes the agency’s ability to react to SSOs in a timely and efficient manner, including internal and external notification procedures, staffing and contractor personnel resources, traffic and crowd control, and protection of natural resources.

7. **Fats, Oils and Grease (FOG) Control Program**
   This section details overall FOG management including identification of proper disposal sites, legal authority to prohibit discharges, requirements for private grease removal devices, authority to inspect grease removal devices, identification of system areas that are prone to FOG blockages, and development and implementation of a public outreach program.

8. **System Evaluation and Capacity Assurance Plan**
   This section describes the agency’s methodology to ensure proper pipe and lift station capacity by flow validation, estimation of peak wet weather flow factors, maintenance of an up-to-date hydraulic model, identification of areas of improvement, and schedule of system upgrades.
9. Monitoring, Measurement, and Program Modifications
   This section identifies requirements of program auditing capabilities such as records maintenance, measurement of operational effectiveness, and SSO trend analysis.

10. SSMP Program Audits
    This section identifies requirements for periodic agency audits of the SSMP.

11. Communication Program
    This section identifies requirements for frequent communication with the public on the development, implementation, and performance of its SSMP.

The District’s ability to abide by the SSMP requires a well-trained and dedicated staff in addition to sufficient resources. Per State regulation, the SSMP is to be audited every two years and updated every five years. Each audit and update provides an opportunity to revisit goals and direction of the wastewater operations and engineering group to determine how the program can continue to meet the ever-growing challenge of aging infrastructure and protection of public health and the environment.

The District’s SSMP was originally approved in 2009 and has since been audited and updated per the required intervals. Staff is presenting the 2019 update to the Board to inform members of the public and receive document approval.

**Board Options**

**Option 1:** Approve the Sewer System Management Plan update.

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

**Option 3:** Take no action.

**Recommendation**

Option 1

**Attachments**

Attachment A: 2019 SSMP
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
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<td>SSMP Program Audits</td>
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<td>Communication Program</td>
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<td>12</td>
<td>SSMP Completion and Certification</td>
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<td>Appendix A</td>
<td>District Staff Contact Information with SSMP Responsibilities</td>
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<td>Appendix B</td>
<td>Overflow Emergency Response Plan for Sanitary Sewer Overflows</td>
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<td>Integrated Water Resources Master Plan</td>
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List of Figures

Figure 2-1  El Dorado Irrigation District Organization Chart (shows all departments, but not all positions) ............................................................................................................ 2-3
Figure 2-2  Emergency Response Chain of Communication ...................................................... 2-5
Figure 4-1  Map Identification System ....................................................................................... 4-2
Figure 8-1  El Dorado Hills Collection System ........................................................................... 8-3
Figure 8-2  Deer Creek and Mother Lode Collection System .................................................... 8-6
Figure 9-1  SSO Trends by Volume for the Deer Creek and El Dorado Hills Collection Systems .................................................................................................................... 9-3
Figure 9-2  SSO Trends by Number for the Deer Creek and El Dorado Hills Collection Systems .................................................................................................................... 9-4
Figure 9-3  SSOs per 100 miles per year for the Deer Creek and El Dorado Hills Collection Systems .................................................................................................................... 9-4

List of Tables

Table 4-1  Sewer System Map Features ...................................................................................... 4-2
Table 4-2  Facility Condition Ratings .......................................................................................... 4-6
Table 8-1  El Dorado Hills Collection System Inventory ............................................................ 8-2
Table 8-2  El Dorado Hills Collection System Pipe Materials .................................................... 8-2
Table 8-3  El Dorado Hills Lift Stations ...................................................................................... 8-4
Table 8-4  Deer Creek Collection System Inventory .................................................................. 8-5
Table 8-5  Deer Creek Collection System Pipe Materials ........................................................... 8-5
Table 8-6  Deer Creek Lift Stations ............................................................................................. 8-6
Table 9-1  Sewer System Overflows by Size. Includes all District Collection Systems .......... 9-2
Table 9-2  Total Volume of SSOs. Includes all District Collection Systems ......................... 9-3
Table 9-3  Deer Creek Collection System – SSOs by Cause 2011-2017 ................................. 9-5
Table 9-4  El Dorado Hills Collection System – SSOs by Cause 2011-2017 ............................. 9-5
This introductory section provides background information on the purpose and organization of this Sewer System Management Plan (SSMP) and provides a brief overview of the El Dorado Irrigation District (District) service area and sewer system.

**SSMP Requirement Background**
The 2019 SSMP has been prepared in compliance with requirements of the State Water Resource Control Board’s (SWRCB) adopted Statewide General Waste Discharge Requirement (GWDR) Order No. 2006-003-DWQ adopted in May 2006 and the amendment to the Monitoring and Reporting Program of the SSS WDR, Order No. WQ 2013-0058-EXEC. The GWDR applies to all public collection system agencies in California that own or operate collection systems comprised of more than one mile of pipe or sewer lines, which convey untreated wastewater to a publicly owned treatment facility, and requires each agency to prepare a SSMP. Per the GWDR, the District prepared and adopted an original SSMP in July 2009 and an updated version in 2014. The GWDR requires that all SSMP’s are audited every two years and updated every five years. This 2019 update of the SSMP provides a general update of all SSMP sections.

**Document Organization**
This SSMP is intended to meet the requirements of the statewide GWDR and is organized into the following sections.

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease Control Program
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program
12. SSMP Completion and Certification

**El Dorado Irrigation District Services and Service Area**
The District is a public agency and was organized in 1925 and is designated as an irrigation special district under the Irrigation District Law (Water Code §§20500, et seq.). Its original purpose was to ensure domestic water for Placerville and irrigation water for local farmers. The District now provides water, wastewater treatment, recycled water, hydroelectric and solar power generation, recreation, and water-use efficiency services. Included in the District service area are the communities of Cameron Park, Camino, Diamond Springs, El Dorado, El Dorado Hills, Placerville, Pollock Pines, Shingle Springs, Rescue, and many other smaller communities.

The District operates and maintains a sanitary sewer system serving a population of approximately 62,000, with over 77 square miles of service area. The system is divided into two larger shed areas; El Dorado Hills and Deer Creek, in addition to two smaller sheds; Gold Ridge and Camino Heights. The system has approximately 411 miles of gravity pipelines, 55 miles of force mains, 9372 maintenance holes, 60 lift stations, and 25,893 sewer service laterals, which total 231 miles. The total system has approximately 697 miles of collection system pipeline owned and maintained by the District.
Mission Statement
El Dorado Irrigation District is a public agency that is dedicated to providing high quality water, wastewater treatment, recycled water, hydropower, and recreation services in an environmentally and fiscally responsible manner.

Goals
In support of this mission, the District has developed the following goals for the operation and maintenance of its sewer system.

(a) Maintain and improve the condition of the collection system infrastructure in order to provide continuous reliable service.

(b) Cost-effectively;
    a. Reduce preventable SSO’s
    b. Minimize infiltration/inflow (I/I)
    c. Minimize adverse impacts of SSO’s
    d. Improve operational efficiencies
    e. Ensure corrective action is taken in a timely manner
    f. Improve emergency response strategies
2 Organization

Requirements: The SSMP must identify each of the following items.

A. The name of the agency’s responsible or authorized representative.

B. The names and telephone numbers of management, administrative, and maintenance positions with responsibility for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation.

C. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable such as, County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES).

This section of the SSMP identifies District staff responsible for implementing the SSMP, responding to a SSO event, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative to meet RWQCB requirements for completing and certifying spill reports.

A. District’s Authorized Representative
The District is responsible for implementing and maintaining all components of this SSMP and is authorized to submit SSO reports to the appropriate government agencies. The authorized representative for all wastewater collection system matters is the Collections Section Supervisor who is authorized to certify electronic spill reports submitted to the SWRCB. In the absence of the Collections Section Supervisor a responsible charge assignment is made by the Supervisor and the Division Manager of Wastewater / Recycled Water Operations is also able to certify electronic spill reports as a backup to the Collections Supervisor, if necessary.

B. Responsible Staff and Lines of Authority
Implementation, management and updating of the SSMP involves staff from six of the District departments. Figure 2-1 is a District organization chart showing all departments and those positions within each department that have SSMP responsibilities. Descriptions of general responsibilities for each of these positions are listed below. Names and phone numbers of staff in these positions are included in Appendix A.

- **Board of Directors** – Establish Policy.
- **General Manager** – Under administrative direction of the Board of Directors, is in charge of the operations, functions and administrative affairs of the District. The General Manager is responsible for implementing the Board's policies and administrative regulations.
2. Organization

- **Director of Engineering** – Plans, organizes, directs, and reviews the activities and operations of the Engineering Department including projects related to water, wastewater, and hydroelectric generation systems. Serves as District Engineer, coordinates assigned activities with other departments and outside agencies, and provides administrative support to the General Manager.

- **Engineering Manager** – Plans, schedules, directs, reviews, and coordinates engineering division activities.

- **Director of Operations** – Plans, organizes, directs and reviews the activities and operations of the Operations Department including water and wastewater treatment, recycled water, collection, distribution, hydroelectric generation, and construction. Coordinates assigned activities with other departments and outside agencies, and provides administrative support to the General Manager.

- **Operations Division Manager Wastewater/Recycled Water** - Organizes, directs and coordinates the activities of the Wastewater/Recycled Water Division within the Operations Department including the maintenance and operation of District wastewater collection and treatment facilities, and recycled water distribution facilities. Coordinates operation, maintenance and regulatory activities with other divisions and departments; and provides staff assistance to the Director of Operations.

- **Collection System Supervisor** – Plans, organizes, schedules, assigns and reviews the work of field crews in a variety of skilled and semi-skilled activities in general construction, repair and maintenance of wastewater collection system facilities, and has primary responsibility for the operation of lift stations.

- **Plant Operators and Construction/Maintenance Workers** – Routinely monitor, maintain, adjust, and clean pumping, regulator, or lift stations in order to prevent spills, and to ensure the smooth operation of the water, recycled water, and wastewater distribution, collection and storage systems. Responds to customer’s problems/complaints, SCADA, and alarms.

- **WW/RW Chemist** – Performs routine lab testing (physical, biological, chemical, microbiological) and oversees contracted laboratory testing to meet state and federal compliance, environmental monitoring programs and facilities process control for wastewater and recycled water operations.

- **Environmental Compliance Supervisor** – Supervises activities of the Environmental Compliance Division including, among others, the District’s Industrial Pretreatment Program, Recycled Water Compliance, Cross-Connection Control Program and Water Quality Monitoring.

- **Environmental Compliance Analyst** – Coordinates and oversees day-to-day implementation of the District’s environmental compliance programs, which may include Water Quality Monitoring, Industrial Pretreatment, Recycled Water Compliance, Drinking Water Compliance, Cross-connection Control, and other activities necessary for the District to comply with applicable federal, state and local requirements.

- **Environmental Compliance Inspector** – Under supervision performs water quality sampling and testing; conducts inspections and testing of backflow devices; issues Waste Water Discharge Permits and performs inspections of industrial and commercial wastewater services; performs inspections of Food Service Enterprises (FSEs) to verify
required grease removal devices are being properly maintained and the facility is in compliance with District permitting requirements; and ensures regulatory compliance of recycled water systems.
Figure 2-1 El Dorado Irrigation District Organization Chart (shows all departments, but not all positions)


C. SSO Reporting Chain of Communication

Figure 2-2, on the following page, is a flowchart depicting the chain of communication for responding to and reporting an SSO to the appropriate regulatory agencies. The SSO Reporting process is overviewed in Section 6 and provided in detail in Appendix B the Overflow Emergency Response Plan.
Figure 2-2 Emergency Response Chain of Communication

Observation

First Response

Corrective Action

Notification and Reporting

- Public
- Outside Agency
- District Staff
- SCADA wet well alarm

After hours

- District Dispatch
- Collections Standby

Collections Supervisor

- Collections Crew

Follow OERP

Status Feedback

Senior Management
### Legal Authority

**Requirement:** Each enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- **A.** Prevent illicit discharges into its sanitary sewer system, including Inflow/Infiltration from satellite wastewater collection systems and laterals, stormwater, unauthorized debris, etc.
- **B.** Require proper design and construction of sewers and connections.
- **C.** Ensure access for maintenance, inspection and repairs to publicly owned portions of laterals.
- **D.** Limit the discharge of fats, oils, and grease (FOG) and other debris that may cause blockages.
- **E.** Enforce any violation of its sewer ordinances.

This component of the SSMP discusses the District’s legal authority, including federal and state law as well as District board policies and administrative regulations.

The District derives its legal authority from, and is regulated by, federal and state law. In exercising the authority granted there under, the District has adopted Board Policies and Administrative Regulations setting forth the terms and conditions of service. The District’s adopted Board Policies and Administrative Regulations are available at [https://www.eid.org/home/showdocument?id=2687](https://www.eid.org/home/showdocument?id=2687).

**Federal and State Law**

Federal and State Laws include but are not limited to:

- California Irrigation District Law (Water Code § 20500 et seq.) (grant of authority to perform “all acts necessary” in its operation and control of its sewer disposal system)
- Federal Water Pollution Control Act, commonly known as the Clean Water Act (33 U.S.C. § 1251 et seq.)
- California Porter Cologne Water Quality Act (California Water Code § 13000 et seq.)
- California Health & Safety Code § 25100 et seq.
- California Government Code §§ 54739, 54740 (grant of authority to regulate and/or prohibit the discharge of industrial waste into the District’s collection system and treatment works)

**El Dorado Irrigation District Board Policies and Administrative Regulations**

The District Board Policies (BP) and Administrative Regulations (AR) set forth binding terms and conditions for sanitary sewer service to ensure the safe operation of its facilities and compliance with all applicable laws. The District possesses the necessary legal authority to meet its obligations under Section D, 13 (iii) (Legal Authority) of SWRCB Order No. 2006-0003 and Order No. 2013-0058-EXEC.
A. Prevention of Illicit Discharges
Illicit discharges into the District’s sanitary sewer system are strictly prohibited under BP 6010-Wastewater System Management, AR 6020-Wastewater Discharge and Disposal, 6021-Industrial Pretreatment Program and AR 6022-Requirements for the Control of Fats, Oils, and Grease from Food Service Establishments.

B. Proper Design and Construction of Sewers and Connections

C. Lateral Maintenance Access
Access to all sewer laterals owned or maintained by the District is ensured as a requirement of service under BP 9020-Establishing New Service, AR 9029-District Access to Facilities and AR 1120-Right of Inspection and Access.

D. Limit Discharge of FOG and Other Debris
The discharge of fats, oils, grease and other debris into the system that may cause blockages is limited under BP 6010-Wastewater System Management, AR 6020-Wastewater Discharge and Disposal, AR 6021-Industrial Pretreatment Program, and AR 6022-Requirements for the Control of Fats, Oils, and Grease from Food Service Establishments.

E. Enforcement Measures
The District is empowered to enforce any violation of its sewer requirements and seek legal redress under BP 9060-Discontinuance of Service, AR 9061-Disconnection or Discontinuation of Service, BP 1040-Restriction, Wrongful Acts, and Enforcement, AR 1040-Wrongful Acts Subject to Penalties, AR 1050-State Criminal Laws Protecting Public Water Supplies and Wastewater Systems, and AR 6021-Industrial Pretreatment Program.
4 Operations and Maintenance Program

Requirements: The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee’s system:

A. Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water pumping and piping facilities.

B. Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

C. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the conditions of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short-term and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

D. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.

E. Provide equipment and replacement part inventories, including identification of critical replacement parts.

This section of the SSMP discusses the District’s sewer system operations and maintenance.

A. Collection System Map

Description of Sewer Map System
The District map system is maintained in a Geographic Information System (GIS) following ESRI’s local government information model schema. Sewer, water and recycled water facilities are maintained as separate layers that can be shown separately or together over a base map of the area. The base map shows property boundaries, roads, rivers, streams, lakes and reservoirs. An example is shown in Figure 4-1. In the event that GIS is not available, the District has access to hard copy maps.
Some information about the District’s sewer facilities are shown directly on these maps and additional information may be found by cross referencing work order and project numbers shown on the maps. A table of sewer system map features is shown in Table 4-1.

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<th>Facility Type</th>
<th>Information Available in GIS</th>
<th>Information Available by Cross Reference</th>
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<td>Record Drawing Number; Work Orders</td>
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<td>Size</td>
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<td></td>
<td>Material Type</td>
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<td></td>
<td>Location with reference to streets and property lines</td>
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<td>Maintenance Holes</td>
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<td>Lift Stations</td>
<td>Location with reference to streets and property lines</td>
<td>Lift Station Data Files: Design, Drawings, Pump Curves, Maintenance History, Operating History.</td>
</tr>
</tbody>
</table>

**Map Updating Procedures**

Assets affected by new construction or facility rehabilitation or replacement projects are updated using either red-lined map drawings or completed record drawings. When field staff identifies a discrepancy between the system map and what exists in the field, the error is noted on the GIS System maps and submitted to the Engineering GIS/Drafting unit for updates. New construction projects are input after final acceptance of the project by the District through completed record drawings.

**B. Preventive Maintenance Program**

The District’s preventative maintenance (PM) program includes cyclical as well as focused maintenance and cleaning of the sanitary sewer system. The system of scheduling, documenting and recording these activities is facilitated with a computerized maintenance management system (CMMS).
Computerized Maintenance Management System

The CMMS utilized by the District is a database system that compiles a wide variety of information about the District’s sewer system assets and maintenance of those assets. It provides the District with preventative maintenance schedules that are generated weekly, monthly, quarterly, annually, bi-annually, or as needed. Scheduling functions include the following.

- Issue scheduled PM work orders as specified by the manufacturer or maintenance personnel.
- Issue work orders for service requests or repair orders including SSOs.
- Differentiate maintenance priority status for specified areas of the system.
- Differentiate between work orders for periodic maintenance, SSO follow up, service request, or repair order.
- Maintain a detailed database of system, costs, repair times, and equipment histories.

Work orders are “closed” by maintenance staff as work is completed. Typically the following information is added to the database each time an order is closed.

- Description of work
- Parts used
- Cost and time spent on each repair task
- Observations on the equipment
- Additional maintenance recommendations
- Adjustments to the maintenance schedule
- Equipment ID number(s)
- Initiating party
- Employee or work crew assignment
- Any additional information the maintenance staff believes would be advantageous for future reference.

The CMMS database compiles information that can be used to generate reports related to a particular system asset or the system as a whole. Tailored reports can be created based on any data field. Typical reports include the following:

- Asset maintenance and repair history
- CCTV areas for history or troubleshooting
- Smoke testing
- Root control
- Cyclical or focused cleaning areas and maps
- Spill reports
- Blockages
- Asset status reports

Sewer System Preventative and Proactive Maintenance

During routine preventative maintenance, staff will conduct a condition assessment that gathers information to evaluate potential immediate and/or future impacts. Adjustments are made if necessary and documented on the work order for possible schedule adjustments. Some adjustments that may be made are as follows.

- Remain on current PM schedule
- Treat for roots or FOG
• CCTV the line
• Place on prioritized PM
• Refer to Engineering for further evaluation
• Repair

Lift Stations
Plant operators perform routine inspections using a station checklist and construction & maintenance workers make weekend checks and provide emergency response on the off shift from a standby capacity. The majority of lift stations are inspected 2-3 times per week. Three large stations are inspected 6 days per week. Inspections are designed to confirm that the station is in normal operating condition and include such items as housekeeping, fluid levels, pump totalizer readings, wet well levels, and instrumentation and generator operations. Generators are exercised monthly. Maintenance performed, station statistics and observations are recorded in logbooks kept at the station. Station PM occurs as follows.

• Wet wells cleaned 4 to 24 times per year.
• Mechanical inspections, including the pumps and motors, are conducted annually.
• Priority alarms are simulated monthly.
• Generators are checked under load monthly.

Cyclical Sewer Cleaning
Sewer cleaning occurs as part of PM. The District performs cyclic cleaning based on the branching structure of the collections system. Starting from the ends of the sub-areas and working toward the wastewater treatment plant, each sub area of the system is cleaned on a rotating basis. The District takes a proactive approach on non-problem areas through cleaning of gravity lines on a rotating 6-year schedule. As cleaning is completed and condition assessments made, potential trouble areas are documented and prioritized for increased cleaning or remedial action as required.

Focused Sewer Cleaning
Focused or prioritized sewer cleaning is scheduled based on findings from PMs, SSOs, or cyclical inspections. Focused cleaning may include root control or hydro-jetting of the line.

Root Control
The District uses two methods of root control, root cutting and chemical root application. In 2007 the District conducted a study on roots and identified a method to control roots that was appropriate for the District. In early 2009 the District purchased a specialized vehicle that would cut roots and apply chemical for root control.

Fats, Oils, and Grease Control
The District has a proactive approach to PM that minimizes FOG trouble spots. Mitigation of FOG impacts to the sewer system are discussed in Section 7 of this SSMP.

Odor Control Methods
The District has been very proactive in preventing and or minimizing odors. Chemical application for odor control occurs on an as-needed basis and routinely in the summer months. The District has improved other areas by utilizing additional odor removal methods, which includes biofilters, activated carbon and other filtration methods.
**Quality Control Inspections**
The District is developing standard operating procedures for proper cleaning, root control, flushing methods and equipment usage. CCTVs inspections are conducted as part of the preventative maintenance schedules. Videos are reviewed periodically for assessment to determine if further action is required.

**Service Requests and Repair Orders**
Service requests are initiated by customers, staff or an outside entity. Service requests are prioritized by the nature of the request and initiate any of the following actions; immediate response from construction & maintenance workers in the area to investigate probable cause including CCTV of the line when necessary, public outreach/educational information describing the difference between private and public pipelines, referral for further evaluation, or referral directly to District engineering staff for replacement.

**Flow Monitoring**
Flow monitoring in the collection system has been conducted in the past few years as part of the master planning process to model the collection system capacity and to identify areas with high Inflow/Infiltration (I/I). The Wastewater Facilities Master Plan (WWFMP) was updated in 2013 and contains the results of the modeling analysis. The WWFMP can be viewed on the District’s website. Flow monitoring is continuing at several locations within the sewer system for refinement of the collection system capacity model.

**C. Rehabilitation and Replacement Plan**
The District has a rehabilitation and replacement program that identifies and prioritizes system deficiencies and implements appropriate short-term or long-term actions to address each deficiency.

**Identification of System Deficiencies**
Collection system deficiencies are identified by several means listed below:
- Review of CCTV surveys.
- During the process of cleaning a mainline.
- During the process of root removal and cleaning of lower laterals.
- During the process of chemical root control.
- Maintenance holes are regularly inspected for structural integrity, roots, or I/I problems during the pipeline cleaning process.
- The District’s lift stations are continually monitored during routine inspections by Plant operators or construction and maintenance workers. Defects discovered are reported to supervisors and/or directly to the District’s electrical/instrument technician and/or mechanic.
- District staff also review monthly reports generated from the CMMS locating potential areas of concern.
- If an SSO occurs, a failure analysis is conducted and appropriate action is taken.
Prioritizing System Deficiencies
When a pipeline deficiency has been identified, a systematic prioritization is used to determine when the problem needs to be addressed. Facilities thus identified receive a rank from 1 to 5. Priority 1 indicates an immediate response is needed. Priority 5 represents further action will not be needed for some time. Condition assessment rankings are shown in Table 4-2. It is up to operations to assign a priority rating to each discovered problem. In the case where the pipeline deficiency caused an SSO, it is always given a priority 1 status.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Rating</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poor</td>
<td>Immediately</td>
</tr>
<tr>
<td>2</td>
<td>Fair</td>
<td>Within 1 year</td>
</tr>
<tr>
<td>3</td>
<td>Good</td>
<td>Within 2-5 years</td>
</tr>
<tr>
<td>4</td>
<td>Very Good</td>
<td>Within 5-10 years</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
<td>20+ years</td>
</tr>
</tbody>
</table>

Implementation of Short and Long Term Rehabilitation Actions

Short Term – Facilities that receive a priority 1 or 2 are investigated and an action plan is developed. Pipelines that are at risk of failure are repaired as soon as possible. Temporary repairs, or repairs that are limited in scope, are undertaken by District staff.

Long Term – Facilities that are not in danger of immediate failure but need rehabilitation are either; scheduled to be repaired by District crews, or are placed on the Capital Improvement Plan (CIP).

Capital Improvement Plan
The District develops a five-year CIP that is updated annually. Timing of construction of both new and replacement facilities is based on priority, deficiency, and input from operations staff. Risk assessment, financing, and staffing are also considered in the long-term management of District facilities.

The CIP is funded through wastewater rates and wastewater facility connection charges. The composition of the finance package for each project is based upon the ratio of new and existing customers that will be served by the new or upgraded facility.

D. Training
The District provides extensive training for all Collections staff. Contractors performing any work on the District’s collection systems, whether it is a system upgrade, rehabilitation or new installation, are required to submit a copy of their safety program prior to the start of work. Contractors are required to follow all applicable health and safety laws. All contractors are required to submit a Health and Safety Plan (HSP). The HSP is reviewed to ensure it meets Cal-OSHA requirements.

Wastewater collections staff are encouraged to become and remain CWEA certified in the maintenance and operations of wastewater collection systems. The District assists with the certification by paying for the preparation course, take home study materials, certification exams, and required continuing education to maintain certification.

Numerous outside vendor sponsored training courses, in-house training by lead workers, and extensive cross training programs are employed to keep operators current with updated maintenance and operations practices. The following training is provided on a yearly or bi-yearly
timeframe. Additional training is made possible through CWEA local section and District participation in Collections System Committee membership.

- First-aid
- CPR
- Confined Space Entry
- Trench Safety
- Stand-by Generator Operations
- Traffic Control
- Training on the use of all collection system maintenance equipment
- Overflow Emergency Response Plan
- SSO Volume Estimation
- Annual Response Drill

E. Contingency Equipment and Replacement Inventories

The District maintains an extensive inventory of critical replacement parts and owns necessary construction equipment to conduct repairs.

Contingency Equipment
The District has numerous pieces of portable equipment available in the event of an emergency: pumps, generators, heavy equipment and traffic safety equipment. The District owns and operates a variety of equipment to keep the collection system in working order. At this time, the District fleet includes the following.

- (3) High power vacuum combination trucks
- (1) 4,000 gallon pumper truck
- (1) Combination pipe cleaning/chemical root control truck
- (1) Trailer mounted high pressure jet rodder; used in cleaning pipelines
- (1) CCTV truck; used to inspect inside gravity and service lines
- (2) Backhoe; earth moving equipment
- (2) Dump truck
- (1) Mini-excavator
- (1) Easement machine
- (4) Portable diesel generators
- (1) Portable diesel pump
- (1) National crane truck
- (1) Confined space rescue/entry support van

Replacement Parts Inventory
The collections division keeps a robust inventory of pipe and fitting materials. Parts that are needed routinely for preventative maintenance and repairs are kept on hand or can be easily attained from local vendors. Procedures are in place for unplanned or emergency parts purchases. Parts are also available from the wastewater treatment facilities and other divisions.
5 Design and Performance Provisions

Requirements:

A. The SSMP must identify design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems.

B. The SSMP must identify the procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.

This section of the SSMP discusses the District’s design and construction standards as well as procedures and standards for inspection of new or repaired facilities.

A. Design and Construction Standards and Specifications

The District requires that all new sanitary sewer systems, pump stations and other appurtenances, as well as the rehabilitation and repair of existing sewer facilities, be designed and constructed in accordance with the District’s Water, Sewer and Recycled Water Design and Construction Standards. Collection system standards include the following.

- Design Criteria and Standards
- Standardization of equipment
- Standard Sewer Construction Details
- Technical Specifications; Materials and Construction Standards

B. Inspection and Testing Procedures

Within the sewer section of the Technical Specifications are procedures and standards for inspecting and testing the installation of new or rehabilitated sewers, pumps and other appurtenances.
6 Overflow Emergency Response Plan

Requirements: Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

A. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner.

B. A program to ensure an appropriate response to all overflows.

C. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g., health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach water of the State in accordance with the MRP. All SSOs shall be reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification.

D. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained.

E. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.

F. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

This section of the SSMP provides an overview and summary of the District’s emergency response documents and procedures for sewer overflows.

Purpose:

The purpose of the El Dorado Irrigation District’s Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to SSOs. The OERP provides guidelines for District personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the District’s service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an OERP. The OERP is a standalone document contained in Appendix B of the SSMP.

Policy:

The District’s employees are required to report all wastewater overflows found, to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District’s goal is to respond to sewer system overflows as soon as possible following
notification. The District will follow reporting procedures in regards to sewer spills as set forth by the Central Valley Regional Water Quality Control Board (CVRWQCB) and the California State Water Resources Control Board (SWRCB).

Goals:

The District’s goals with respect to responding to SSOs are:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

OERP Components:

The OERP is divided into sixteen sections as follows:

- Purpose
- Policy
- Definitions
- Regulatory requirements for OERP element of the SSMP
- Goals
- SSO detection and notification
- SSO response procedures
- Recovery and cleanup
- Water quality
- Sewer backup into/onto private property claims handling policy
- Notification, reporting, monitoring and recordkeeping requirements
- Post SSO event debriefing
- Failure analysis investigation
- SSO Response training
- Authority
- References.
### Requirement:
Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed the Enrollee must provide justification as to why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate.

A. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area.

B. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.

C. Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.

D. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance.

E. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.

F. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (e) above.

G. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

### District Evaluation of Service Area FOG
The District regulates direct and indirect contributors to the sewer system through the following actions and programs.

- Preventative Maintenance
- Source Control Measures
  - Industrial Pretreatment and Pollution Prevention Program
  - Issuance of discharge permits to and regular inspections and enforcement of Food Service Enterprises (FSE)
  - Enforcement of General Sewer System User Requirements

SWRCB requires each enrollee to evaluate its service area to determine whether a FOG control program is needed and to develop a program if needed. The District conducted an evaluation of service area FOG and determined that proactive preventative maintenance is effective in mitigating FOG blockages in the sewer system and that a formal FOG control is not needed.
A. FOG Disposal
The District requires and/or disposes of FOG in the following ways.
- Commercial businesses with Grease Interceptors are required to have them cleaned by a licensed hauler, who then disposes of the contents to a facility out of El Dorado County.
- Commercial businesses with Grease Traps are required to clean the pretreatment device at least monthly and dispose of the contents in either a rendering container or solid waste bin, which is picked-up by a licensed hauler and disposed of accordingly.
- FOG collected in the sewer system is transported to the headworks of either the Deer Creek or the El Dorado Hills WWTP.

B. Legal Authority
The District possesses the legal authority to control sources of FOG through the following Administrative Regulations.
- **AR 6020 Wastewater Discharge and Disposal:** This regulation addresses wastewater discharge and disposal, and customer responsibility.
- **AR 6021 Industrial Pretreatment Program:** This Administrative regulation describes the Industrial Pretreatment Program.
- **AR 6022:** Requirements for the Control of Fats, Oils, and Grease from Food Service Establishments: This administrative regulation details the waste discharge permit program for FSEs including the authority to inspect GRDs.
- **The Uniform Plumbing Code and the California Plumbing Code:** Contain provisions for the sizing of GRDs. The District has adopted these codes by reference through its Administrative Regulations.

C. Discharge Permits for Grease Removal Devices
When a waste discharge permit is issued to a FSE, District staff advises the permittee on the following.
- GRD maintenance requirements
- BMP requirements
- Record keeping and reporting requirements

As part of the initial inspection for a new FSE the District inspects the GRD to confirm it is sized and installed appropriately according to the Uniform Plumbing Code based on the number and type of fixtures (e.g., sinks) installed at the facility. At this time a dye test of the FSE’s plumbing system is also performed to verify the appropriate fixtures are attached and not bypassing the GRD.

All FSEs with GTs are inspected at least three times per year and FSEs with GI are inspected at least two times per year. Inspection frequency in increased when the FSE fails to maintain adequate GRD maintenance records or District preventive maintenance (PM) records indicates abnormal FOG accumulation in District facilities downstream of GRD.

Ongoing regular inspections include; verifying percentage of FOG & solids accumulation is less than or equal to 25% of volume of GRD, GRD is in proper working order, reviewing grease traps and grease interceptors cleaning records, review of FOG best management practices, and
ensuring compliance with waste discharge permit conditions. A copy of the compliance inspection check-list appears in Appendix C. Non-compliance notices are issued and follow-up enforcement is conducted, as necessary, if the FSE fails to meet all permit conditions.

**D. District Enforcement**

In the event of non-compliance with AR 6021 and/or AR 6022, the District Enforcement Response Plan (ERP) aims to deal with the noncompliance in a just, efficient, and effective manner. The ERP addresses the different types of non-compliance and the nature of the violation, as well as the enforcement response tasks for each non-compliance matter. It also includes an enforcement matrix which shows the title and action allowed by District personnel. The necessary steps are as follows.

- Identify and respond to noncompliance as quickly as possible, in order to minimize impact on the District’s collection system.
- Document and investigate noncompliance thoroughly and expeditiously.
- Ensure that enforcement actions are dictated by the severity of the violation.
- Take enforcement action in a timely manner.
- Respond to noncompliance in a consistent and objective manner.

**E. Preventative Maintenance**

Cyclical and focused preventative maintenance (PM) schedules consist of hydro-jet cleaning and chemical root control measures to inhibit the growth of roots where grease may accumulate. Hydro-jetting is the most common method of trunk line preventive maintenance.

Preventative maintenance for any sewer system area is prioritized based on qualitative findings of previous preventive maintenance results, such as observation of grease accumulation or grit deposits. High priority segments are placed on an accelerated PM schedule and the findings are forwarded to the District’s IPP for follow-up to verify FSEs are complying with discharge permit requirements. The segment will remain on accelerated PM until subsequent observations determine that the potential for obstruction or blockage have been reduced or eliminated.

**F. Source Control Measures**

The Industrial Pretreatment and Pollution Prevention Program (IPP) is administered by the Environmental Compliance Division. IPP staff is responsible to permit, inspect, monitor, conduct enforcement, and assist in investigations relating to FOG control.

All FSEs are considered potential FOG generators. Currently there are over 145 FSEs in the service area. To control FOG at its source, the District issues waste discharge permits to all FSEs requiring them to do the following.

- Install Grease Removal Devices (GRD) for all new FSEs.
- Maintain GRD in proper working order.
- Limit the capacity of FOG and solids to less than or equal to 25% of the GRD volume.
- Conduct GRD scheduled maintenance a minimum of every three months or more frequently for grease interceptors (GI) and no less than monthly for grease traps (GT).
- Practice Best Management Practices (BMPs) to minimize the amount of FOG reaching GRDs.
- Maintain GT cleaning records and GI pick-up logs on site and available for review by District personnel.
• Allow District inspection of GT without impediment a minimum of every 4 months and GI a minimum of every six months or any other time the District determines necessary.

G. Public Education/Outreach Program
The District has increased public outreach and education on the sewer system in general and has embarked on a “Don’t Fog your Drain” campaign on the District website, local newspaper ads during holiday periods when the potential for residential FOG production is increased, and the District Waterfront bimonthly newsletter. Additionally, the District has developed a FOG awareness door hanger that can be placed at surrounding residences following a residential blockage to inform the public of the potential for blockage and overflow due to improper FOG control practices. This brochure specifically addresses the role of FOG in causing sewer blockages, proper FOG disposal procedures, and other means of reducing backups or blockages. The brochure is displayed at the District’s Headquarters and is available from the District’s website at http://www.eid.org.
8 System Evaluation and Capacity Assurance Plan

**Requirements:** The Enrollee shall prepare and implement a capital improvement plan that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

A. **Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

B. **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria.

C. **Capacity Enhancement Measures:** The steps needed to establish a short-term and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

D. **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a) – (c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D.14.

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**A. Background and Evaluation**

In 2013 the District completed an Integrated Water Resources Master Plan (IWRMP) and a Wastewater Facilities Master Plan (WWFMP). The District’s primary objective is to optimize the use of water, wastewater and recycled water resources and provide a roadmap for the development of future infrastructure and the maintenance of existing facilities. The work for the WWFMP included an extensive evaluation of the collection system including flow monitoring, lift station condition assessments, hydraulic modeling of the collection system, risk and consequence analysis, and the development of a corrective action plan.

The District is currently working on an update to the hydraulic model which will include additional flow monitoring and incorporation of new and future connections. The goal of the hydraulic model update is to supplement the previously mentioned documents and further refine the schedule for necessary upgrades.

**El Dorado Hills Collection System**

The El Dorado Hills sewer shed encompasses approximately 24.9 square miles located between the western El Dorado County Boundary and Bass Lake Road and Folsom Lake and 3 miles
south of Highway 50. In 2019, there were approximately 12,000 sewer connections equating to approximately 13,600 equivalent dwelling units (EDUs) located within this particular sewer shed.

The collection system, shown in Table 8-1, is comprised of 30 lift stations and 240 miles of pipeline ranging between 4- and 42-inches in diameter, as summarized in the Table 8-2. Pipelines are comprised of gravity sewers, force mains and portions of the laterals are owned by the District. Pipe materials consist of polyvinyl chloride (PVC), ductile iron, asbestos cement (AC), and vitreous clay and were installed between 1960 and 2018, as indicated in Table 8-2.

Table 8-1 El Dorado Hills Collection System Inventory

<table>
<thead>
<tr>
<th>Pipe Diameter (inches)</th>
<th>Force main(a) (linear feet)</th>
<th>Gravity Sewer(a) (linear feet)</th>
<th>Total Pipe Length (linear feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>27,204</td>
<td>11,215</td>
<td>38,419</td>
</tr>
<tr>
<td>4</td>
<td>23,712</td>
<td>9,239</td>
<td>32,951</td>
</tr>
<tr>
<td>6</td>
<td>9,827</td>
<td>748,702</td>
<td>778,529</td>
</tr>
<tr>
<td>8</td>
<td>10,065</td>
<td>241,066</td>
<td>251,131</td>
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<tr>
<td>10</td>
<td>6,831</td>
<td>34,525</td>
<td>41,356</td>
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<td>15,594</td>
<td>28,808</td>
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<td>14</td>
<td>345</td>
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</tr>
<tr>
<td>15</td>
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<td>22,070</td>
<td>22,070</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>40</td>
<td>40</td>
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<td>18</td>
<td>3,654</td>
<td>30,699</td>
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<td>21</td>
<td>0</td>
<td>15,910</td>
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<td>24</td>
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<td>27</td>
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<td>1,547</td>
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<tr>
<td>30</td>
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<td>36</td>
<td>0</td>
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<tr>
<td>42</td>
<td>0</td>
<td>315</td>
<td>315</td>
</tr>
<tr>
<td>Total</td>
<td>97,232</td>
<td>1,168,257</td>
<td>1,265,490</td>
</tr>
</tbody>
</table>

Length of pipe by diameter is based on March 2019 GIS data provided by the District.

Table 8-2 El Dorado Hills Collection System Pipe Materials

<table>
<thead>
<tr>
<th>Pipe Material</th>
<th>Length (ft)</th>
<th>Percent of Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC</td>
<td>1,055,382</td>
<td>83</td>
</tr>
<tr>
<td>Ductile Iron</td>
<td>16,328</td>
<td>1</td>
</tr>
<tr>
<td>Asbestos Cement</td>
<td>111,517</td>
<td>9</td>
</tr>
<tr>
<td>Other (SPIRO, CAS, etc.)</td>
<td>279</td>
<td>0</td>
</tr>
<tr>
<td>Vitreous Clay</td>
<td>39,750</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>42,234</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>1,265,490</td>
<td>100</td>
</tr>
</tbody>
</table>
The El Dorado Hills Collection System includes 30 lift stations. The lift stations and their key attributes are presented in Table 8-3.
### Table 8-3 El Dorado Hills Lift Stations

<table>
<thead>
<tr>
<th>Lift Station</th>
<th>Year Constructed</th>
<th>No. of Pumps</th>
<th>HP</th>
<th>Storage Capacity (gal)</th>
<th>Generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown's Ravine 1</td>
<td>1974</td>
<td>2</td>
<td>15</td>
<td>Wetwell only</td>
<td>NA</td>
</tr>
<tr>
<td>Brown's Ravine 2</td>
<td>1974</td>
<td>2</td>
<td>1</td>
<td>Wetwell only</td>
<td>NA</td>
</tr>
<tr>
<td>Business Park 1</td>
<td>1985</td>
<td>4</td>
<td>70</td>
<td>Standby Power</td>
<td>200 kW Diesel</td>
</tr>
<tr>
<td>Carson Creek 1</td>
<td>2016</td>
<td>2</td>
<td>70</td>
<td>Standby Power</td>
<td>175 kW Diesel</td>
</tr>
<tr>
<td>Carson Creek 2</td>
<td>2018</td>
<td>2</td>
<td>34</td>
<td>13,650 + Standby Power</td>
<td></td>
</tr>
<tr>
<td>Creekside Greens</td>
<td>2002</td>
<td>2</td>
<td>3</td>
<td>Standby Power</td>
<td>10 kW Diesel</td>
</tr>
<tr>
<td>Highland Hills</td>
<td>2003</td>
<td>2</td>
<td>30</td>
<td>Standby Power</td>
<td>60 kW Diesel</td>
</tr>
<tr>
<td>Marina Hill</td>
<td>1995</td>
<td>2</td>
<td>40</td>
<td>Wetwell only</td>
<td>NA</td>
</tr>
<tr>
<td>Marina Village 1</td>
<td>1973</td>
<td>4</td>
<td>88</td>
<td>20,000 + Standby Power</td>
<td>265 kW Diesel</td>
</tr>
<tr>
<td>Marina Village 2</td>
<td>1980</td>
<td>2</td>
<td>10</td>
<td></td>
<td>16,000</td>
</tr>
<tr>
<td>Meadow Wood</td>
<td>2004</td>
<td>2</td>
<td>5</td>
<td></td>
<td>4,000</td>
</tr>
<tr>
<td>New York Creek</td>
<td>1983</td>
<td>3</td>
<td>84</td>
<td>Standby Power</td>
<td>200 kW Diesel</td>
</tr>
<tr>
<td>North Uplands</td>
<td>1994</td>
<td>2</td>
<td>60</td>
<td>Standby Power</td>
<td>209 kW Propane</td>
</tr>
<tr>
<td>Oak Ridge High School</td>
<td>1981</td>
<td>2</td>
<td>5</td>
<td>Standby Power</td>
<td>40 kW Diesel</td>
</tr>
<tr>
<td>Promontory No. 1</td>
<td>2001</td>
<td>4</td>
<td>84,48</td>
<td>Standby Power</td>
<td>240 kW Diesel</td>
</tr>
<tr>
<td>Promontory No. 2</td>
<td>2001</td>
<td>4</td>
<td>75,77</td>
<td>Standby Power</td>
<td>240 kW Diesel</td>
</tr>
<tr>
<td>Promontory No. 3</td>
<td>2001</td>
<td>4</td>
<td>14</td>
<td>Standby Power</td>
<td>60 kW Diesel</td>
</tr>
<tr>
<td>Saint Andrews</td>
<td>1985</td>
<td>6</td>
<td>70,70,140,140</td>
<td>4,000 + Standby Power</td>
<td>510 kW Diesel</td>
</tr>
<tr>
<td>Southpoint</td>
<td>1991</td>
<td>2</td>
<td>75</td>
<td>Standby Power</td>
<td>100 kW Diesel</td>
</tr>
<tr>
<td>Stonebriar No. 1</td>
<td>2001</td>
<td>2</td>
<td>58</td>
<td>Standby Power</td>
<td>135 kW Diesel</td>
</tr>
<tr>
<td>Summit 1</td>
<td>2009</td>
<td>2</td>
<td>25</td>
<td>Standby Power</td>
<td>75 kW Propane</td>
</tr>
<tr>
<td>Summit 2</td>
<td>1988</td>
<td>2</td>
<td>5</td>
<td>Standby Power</td>
<td>20 kW Propane</td>
</tr>
<tr>
<td>Summit 3</td>
<td>1988</td>
<td>2</td>
<td>27</td>
<td>Standby Power</td>
<td>100 kW Diesel</td>
</tr>
<tr>
<td>Summit 5</td>
<td>1988</td>
<td>2</td>
<td>4.5</td>
<td>Standby Power</td>
<td>20 kW Diesel</td>
</tr>
<tr>
<td>Summit 6 (Marina Woods)</td>
<td>1996</td>
<td>2</td>
<td>15</td>
<td>10,000</td>
<td>NA</td>
</tr>
<tr>
<td>Timberline</td>
<td>2011</td>
<td>2</td>
<td>75</td>
<td>Standby Power</td>
<td>180 kW Diesel</td>
</tr>
<tr>
<td>Valley View</td>
<td>2006</td>
<td>3</td>
<td>15,59,59</td>
<td>Standby Power</td>
<td>150 kW Diesel</td>
</tr>
<tr>
<td>Waterford 7</td>
<td>1988</td>
<td>2</td>
<td>30</td>
<td>Standby Power</td>
<td>75 kW Diesel</td>
</tr>
<tr>
<td>Waterford 8</td>
<td>1988</td>
<td>2</td>
<td>15</td>
<td>Standby Power</td>
<td>50 kW Diesel</td>
</tr>
<tr>
<td>Waterford 9</td>
<td>1988</td>
<td>2</td>
<td>15</td>
<td>Standby Power</td>
<td>50 kW Diesel</td>
</tr>
</tbody>
</table>

**Deer Creek Collection System**

The Western and Mother Lode service areas include 15 and 8 square miles, respectively. Through 2015, there were approximately 10,000 sewer connections equating to approximately 11,075 equivalent dwelling units (EDUs) located within these sewer sheds.

The collection system, shown in Figure 8-2, consists of approximately 204 miles of pipeline, ranging from 4- to 36-inches in diameter, and 30 lift stations, as shown in Table 8-4. Pipelines
are comprised of gravity sewers, force mains and District owned laterals. As shown in Table 8-5, pipe materials include asbestos cement, vitreous clay, PVC and high-density polyethylene and were installed between 1961 and 2018.

**Table 8-4 Deer Creek Collection System Inventory**

<table>
<thead>
<tr>
<th>Pipe Diameter (inches)</th>
<th>Force main (linear feet)</th>
<th>Gravity Sewer (linear feet)</th>
<th>Total Pipe Length (linear feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>81,492</td>
<td>29,489</td>
<td>110,981</td>
</tr>
<tr>
<td>4</td>
<td>47,213</td>
<td>8,013</td>
<td>55,226</td>
</tr>
<tr>
<td>6</td>
<td>35,707</td>
<td>535,596</td>
<td>571,303</td>
</tr>
<tr>
<td>8</td>
<td>12,980</td>
<td>195,992</td>
<td>208,972</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>30,738</td>
<td>30,738</td>
</tr>
<tr>
<td>12</td>
<td>7,647</td>
<td>32,147</td>
<td>39,794</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>792</td>
<td>792</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>5,105</td>
<td>5,105</td>
</tr>
<tr>
<td>18</td>
<td>0</td>
<td>15,091</td>
<td>15,091</td>
</tr>
<tr>
<td>20</td>
<td>292</td>
<td>1,007</td>
<td>1,299</td>
</tr>
<tr>
<td>21</td>
<td>0</td>
<td>3,343</td>
<td>3,343</td>
</tr>
<tr>
<td>24</td>
<td>0</td>
<td>23,033</td>
<td>23,033</td>
</tr>
<tr>
<td>27</td>
<td>-</td>
<td>1,381</td>
<td>1,381</td>
</tr>
<tr>
<td>30</td>
<td>-</td>
<td>993</td>
<td>993</td>
</tr>
<tr>
<td>36</td>
<td>-</td>
<td>6,667</td>
<td>6,667</td>
</tr>
<tr>
<td>Total</td>
<td>185,331</td>
<td>889,387</td>
<td>1,074,718</td>
</tr>
</tbody>
</table>

Length of pipe by diameter is based on March 2019 GIS data provided by the District.

**Table 8-5 Deer Creek Collection System Pipe Materials**

<table>
<thead>
<tr>
<th>Pipe Material</th>
<th>Length (ft)</th>
<th>Percent of Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Cement</td>
<td>460,325</td>
<td>43</td>
</tr>
<tr>
<td>Vitreous Clay</td>
<td>27,064</td>
<td>3</td>
</tr>
<tr>
<td>PVC</td>
<td>378,797</td>
<td>35</td>
</tr>
<tr>
<td>Ductile Iron</td>
<td>31,105</td>
<td>3</td>
</tr>
<tr>
<td>Other (ABS, steel)</td>
<td>112,581</td>
<td>10</td>
</tr>
<tr>
<td>Unknown</td>
<td>64,846</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,074,718</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
The Deer Creek Collection System includes 30 lift stations. The lift stations and their key attributes are presented in Table 8-6.

**Table 8-6 Deer Creek Lift Stations**

<table>
<thead>
<tr>
<th>Lift Station</th>
<th>Year Constructed</th>
<th>No. of Pumps</th>
<th>Horsepower</th>
<th>Storage Capacity (gal)</th>
<th>Generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlette</td>
<td>1996</td>
<td>2</td>
<td>2</td>
<td>960</td>
<td>NA</td>
</tr>
<tr>
<td>Bar J</td>
<td>1987</td>
<td>2</td>
<td>15</td>
<td>Standby Power</td>
<td>35 kW Diesel</td>
</tr>
<tr>
<td>Barnette</td>
<td>2009</td>
<td>2</td>
<td>27</td>
<td></td>
<td>62 kW Diesel</td>
</tr>
<tr>
<td>Bass Lake Village</td>
<td>1994</td>
<td>2</td>
<td>11.3</td>
<td>Standby Power</td>
<td>30 kW Propane</td>
</tr>
<tr>
<td>Bridlewood Canyon</td>
<td>2016</td>
<td>2</td>
<td>60</td>
<td>Standby Power</td>
<td>150 kW Diesel</td>
</tr>
<tr>
<td>Buckeye</td>
<td>1977</td>
<td>2</td>
<td>7.5</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Cambridge Oaks</td>
<td>2003</td>
<td>2</td>
<td>40</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Charles Brown</td>
<td>1965</td>
<td>2</td>
<td>12</td>
<td>Standby Power</td>
<td>60 kW Diesel</td>
</tr>
<tr>
<td>Courtside Manner</td>
<td>1999</td>
<td>2</td>
<td>15</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Deb’s Frosty</td>
<td>1989</td>
<td>2</td>
<td>23</td>
<td>Standby Power</td>
<td>80 kW Diesel</td>
</tr>
<tr>
<td>Deer Park</td>
<td>1986</td>
<td>2</td>
<td>5</td>
<td>Standby Power</td>
<td>20 kW Diesel</td>
</tr>
<tr>
<td>Diamond Industrial</td>
<td>1981</td>
<td>2</td>
<td>7.5</td>
<td>Standby Power</td>
<td>26 kW Diesel</td>
</tr>
<tr>
<td>East Road</td>
<td>1965</td>
<td>2</td>
<td>23</td>
<td>Standby Power</td>
<td>80 kW Diesel</td>
</tr>
<tr>
<td>El Dorado</td>
<td>1977</td>
<td>4</td>
<td>10,33.5,114,114</td>
<td>4,630,000</td>
<td>350 kW Diesel</td>
</tr>
<tr>
<td>Herbert Green</td>
<td>1967</td>
<td>2</td>
<td>33.5</td>
<td>Standby Power</td>
<td>125 kW Diesel</td>
</tr>
<tr>
<td>Indian Creek</td>
<td>1988</td>
<td>2</td>
<td>40</td>
<td>Standby Power</td>
<td>75 kW Propane</td>
</tr>
<tr>
<td>Missouri Flat</td>
<td>2004</td>
<td>2</td>
<td>10</td>
<td>6,390</td>
<td>40 kW Diesel</td>
</tr>
<tr>
<td>Mother Lode</td>
<td>1978</td>
<td>2</td>
<td>6.2</td>
<td>2,400</td>
<td>NA</td>
</tr>
</tbody>
</table>
Hydraulic Modeling

The District’s collection system is hydraulically modeled in InfoWorks ICM. The model represents existing conditions within the El Dorado Hills, Deer Creek, and Motherlode sewer sheds derived from a combination of electronic and hardcopy maps of the existing collection system, as well as operational data of lift station logic and field-verified pump curves.

Wastewater flows and diurnal patterns were analyzed by customer class and based on 3-years of customer account and flow monitoring data. The customer classes reflect user categories described in the El Dorado County General Plan and their associated flows. Analysis included identifying key characteristics such as, base sanitary flows, groundwater infiltration and rainfall-dependent inflow and infiltration, and seasonal variances due to impacts from the fluctuating groundwater table.

The completed model includes all key force and gravity mains within the El Dorado Hills, Deer Creek, and Motherlode sewer sheds. An excel-based model was be prepared for the smaller Camino Heights sewer system.

Model calibration was and is continually being performed using results from dry and wet weather flow monitoring efforts to within 10 percent of recorded values, including volume and peaking factors.

The upcoming hydraulic model update will include insertion of new and future connections as well as additional flow monitoring calibration. Modeling results will further enlighten District staff on timing of necessary capacity upgrade projects.

Peak Flow

The District is continuing to revise peak flow in the system by using six flow meters that provide continuous reading. This data is used to update the flow model.

The District’s engineering consultant continually utilizes the flow monitoring results to differentiate and estimate base wastewater flow, groundwater induced infiltration and inflow, and rainfall induced infiltration and inflow with respect to various land use categories. Unit demand factors derived from the flow monitoring program have been applied throughout the system. A comparison of measured and projected wastewater flows will be prepared in the
upcoming hydraulic model update and used as a basis for determining specific service areas associated with relatively high I/I contributions.

**Condition and Capacity of Key System Components**
The condition and capacity of key system components were evaluated as follows.

**Lift Stations**
Hydraulic capacity of key lift stations was analyzed using data loggers, pump run times and the hydraulic model. Condition assessments performed on 10 lift stations included analysis of structural, mechanical, electrical, and field verified operational data and pump curves.

**Pipe Lines**
Hydraulic capacity of main pipelines was determined using the completed 2013 model. CCTV surveys of the collection system are used to assess the condition of force mains, gravity lines and laterals. Proposed development projects requesting services from the District are analyzed by the engineering department for hydraulic capacity, water, fire-flow, and sewer capacity prior to plan approval.

**B. Design Criteria**
Design criteria are contained in the District’s Design and Construction Standards. These standards are published on the District’s website and are reviewed and updated as necessary.

**C. Capacity Enhancement Measures**
The District develops a five year CIP which is updated annually. CIP projects are funded through wastewater rates, wastewater facility connection charges (FCCs), and municipal bonds. The composition of the finance package for each project is based on the percentage of new and existing customers who will be served by the new or upgraded facility.

Within the CIP is a Corrective Action Program (CAP) for the Deer Creek and El Dorado Hills collection systems. The purpose of the CAP is to identify and reduce I/I through repair and rehabilitation of the collection systems. The CAP is also used to replace failing appurtenances, such as ARVs, on a program level. If a large capacity improvement or rehabilitation project is identified in the condition and capacity assessment then it will be integrated into the CIP on a project specific basis.

Key findings derived from the 2013 collection system capacity analysis and the 2019 model update will be prioritized in terms of the ability of the corrective action to add value to the collection system in one or more of the following areas: capacity, operations, life extension, maintenance, code compliance, safety, regulatory compliance, reliability, and reduction of customer complaints. Results of the updated analysis will be integrated into the District’s CIP.

**D. Schedule**
Timing of construction of both new and replacement facilities is based on priority, deficiency, and input from operations staff. The CIP contains planning, design, and construction schedules for all projects. Each individual CIP project contains the project cost estimate and the funding percentage of wastewater rates and wastewater FCCs. Risk assessment, financing, and staffing are also
considered in the long-term management of District facilities and implementation of the CIP. All project funding greater than $50,000 requires approval by the EID Board.
This section of the SSMP discusses parameters the District tracks to monitor the success of the SSMP and how the District plans to keep the SSMP current.

**A. Records Maintenance**
The District uses a CMMS with Hansen software that compiles a wide variety of collection system information including all maintenance activities, SSO data, service and repair history, root control, pipe cleaning, and customer complaints. The data collected and accessed through the CMMS is used to generate management reports that are used to monitor and prioritize SSMP activities.

The District’s Environmental Compliance Division manages the Industrial Pretreatment Program which is responsible for the permitting of food service establishments and commercial wastewater customers. A list of all such customers is maintained by the District and compliance inspections are conducted annually or more frequently as required.

The District’s Collection System Division manages, reviews, and maintains CCTV records at the Bass Lake facility and records routinely uploaded to the District’s network for archives. Root abatement and pipe cleaning maps are also maintained by the Collections division.

**B. Data Reporting and Assessing the Program**
The success of the preventative maintenance program is assessed through identification and tracking of trends in key performance indicators over time. The District uses the following performance indicators:

- Location of all SSOs
- SSOs by cause – roots, grease, debris, pipe failure, pump station failure, capacity
- Length and location of pipeline cleaned
- Length and location of pipeline cleared of roots
- Lift station maintenance performed
- Repairs and rehabilitation projects completed
- Number of grease traps and interceptors inspected
- SSOs per 100 miles per year

**Requirements:** The Enrollee shall:

A. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.

B. Monitor the implementation and, where appropriate, measure the effectiveness of each component of the SSMP.

C. Assess the success of the preventive maintenance program.

D. Identify and illustrate SSO trends, including: frequency, location and volume.
C. Identification and Illustration of SSO Trends

Performance indicator information is generated and reviewed on an annual basis. The compiled information, in the form of table-based reports, graphs, and maps, is reviewed by operations and engineering staff. Reports are generated for each collection system, and then aggregated for the entire District. Reports are described and presented below for 2012-2018.

Definitions of Category Spills:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Category 1 | Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:  
Reach surface water and/or reach a drainage channel tributary to a surface water; or  
Reach a municipal separate storm sewer system and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the municipal separate storm sewer system is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond). |
| Category 2 | Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee’s sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a municipal separate storm sewer system unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly. |
| Category 3 | All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition. |

Distribution of SSOs

Table 9-1 is an aggregated summary illustrating quantity by SSO size of all SSOs for the years 2012-2018.

Table 9-1- Sewer System Overflows by Size. Includes all District Collection Systems

<table>
<thead>
<tr>
<th>SSO Size</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 10 gallons</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>11 to 99 gallons</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>100 to 999 gallons</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>1,000 to 9,999 gallons</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10,000 gallons or greater</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Volume of SSOs
The District produces reports for each collection system, showing statistics of all spills on an annual basis. Table 9-2 includes all district collection systems.

<table>
<thead>
<tr>
<th>Table 9-2 Total Volume of SSOs. Includes all District Collection Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of SSO locations</td>
</tr>
<tr>
<td>Total volume of SSOs (gal)</td>
</tr>
<tr>
<td>Volume recovered</td>
</tr>
<tr>
<td>Volume reaching surface waters</td>
</tr>
<tr>
<td>Volume not recovered and not reaching waters of the state</td>
</tr>
<tr>
<td>Percent reaching surface waters</td>
</tr>
</tbody>
</table>

D. Number and Size of SSOs
Figure 9-1 provides historical SSO data by volume while Figure 9-2 presents SSO data by the number of SSOs experienced for the El Dorado Hills and Deer Creek collections systems.

Figure 9-1 SSO Trends by Volume for the Deer Creek and El Dorado Hills Collection Systems
The State Water Board reported that the typical sanitary sewer overflow (SSOs) per 100 miles of piping per year was 4.73 (January 2007 – June 2014). The District SSOs per 100 miles per year has averaged 2.4 over the past five years.
Cause

Annual SSO information is presented for the Deer Creek and El Dorado Hills collection systems in Tables 9-3 and 9-4 to illustrate the contribution to total SSOs by cause.

Table 9-3 Deer Creek Collection System - SSOs by Cause 2012-2018

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Table 9-4 El Dorado Hills Collection System - SSOs by Cause 2012-2018

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Location of all SSOs

Data collected for SSOs is used to plot spill locations on sewer system maps of each collection system. The Collection System Supervisor reviews and coordinates with Engineering as needed.

E. Updating Program Components

Biannual program audits will be conducted to ensure that the SSMP remains current and useful over time. The District will assign staff to coordinate the biannual review of the SSMP, and each section of the SSMP will be reviewed by the appropriate District staff.
El Dorado Irrigation District will conduct an internal audit of their SSMP every two years, and focus on the effectiveness of the SSMP and the District’s compliance with the SSMP requirements of Order Numbers 2006-0003-DWQ and 2013-0058-EXEC. The audit will include, but is not limited to, the following areas:

- Any significant changes to components of the SSMP, including but not limited to, Legal Authority, Organization, FOG Control Program, or Overflow Emergency Response Plan.
- Any significant changes to the referenced compliance documents presented as appendix items to the Sewer System Management Plan.
- SSMP implementation efforts over the past two years.
- Strategies to correct deficiencies, if identified, will be developed by the responsible District division.

**Requirement:** As part of the SSMP, the Enrollee shall conduct periodic internal audits appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee’s compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.
11 Communication Program

**Requirement:** The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee’s sanitary sewer system.

The District will communicate on a regular basis with the public on the implementation and performance of this SSMP, by providing period updates during the District’s regular public Board Meetings.

The District maintains a website at [http://www.eid.org](http://www.eid.org) that provides information to the public on a wide variety of topics. The website is a valuable and effective communication channel and a source for current District news, features, important announcements, agendas and minutes for Board meetings, and information links. The District’s SSMP is posted on the web site in an area that will also be used to notify the public of information related to sewer system management.
**Requirement:** Both the SSMP and the Enrollee’s program to implement the SSMP must be certified by the Enrollee to be in compliance with the requirements set forth above and must be presented to the Enrollee’s governing board for approval at a public meeting. The Enrollee shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15 below.

In order to complete this certification, the Enrollee’s authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to the State Water Board.

### Approval of Governing Board at Public Meetings

Elements of the SSMP have been presented to the District’s governing board for approval at the following public meetings.

- **October 22, 2007.** The Board approved three elements of the SSMP: Development Plan and Schedule, Goals, and Agency Organizational Structure.
- **June 2014.** The SSMP has been revised to reflect current SSO data and minor revisions to organizational structure. The revised 2014 SSMP is posted on the District’s website.
- **June 2016.** The SSMP has been audited to reflect current SSO data and Regional Board update to add category 3 spills and minor revisions to organizational structure. The Emergency Response Plan (Appendix D) was updated. The audited 2016 SSMP is posted on the District’s website.
- **July 22, 2019.** The SSMP has been updated to reflect current SSO data. Once approved, the 2019 SSMP is posted on the District’s website.
## El Dorado Irrigation District Staff with SSMP Responsibilities

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<td>Waste/Recycle Water Operations Manager</td>
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<td>Collection System Supervisor</td>
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<td>Parks and Recreation Manager</td>
<td>530-295-6819</td>
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Appendix B – Overflow Emergency Response Plan for Sanitary Sewer Overflows

El Dorado Irrigation District

Overflow Emergency Response Plan

Effective Date: July 22, 2016
Revised Date: June 30, 2016
Approved by: Margaret P. Washko, P.E.
Signature: 
Date: June 30, 2016

Prepared by David Patzer, DKF Solutions Group
(707) 373-9709 dpatzer@dkfsolutions.com
Copyright © 2004-2016 DKF Solutions Group, LLC. All rights reserved.
Sanitary Sewer Overflow Emergency Response Plan
(Ref. SWRCB Order No. 2006-0003-DWQ Element VI)

1. Purpose
2. Policy
3. Definitions as used in this OERP
4. Regulatory Requirements for OERP Element of SSMP
5. Goals
6. Sanitary Sewer Overflow (SSO) Detection and Notification
7. SSO Response Procedures
8. Recovery and Cleanup
9. Water Quality
10. Sewer Backup Into/Onto Private Property Claims Handling Policy
11. Notification, Reporting, Monitoring and Recordkeeping Requirements
12. Post SSO Event Debriefing
13. Failure Analysis Investigation
14. SSO Response Training
15. Authority
16. References

Appendix A: Regulatory Notifications Packet
- Instructions.................................................................................................................. Packet Envelope
- Regulatory Reporting Guide .................................................................................. A-1
- Category 1 SSO Reporting Checklist ................................................................. -2a
- Category 2 and 3 SSO Reporting Checklist .......................................................... -2b

Appendix B: Sanitary Sewer Backup Packet
- Response Instructions and Chain of Custody......................................................... Packet Envelope
- Backup Response Flowchart .................................................................................. B-1
- Bubbled Toilets Letter ............................................................................................ -2
- First Responder Form ............................................................................................. -3
- Lodging Authorization Form .................................................................................. -4
- Sewer Overflow Report .......................................................................................... -5
- Start Time Determination Form .............................................................................. -6
- Volume Estimation Methods
  - Eyeball Estimation ............................................................................................... -7a
  - Duration and Flow Rate Photo Comparison ....................................................... -7b
  - Upstream Lateral Connections ........................................................................... -7c
- Lateral CCTV Report ............................................................................................... -8
- Claims Submittal Checklist .................................................................................... -9
- Collection System Failure Analysis Form ............................................................. -10
- Customer Service Packet
  - Instructions .............................................................................................................. envelope
  - Customer Information ............................................................................................ CS-1
  - Sewer Spill Reference Guide ............................................................................. pamphlet
- Regulatory Notifications Packet ......................................................................... See contents list above
- Door Hanger ........................................................................................................... N/A
# Table of Contents

## Appendix C: Sanitary Sewer Overflow Packet
- Instructions and Chain of Custody ................................................................. Packet Envelope
- Overflow Response Flowchart .......................................................................... C-1
- Sewer Overflow Report ....................................................................................... -2
- Start Time Determination Form .......................................................................... -3
- Volume Estimation Methods
  - Eyeball Estimation .......................................................................................... -4a
  - Duration and Flow Rate Photo Comparison .................................................... -4b
  - Upstream Lateral Connections ....................................................................... -4c
- Lateral CCTV Report .......................................................................................... -5
- Collection System Failure Analysis Form .......................................................... -6
- Regulatory Notifications Packet ......................................................................... See contents list above
- Public Posting ..................................................................................................... N/A
- Door Hanger ........................................................................................................ N/A
- Sewer Spill Reference Guide ............................................................................... pamphlet

## Appendix D: Field Sampling Kit
- Procedures for Sampling Receiving Waters and Posting
  - Warnings after a Sewage Spill ........................................................................ D-1
  - Sample Collection Chain of Custody Record ..................................................... -2

## Appendix E: Contractor Orientation
Sanitary Sewer Overflow Emergency Response Plan
(Ref. SWRCB Order No. 2006-0003-DWQ Element VI)

1. **Purpose**

The purpose of the El Dorado Irrigation District’s Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for District personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the District’s service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan. The OERP is a standalone document contained in Appendix D of the Sanitary Sewer Management Plan (SSMP).

2. **Policy**

The District's employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District’s goal is to respond to sewer system overflows as soon as possible following notification. The District will follow reporting procedures in regards to sewer spills as set forth by the Central Valley Regional Water Quality Control Board (CVRWQCB) and the California State Water Resources Control Board (SWRCB).

3. **Definitions As Used In This OERP**

**BUILDING DRAIN** – The building drain is that part of the lowest wastewater piping which receives the discharge from drain pipes inside the walls of a building or structure and conveys it to the private lateral (generally connecting within 2’ of the building wall).

**BUILDING SEWER** – The building sewer are private sewer facilities that convey wastewater from the premises of a Customer to the Public Sewer System.

**BUILDING WASTEWATER PIPELINES** – The building wastewater pipelines are those black or grey water pipes installed within the walls of a building or structure that connect to the building drain. Building wastewater pipelines may include interior sump systems, grease traps or other appurtenances.

**CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS):** Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

**FOG – Fats, Oils, and Grease:** FOG refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

**LEGALLY RESPONSIBLE OFFICIAL (LRO):** Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

**MAINLINE SEWER:** Refers to District wastewater collection system piping that is not a private lateral connection to a user.

**MAINTENANCE HOLE OR MANHOLE:** Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.
NOTIFICATION OF AN SSO: Refers to the time at which the District becomes aware of an SSO event through observation or notification by the public or other source.

NUISANCE - California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:

a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

c. Occurs during, or as a result of, the treatment or disposal of wastes.

PREVENTATIVE MAINTENANCE: Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

PRIVATE LATERAL(S) – That part of the generally horizontal piping of a drainage system which extends from the end of the building drain and which receives the wastewater discharge from the structure and conveys it to a public sewer or other on-site individual sewage disposal system (septic system). The Private lateral begins at Building Drain and extends to and including the wye or point of connection with the public sewer. Private laterals may include privately owned pipelines, sump systems, interceptors or other appurtenances within private streets or private property common areas that are not dedicated to or owned by the District. Private laterals may also begin at the building drain and extend to a private sewer disposal system.

PRIVATE LATERAL SEWAGE DISCHARGES – Sewage discharges that are caused by blockages or other problems within a privately owned lateral. Spills from private property are not reported to the regulatory agency.

PRIVATE SEWER DISPOSAL SYSTEM – The pipelines and points of connection of a building drain to a grease interceptor, an individual sewage disposal system (septic system), holding tank or other private point of disposal unaffiliated with the public sewer comprises a private sewer disposal system.

PRIVATE SEWER FACILITIES – These are sewer facilities that are privately constructed and not dedicated and accepted as a Public Sewer Facility by the District. Private Sewer Facilities generally include sewer facilities within a privately owned building, service laterals, private pump stations, grease interceptors, and all other facilities located between the sewer customer and the connection to the collection line, including the integral wye fitting that connects the lateral to a collection line. Sewer facilities intended for dedication to the District are Private Sewer Facilities until such time as they are accepted by the District.

PUBLIC SEWER – A public sewer is the sewer collection system owned by the District lying within limits of public streets, roads, easements, reserves, non-exclusive easements or other public rights of way and downstream of the wye or cleanout on a Private lateral nearest to a sewer main. The location of a Private lateral within any public street or right of way does not convert it to a public sewer owned by the District unless the District has taken an affirmative action to accept ownership. Public sewer facilities owned and maintained by the District, including facilities designed and constructed by the District and facilities that have been dedicated and accepted by the District. Private Sewer Facilities constructed for dedication to the District do not become public sewers until they have been accepted by the District.

PUBLIC SEWER FACILITIES OR PUBLIC SEWER SYSTEM – Sewer facilities owned and maintained by the District, including facilities designed and constructed by the District and facilities that have been dedicated and accepted by the District. Private Sewer Facilities constructed for dedication to the District do not become Public Sewer Facilities until they have been accepted by the District.
ROOTS (R) Tree root (R) invasion presents an additional problem. If a mat of root hair forms in the sewer line it slows the flow of wastewater and exacerbates the rate of accumulation of FOG materials.

SANITARY SEWER BACKUP (BACKUP) - Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SANITARY SEWER OVERFLOW (SSO) - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

(ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

SSO Categories:

Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:

- Reaches surface water and/or drainage channel tributary to a surface water; or
- Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

SANITARY SEWER SYSTEM: Any publicly-owned system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

SENSITIVE AREA: Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)
SERVICE LATERAL OR LOWER LATERAL – Sewer pipeline from the cleanout or in the absence of a cleanout located in public streets, roads, easements, reserves, non-exclusive easements or other public rights of way to the collection line are District assets. Lower laterals intended for dedication to the District are Private Sewer Facilities until such time as they are accepted by the District.

UNTREATED OR PARTIALLY TREATED WASTEWATER: Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

WATERS OF THE STATE: Waters of the State (or waters of the United States) means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system and that portion of the storm drain is cleaned.

4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan

General Waste Discharge Requirement (GWDR)
The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
(b) A program to ensure appropriate response to all overflows;
(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are available to the public on the District’s website: www.eid.org.

5. Goals

The District’s goals with respect to responding to SSOs are:
- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
• Contain the spilled wastewater to the extent feasible;
• Minimize public contact with the spilled wastewater;
• Mitigate the impact of the SSO;
• Meet the regulatory reporting requirements;
• Evaluate the causes of failure related to certain SSOs; and
• Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

6. **SSO Detection and Notification**
   
   *Ref. SWRCB Order No. 2006-0003-DWQ VI(a)*

The processes that are employed to notify the District of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by District staff during the normal course of their work.

In the event of any pump failure at a District wastewater lift station, the high level sensor activates the SCADA alarm system and the District is contacted. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole, or bypassed around the station into the sanitary sewer system.

6.1 **PUBLIC OBSERVATION**

Public observation is the most common way that the District is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the District’s website: www.eid.org. The District’s telephone numbers for reporting sewer problems are (530) 642-4000 (direct dispatch) and (530) 622-4513 (main).

**Normal Work Hours**

When a report of a sewer spill or backup is made during business hours, the District’s Customer Services Division receives the call, collects basic information about the caller and the problem, and enters it into the District’ Computerized Maintenance Management System (CMMS). This information is then forwarded via phone and email to the Collections Systems Supervisor (or designee) who will dispatch the appropriate crew based on the location and nature of the problem.

**After Hours**

After hours calls are automatically forwarded to an answering service, which will notify the standby employee. If the standby employee does not respond within a specified timeframe, secondary standby employee will be notified, in the event that standby cannot respond the Collections Supervisor (or his designee) will be called.

When calls are received, either during normal work hours or after hours, the individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential overflow or incident
- Nature of call
- In case of SSO, estimated start time of overflow and how long it has been occurring
- Caller’s name, telephone number and address
- Caller’s observations (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information
Figure 6.1 is an overview of the procedure for receiving a sewage overflow or backup report (*see next page*):
**Fig. 6.1 Overview of Receiving a Sewage Overflow or Backup Report Procedure**

**Business Hours**
(530) 642-4000 *direct dispatch*
(530) 622-4513 *main office*

- Finance Assistant:
  1. Collects basic information
  2. Notifies Collections Systems Supervisor or designee

**Non-Business Hours**
(530) 642-4000 *direct dispatch*
(530) 622-4513 *main office*

- Call is forwarded to the answering service, which collects basic information and notifies the standby employee via text message, pager or telephone.

**Receive notification of Overflow/Backup**

**Collections Systems Supervisor or designee**
reviews complaint

- Is the overflow/backup in the service area?
  - NO
  - OUTSIDE
    - Is the spill inside a building or outside?
      - INSIDE
        - 2. Notify the responsible Agency
        - 1. Provide Customer with the contact info for the responsible Agency
  - YES
    - Dispatch a Collections Crew
    - Complete the Sanitary Sewer Overflow Response Plan Packet

**WHAT TO TELL THE CUSTOMER**
Clearly communicate who will respond, estimated time they will arrive and what area(s) will need to be accessed.
- Clearly communicate that a blockage in the sewer main line will be promptly cleared, but that the District is **not allowed to work on a blockage in the property owner's/resident's service lateral line**. Use general terms that the caller can understand, and give the caller your name for future reference.
- Show concern and empathy for the property owner/resident, **but do not admit or deny liability**.
- Instruct the caller to turn off any appliances that use water and to shut off any faucets inside the home.
- Instruct the caller to keep all family members and pets away from the affected area.
- Instruct the caller to place towels, rags, blankets, etc. between areas that have been affected and areas that have not been affected.
- Instruct the caller to not remove any contaminated items – **let the professionals do this**.
- Instruct the caller to turn off their HVAC system.
- Instruct the caller to move any **uncontaminated** property away from impacted areas.

- Dispatch a Collections Crew
- Complete the Sanitary Sewer Backup Response Packet.
6.2 DISTRICT STAFF OBSERVATION

District staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate District staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

6.3 CONTRACTOR OBSERVATION

The following procedures are to be followed in the event that a contractor causes or witnesses a Sanitary Sewer Overflow. If the contractor causes or witnesses an SSO they should:

1. Immediately notify the District by calling (530) 642-4000 (direct dispatch) or (530) 622-4513 (main office).
2. Protect storm drains.
3. Protect the public.
4. Provide information to the Collections Crew such as start time, appearance point(s), suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the Public Information Officer at (530) 622-4513.

Appendix E includes a handout for Contractors with a flowchart of the above procedures.
7. SSO Response Procedures  
Ref. SWRCB Order No. 2006-0003-DWQ Element 6(b)

7.1 Sewer Overflow/Backup Response Summary

The District will respond to SSOs as soon as feasible following notification of an overflow/backup or unauthorized discharge. The following (Figure 7.1) is an overview of the response activities.

**Figure 7.1 Overview of SSO/Backup Response**

1. **Receive notification of Overflow/Backup or Unauthorized Discharge**
2. **Has the overflow impacted private property?**
   - **YES**
     - **Collections Crew performs the following:**
     - Follow the instructions on the Sanitary Sewer Overflow Packet (Appendix C):
       - Relieve blockage and clean impacted areas
       - Forward the completed Sanitary Sewer Overflow Packet to the Collections Systems Supervisor
     - Collections Systems Supervisor: Perform required regulatory reporting in accordance with the Regulatory Notifications Packet (*inside the Sewer Overflow Packet*)
   - **NO**
3. **Is it possible that the overflow/backup is due to a failure in the District-owned/maintained sewer lines?**
   - **YES**
     - **Collections Crew performs the following:**
     - Follow the instructions on the Sanitary Sewer Backup Packet (Appendix B):
       - Relieve blockage and clean impacted areas
       - Provide the customer the Customer Service Packet
       - Forward the completed Sanitary Sewer Backup Packet to the Collections Systems Supervisor.
       - Collections Systems Supervisor:
         - Perform required regulatory reporting in accordance with the Regulatory Notifications Packet (*inside the Sewer Backup Packet*)
         - Notify Risk Analyst of incident
   - **NO**
4. **Risk Analyst performs the following:**
   - 1. Review incident reports, claim form and other incident information
   - 2. Communicate with claimant as appropriate
   - 3. Adjust and administer the claim to closure

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7.2 First Responder Priorities

The first responder’s priorities are:
- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Collections Systems Supervisor in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).
- To photograph and document affected and unaffected areas from a spill.

7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when District personnel responding to a sewer system event are not familiar with potential safety hazards associated with sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job. This includes use of gas monitoring detectors for air quality in manholes (follow confined space procedures) and traffic controls at the site.

7.4 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:
- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- Contact caller if time permits.
- If the spill is large or in a sensitive area, document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
  - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.
  - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
  - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the SSO. For detailed procedures refer to Appendix B: Sanitary Sewer Backup Procedures, and Appendix C: Sanitary Sewer Overflow Packet.

7.6 Initiate Spill Containment Measures

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:
- Determine the immediate destination of the overflowing sewage.
7.5 Restore Flow

Using the appropriate cleaning equipment set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If assistance is required, immediately contact other employees, contractors, and equipment suppliers. For detailed procedures refer to Appendix C: Sanitary Sewer Overflow Packet.

7.6 Equipment

This section provides a list of specialized equipment that may be used to support this Overflow Emergency Response Plan.

- **Closed Circuit Television (CCTV) Inspection Unit** – A CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers.

- **Camera** – A digital or disposable camera is required to record the conditions upon arrival, during clean up, and upon departure.

- **Emergency Response Trucks** – A utility body pickup truck, or open bed is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools will include containment and clean up materials.

- **Portable Generators, Portable Pumps, Piping, and Hoses** – Equipment used to bypass pump, divert, or power equipment to mitigate an SSO.

- **Combination Sewer Cleaning Trucks** – Combination high velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.

- **Air plugs, sandbags and plastic mats**

- **SSO Sampling Kits**

Standard operating procedures for District equipment that may be necessary in the event of a sanitary sewer overflow or backup can be found at the Bass Lake facility.

7.7 Outside Assistance

Responders will refer to the Emergency Contractor List as necessary for assistance with the response.
8. Recovery and Cleanup  
Ref. SWRCB Order No. 2006-0003-DWQ Element 6(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are:

8.1 Estimate the Volume of Spilled Sewage

Use the methods outlined in the Sanitary Sewer Backup Packet (Appendix B), Sanitary Sewer Overflow Packet (Appendix C), and/or the Field Guide to estimate the volume of the spilled sewage. Wherever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water, and discharge it back into the sanitary sewer system.

8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where cleanup is beyond the capabilities of District staff, a cleanup contractor will be used.

Private Property
District crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow onto private property is definitely the result of District system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, District claim forms may be issued if requested by the property owners.

Hard Surface Areas
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

Landscaped and Unimproved Natural Vegetation
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

Natural Waterways
The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.
Wet Weather Modifications
Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4 Public Notification

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed when directed. Additionally, the Collections Systems Supervisor will use their best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, Collections Systems Supervisor, or designee.

Creeks, streams and beaches that have been contaminated as a result of an SSO will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels as determined by EDC Health. The warning signs, once posted, will be checked at least every day to ensure that they are still in place. Photographs of sign placement will be taken.

In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

When contact with the local media is deemed necessary, the Public Information Officer or their designee will provide the media with all relevant information.

9. Water Quality
Ref. SWRCB Order No. 2006-0003-DWQ Element 6(f)

9.1 Water Quality Sampling and Testing

Water quality sampling and testing is required for Category 1 SSOs of 50,000 gallons or greater to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The District Chemist (or designee) will collect water samples as soon as possible after the discovery and mitigation of the SSO event.
- After business hours sampling may be performed by trained Collections Crew leads and supervisors.
- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples will then be brought to a contract laboratory for analysis or prepared for pickup by the contract laboratory.

9.2 Water Quality Monitoring Plan

The District Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 SSO of 50,000 gallons or more in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Program will:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.)
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the District becoming aware of the SSO, require water quality sampling for ammonia and total and fecal coliform.

6. Observe proper chain of custody procedures.

9.3 SSO Technical Report

The District will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. The Collections Systems Supervisor will supervise and prepare this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

Causes and Circumstances of the SSO:
- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

District’s Response to SSO:
- Chronological narrative description of all actions taken by the District to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

Water Quality Monitoring:
- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.
10. **Sewer Backup Into/Onto Private Property Claims Handling Policy**

It is the policy of the District that a claims form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- District staff will offer a District claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the District-owned sewer lines or whenever a District customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the District was not at fault.

- It is the responsibility of the Collections Systems Supervisor and the Collections Crew to gather information regarding the incident and notify the Risk Analyst.

- It is the responsibility of the Risk Analyst to review all claims and to oversee the adjustment and administration of the claim to closure.

11. **Notification, Reporting, Monitoring and Recordkeeping Requirements**

*Ref. SWRCB Order No. 2006-0003-DWQ Element 6(c)*

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the District maintains records for each sanitary sewer overflow. Records include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.

Regulator required notifications are outlined in Section 11.1 on the following page.
### 11.1 Requirements Table

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>REQUIREMENT</th>
<th>METHOD</th>
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<tbody>
<tr>
<td><strong>NOTIFICATION</strong></td>
<td>Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the District will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.</td>
<td>Call Cal OES at: (800) 852-7550</td>
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| **REPORTING**         | • Category 1 or Category 2 SSO: The District will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.  
  • Category 3 SSO: The District will submit certified report within 30 calendar days of the end of month in which SSO the occurred.  
  • SSO Technical Report: The District will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.  
  • “No Spill” Certification: The District will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.  
  • Collection System Questionnaire: The District will update and certify every 12 months | Enter data into the CIWQS Online SSO Database[^1] (http://ciwqs.waterboards.ca.gov/) certified by the Legally Responsible Official(s) [^2].  
  All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report.  
  Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days. |
| **WATER QUALITY MONITORING** | The District will conduct water quality sampling within 48 hours for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. | Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. |
| **RECORD KEEPING**    | The District will maintain the following records:  
  • SSO event records.  
  • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/uploads to the SSMP.  
  • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.  
  • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.  
  • In accordance with District records retention schedule, records are maintained within the District’s Electronic Records Management System (ERMS) | Self-maintained records shall be available during inspections or upon request. |

[^1]: In the event that the CIWQS online SSO database is not available, the Collections Systems Supervisor will notify SWRCB by phone or email in accordance with the time schedules identified above. In such an event, the District will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

[^2]: The District always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.
For reporting purposes, if one SSO event of any category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that cause the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

11.2 Complaint Records

The District maintains records of all complaints received whether or not they result in sanitary sewer overflows. The information collected includes:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the SSO or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant or informant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken

Records are maintained in the District Electronic Records Management System (ERMS) for a minimum of five years whether or not they result in an SSO.

12. Post SSO Event Debriefing

Ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)

Every SSO event is an opportunity to evaluate the District response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 SSO events, all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or in responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. Failure Analysis Investigation

Ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)

The objective of the failure analysis investigation is to determine the “root cause” of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.
The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report (in Appendices B and C) and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident,
- Reviewing communications with the reporting party and witness.
- Review volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings,
- Reviewing available photographs,
- Interviewing staff that responded to the spill.
- Reviewing past maintenance records,
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segment(s) immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oil and Grease (FOG) related information or results
- Review any root related information
- Post SSO debrief records
- Interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form (in Appendices B and C) will be used to document the investigation.

14. SSO Response Training

Ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

14.1 Initial and Annual Refresher Training

All District personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. The District will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The District's Overflow Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan
The District will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through electronic testing, interviews and observations. The District will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures of an SSO?
12. Please walk us through anything else you’d like to add to help us better understand how your field crews respond and mitigate SSO complaints.

14.2 SSO Response Drills

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, force main failure, pump station failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

14.3 SSO Training Record Keeping

Records will be kept with Human Resources of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event and will include date, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working On District Sewer Facilities

All construction contractors working on District sewer facilities will be required to develop a project-specific OERP, will provide project personnel with training regarding the content of
the contractor's OERP and their role in the event of an SSO, and to follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors will be provided, and required to observe contractor procedures. See Appendix E: Contractor Orientation.

15. Authority

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ

16. References

- Sanitary Sewer Overflow and Backup Response Field Guide, 2014, DKF Solutions Group, LLC
- Appendix A: Regulatory Notifications Packet
- Appendix B: Sanitary Sewer Backup Packet
- Appendix C: Sanitary Sewer Overflow Packet
- Appendix D: Field Sampling Kit
- Appendix E: Contractor Orientation
El Dorado Irrigation District
Overflow Emergency Response Plan

Appendix A
REGULATORY NOTIFICATIONS PACKET
Instructions:

1. Receive call from on-site crew reporting a Sanitary Sewer Overflow.
2. Open this packet.
4. Use the SSO Reporting Checklist for the appropriate category of spill (A-2a or A-2b) to document that all notifications are made according to the reporting schedule.

Contents:

<table>
<thead>
<tr>
<th>Form</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Reporting Guide</td>
<td>A-1</td>
</tr>
<tr>
<td>Reporting Checklist: Category 1</td>
<td>-2a</td>
</tr>
<tr>
<td>Reporting Checklist: Categories 2 and 3</td>
<td>-2b</td>
</tr>
</tbody>
</table>

Print on 6"x9" envelope
### Reporting Instructions

<table>
<thead>
<tr>
<th>Deadline</th>
<th>See reverse side for contact information and definitions of the categories of spills of untreated or partially treated wastewater from publically owned sanitary sewer system</th>
<th>Spill from Private Lateral</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category 1</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
| 2 hours after awareness of SSO | • If the SSO is greater than or equal to 1,000 gallons, call CalOES at (800) 852-7550  
• If the SSO may threaten Folsom Lake, notify the Water Manager at 530-642-4060 | -                          | -           |
| 48 Hours after awareness of SSO | If 50,000 gal or more will likely reach receiving waters, begin water quality sampling within 48 hours and initiate impact assessment with support from engineering | -                          | -           |
| 3 Days after awareness of SSO | Submit Draft Spill Report in the CIWQS* database                                                                                 | Submit Draft Spill Report in the CIWQS* database | -           |
| 15 Days after response conclusion | Certify Spill Report in CIWQS*. Update as needed until 120 days after SSO end time                                                | Certify/Submit Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end time | -           |
| 30 Days after end of calendar month in which SSO occurred | -                                                                                                                                  | -                          | -           |
| 45 days after SSO end date | If 50,000 gal or more were not recovered, submit SSO Technical Report using CIWQS*                                               | -                          | -           |

* In the event that the CIWQS online SSO database is not available, make notifications to the State Water Resources Control Board (SWRCB) by phone or email until the CIWQS online SSO database becomes available. See contact information on Side B.

**Note:** For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, in the CIWQS SSO Online Database, including all the discharge points associated with the SSO event.
Contact Information

<table>
<thead>
<tr>
<th>Contact</th>
<th>Telephone/Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>CalOES</td>
<td>(800) 852-7550</td>
</tr>
<tr>
<td>Collections Supervisor</td>
<td>530-295-6717</td>
</tr>
<tr>
<td>Risk Analyst</td>
<td>(530) 622-4513</td>
</tr>
<tr>
<td>Water Manager</td>
<td>(530) 642-4060</td>
</tr>
<tr>
<td>El Dorado County Environmental Health</td>
<td>(530) 621-5300</td>
</tr>
<tr>
<td>State Water Resources Control Board (SWRCB):</td>
<td></td>
</tr>
<tr>
<td>Russell Norman, P.E.</td>
<td>(916) 323-5598 <a href="mailto:Russell.Norman@waterboards.ca.gov">Russell.Norman@waterboards.ca.gov</a></td>
</tr>
<tr>
<td>Gil Vasquez, Water Resources Control Engineer</td>
<td>(916) 322-1400 <a href="mailto:Gil.Vasquez@waterboards.ca.gov">Gil.Vasquez@waterboards.ca.gov</a></td>
</tr>
</tbody>
</table>

Authorized Personnel
The following individuals are the District’s Legally Responsible Officials (LROs) and are authorized to perform regulatory reporting and electronically sign and certify SSO reports in CIWQS.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collections Systems Supervisor</td>
<td>(530) 295-6717</td>
</tr>
<tr>
<td>Wastewater/Recycled Water Manager</td>
<td>(530) 642-4059</td>
</tr>
<tr>
<td>Director of Operations</td>
<td>(530) 642-4218</td>
</tr>
</tbody>
</table>

Definitions of SSO Categories
The response crew will complete the SSO Report form in the SSO Packet to document how the category was determined.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1:</td>
<td>Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:</td>
</tr>
<tr>
<td></td>
<td>- Reaches surface water and/or drainage channel tributary to a surface water; or</td>
</tr>
<tr>
<td></td>
<td>- Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.</td>
</tr>
<tr>
<td>Category 2:</td>
<td>Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:</td>
</tr>
<tr>
<td></td>
<td>- Does not reach surface water, a drainage channel, or an MS4, or</td>
</tr>
<tr>
<td></td>
<td>- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.</td>
</tr>
<tr>
<td>Category 3:</td>
<td>All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition that does not reach a storm drain of surface water.</td>
</tr>
</tbody>
</table>
El Dorado Irrigation District: Overflow Emergency Response Plan

Regulatory Notifications Packet
Category 1 SSO Reporting Checklist

Use this Checklist for Category 1 SSOs only

STEP 1: Receive call from crew.

STEP 2: 2-hour Notification
If the SSO is greater than or equal to 1,000 gallons, notify CalOES within 2 hours of the time the agency was notified of the SSO.

☐ Notify CalOES at (800) 852-7550:
  o Date Called: ________________________________
  o Time called: ___________ ☐ AM ☐ PM
  o CalOES Control number: ________________________________
  o District personnel who called CalOES: Name ________________
    Title ________________
  o Individual they spoke to at CalOES: ________________________________
  o Statement made to OES: ________________________________

STEP 3: Within 2 hours after awareness of SSO

☐ If the SSO may threaten Folsom Lake, notify the Water Manager
☐ If SSO impacts private property that may be due to a failure in the District sewer and/or if the District believes a claim for damages may be submitted against the District contact the Collections Supervisor (or designee).

STEP 4: Within 48 hours after awareness of SSO

☐ Only if 50,000 gallons or more was not recovered implement Water Quality Monitoring Plan.

STEP 5: Within 3 Days after awareness of SSO

☐ Submit a Draft Spill Report using the CIWQS online reporting database.

STEP 6: Within 15 Days after response conclusion

☐ LRO must certify the Spill Report using the CIWQS online reporting database. Amendments to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

STEP 7: Within 45 Days after SSO end date

☐ Within 45 days after the SSO end date, submit an SSO Technical Report using the CIWQS online reporting database only if 50,000 gallons or more was spilled to surface waters.

This form completed by: ________________________________  ________________________________  ________________________________
**Use this Checklist for Category 2 and 3 SSOs only**

**STEP 1: Receive call from crew.**

**STEP 2: Within 2 hours after awareness of SSO**

- If SSO impacts private property that may be due to a failure in the District sewer and/or if the District believes a claim for damages may be submitted against the District contact the Collections Supervisor (or designee).

**STEP 3: Submit Draft Spill Report (Category 2 only)**

- Submit a Draft Spill Report using the CIWQS online reporting database within 3 days after awareness of Category 2 SSO.

**STEP 4: Certify Spill Report**

- Certify the Spill Report using the CIWQS online reporting database:
  - Category 2 SSO: Within 15 days after the conclusion of the response
  - Category 3 SSO: Within 30 days after the end of the calendar month in which the SSO occurred

- Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

This form completed by: ____________________________  ____________________________  ____________________________

*Name*  *Title*  *Date*
Appendix B

SANITARY SEWER BACKUP RESPONSE PACKET
## Table of Contents

<table>
<thead>
<tr>
<th>Form</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and Chain of Custody</td>
<td>packet envelope</td>
</tr>
<tr>
<td>Backup Response Flowchart</td>
<td>B-1</td>
</tr>
<tr>
<td>Bubbled Toilets Letter</td>
<td>-2</td>
</tr>
<tr>
<td>First Responder Form</td>
<td>-3</td>
</tr>
<tr>
<td>Lodging Authorization Form</td>
<td>-4</td>
</tr>
<tr>
<td>Sewer Overflow Report</td>
<td>-5</td>
</tr>
<tr>
<td>Start Time Determination Form</td>
<td>-6</td>
</tr>
<tr>
<td>Volume Estimation Forms</td>
<td>-7a, -7b, -7c</td>
</tr>
<tr>
<td>Lateral CCTV Report</td>
<td>-8</td>
</tr>
<tr>
<td>Claims Submittal Checklist</td>
<td>-9</td>
</tr>
<tr>
<td>Collection System Failure Analysis Form</td>
<td>-10</td>
</tr>
</tbody>
</table>

### Customer Service Packet
- Instructions .................................................. packet envelope
- Customer Information ........................................ CS-1
- Claim Form ..................................................... -2
- Sewer Spill Reference Guide ......................... pamphlet

### Regulatory Notifications Packet
- Instructions ..................................................... envelope
- Regulatory Reporting Guide ............................. A-1
- Category 1 SSO Reporting Checklist ................... -2a
- Category 2 & 3 SSO Reporting Checklist ............... -2b

Door Hanger ....................................................... N/A

For pre-assembled packets contact DKF Solutions Group at (707) 373-9709 or losscontrol@sbcglobal.net
In the event of a **Sewer Backup** into a home/business

**READ THIS FIRST**

- **If this is a Category 1 SSO greater than or equal to 1,000 gallons immediately** contact the Collections Systems Supervisor or designee at (530) 295-6717 to make the 2-hour notification to CalOES.

- **If the backup is into/onto private property AND possibly due to a problem in the public sewer, notify** the Collections System Supervisor (or designee), and Collections System Supervisor to notify Risk Analyst.

- **For any media requests**: Contact the Public Information Officer at (530) 642-4127

**NOTE:**

Show concern and empathy for the property owner/tenant, but do not admit or deny liability. Do not make any promises to pay damages. Remain calm and professional, even if the property owner/tenant is distraught and emotional; if violent, leave the site, call for assistance, and complete and submit a Security Activity Report.

### Collections Crew:

- Follow the instructions on the Sewer Backup Response Flowchart (B-1).
  
  Note: If multiple dwelling units are affected, use one packet per unit and check here: ☐

- If indicated on the flowchart, give the customer the Bubbled Toilets Letter and/or the Customer Service Packet and have them initial here:
  
  - Customer acknowledgement of receipt of Bubbled Toilets Letter: ______
  
  - Customer acknowledgement of receipt of Customer Service Packet: _____

- Ask the property owner/tenant if you may enter their home. If they allow entry, have them initial here authorizing the entry and then take photos of both the damaged and undamaged areas. _____

- Place completed forms in this envelope, complete the Chain of Custody record (right) and forward this packet to the Collections Systems Supervisor.

### Collections Systems Supervisor:

- Follow the instructions on the Sewer Backup Response Flowchart (B-1).

- Give the property owner/tenant your name, title, phone number and business card.

- Complete the Regulatory Notifications Packet.

- Complete the Claims Submittal Checklist.

- Complete the Chain of Custody record (right) and forward this packet to the Risk Analyst.

### Risk Analyst:

Refer to the Claims Submittal Checklist.

---

El Dorado Irrigation District Overflow Emergency Response Plan: Sanitary Sewer Backup Packet

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Sanitary Sewer Backup Response Packet
Backup Response Flowchart

Start Here

Was this a toilet burp or similar due to District activities?

YES

Provide Customer with the Bubbled Toilets Letter and have Customer initial the front of the Sewer Backup Envelope.

NO

Does the backup appear to be due to a problem in the District-owned/maintained sewer line?

YES

If customer is home:

- Recommend the customer shut off any appliances using water.
- Explain to customer that the blockage is in their private lateral and that the District does not have legal authority to maintain or perform work on privately owned laterals. Consider showing the customer the unobstructed flow in the public sewer to help explain that the blockage is in their lateral.
- Consider cleaning the District-owned/maintained line manhole to manhole and other lines that may tie in to the main line.
- Recommend to customer they hire a contractor to clear their line.
- Give customer the Sewer Spill Reference Guide pamphlet.

If it is a Category 1 spill greater than or equal to 1,000 gallons, immediately contact the Collections Systems Supervisor to make the 2-hour notification to CalOES. See front of envelope for contact information.

If customer is not home:

- Complete Door Hanger and leave on customer’s door.
- Leave a message on the customer’s voicemail.

NO

If customer is home:

- Complete Door Hanger and leave on customer’s door.
- Leave a message on the customer’s voicemail.

If customer is not home:

- Complete Door Hanger and leave on customer’s door.
- Leave a message on the customer’s voicemail.

NO

Address the cause of the SSO/Backup in the District Sewer - See Field Reference Guide, as necessary

Has any sewage spilled outside?

YES

Go to SSO Packet procedures. Complete and then return here.

NO

Has any sewage spilled outside?

YES

Make notification indicated on the top of the Sewer Backup Envelope as appropriate.

NO

Has any sewage impacted public areas?

YES

1. Go to SSO Packet and complete procedures.
2. Document the service call according to District procedures
3. Follow routing instructions on the front of the Sewer Backup Packet envelope.

NO

Is there a property line cleanout?

YES

1. Document the service call according to District procedures
2. Follow routing instructions on the front of the Sewer Backup Packet envelope.

NO

Has any sewage impacted public areas?

1. Give customer the Customer Service Packet. (inside Sewer Backup envelope)
2. Ask the customer to initial the front of the Sewer Backup Packet Envelope, as appropriate.

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1. Remove the First Responder Form from the Sewer Backup Packet envelope and complete. Immediately contact the Risk Analyst and provide the information from the completed First Responder Form.

2. If the livability assessment indicates that temporary relocation is advised, complete the Lodging Authorization form.

3. Advise Customer to contact a cleaning contractor if applicable. Refer to the Customer Information Packet for a list of contractors provided for information only (i.e., not endorsed by the District).

4. Ask Customer to take photographs of affected and non-affected areas, if allowed by customer. Try to get pictures showing where the damaged areas stopped.

Complete the following forms (in the Sewer Backup Packet envelope):

- Sanitary Sewer Overflow Report
- Start Time Determination Form (Remember, the spill was probably already occurring before it was reported.)
- Volume Estimation (Use one or more worksheets and/or methods listed in the Field Guide.)

Clean/disinfect any overflow outside of the building. DO NOT allow any disinfectants to escape to storm drains.

1. Document the service call according to District procedures.
2. Complete the remaining instructions in the Collections Crew box on the front of the Sewer Backup Packet envelope.
3. Follow routing instructions as indicated on the front of the Sewer Backup Packet envelope.

MEDIA AND PUBLIC RELATIONS GUIDELINES:
Exercise caution in contacts with the public or media when you respond to a spill. Any information you provide or statements you make may become pertinent in the event of possible court action, it is important to AVOID THE FOLLOWING:

- Giving out the wrong information,
- Providing incorrect facts about a company or other agency,
- Speculating about the situation you are responding to,
- Making accusations against customers, businesses or other agencies.

Be courteous and refer to the Collections Supervisor or Public Information officer. In some cases, it may be appropriate to say that we are busy with the work and they should contact the Public Information Officer for more details.

In most cases, refer media requests to the Public Information Officer indicated on the front of the Sewer Overflow Packet envelope.
Dear El Dorado Irrigation District Customer,

Thank you for informing us that your toilet bubbled while our crews were working in proximity of your property. We apologize for the inconvenience and hope that this letter will answer some of your questions about bubbling toilets.

1. **Is this a health risk?**
   The water that came out of your toilet is potable water from the toilet bowl. Unless your toilet was in use when this occurred, this water is no different than that encountered while cleaning your toilet.

2. **What is the District doing in the street?**
   In order to insure reliable sewer service, the District inspects, cleans, and repairs its sewer system on a continuous basis.

3. **How does sewer cleaning cause my toilet to bubble?**
   Typical industry cleaning equipment uses high-pressure water to clean sewers. The first step is to use the high-pressure water jets to propel the hose and cleaning nozzle upstream as far as 800 feet. During this process, air within the main pipe is displaced and sometimes goes up the private lateral pipe and releases through the toilet. This can also happen during the cleaning phase, when high-pressure water is pulled downstream to the cleaning truck.

4. **What causes the air to come from my toilet?**
   Over the years, District crews have found that the bubbling of toilets has many causes, some of which are:
   - Obstructed vent pipes;
   - Vent pipes that are positioned too far from the toilet;
   - Private lateral pipes that may be in use as the crew is cleaning (e.g. draining washing machine, draining bathtub, etc.);
   - Lateral pipes that may have obstructions that are causing them to hold water (e.g. roots, grease, etc.).

5. **What does District staff do, once informed of a bubbling toilet?**
   Once notified of a bubbling toilet, the crew leader explains to the customer what has happened, and checks to see if there is a clean-out in the customer’s yard that could be opened in the future during cleaning. The crew leader then makes notes and completes paperwork that puts the address on the District’s computerized notification list. In the future, crews will notice that this address was “bubbled” at one time, and, before commencing the cleaning, they will notify the occupant of the possibility of bubbling toilets. In the event the occupant is not present when the cleaning begins, the crews will attempt to open clean-outs and/or lower water pressure to avoid bubbling, and/or may hang a door hanger to inform the customer that maintenance has or will occur(ed).

6. **What can I do to prevent my toilet from bubbling?**
   When a sewer begins to drain slowly, it may be a sign that it needs to be cleaned or repaired. Trees and shrubs may have root structures that are entering the lateral pipe. The homeowner needs to make sure to have a clean-out for accessing the line. It is the homeowner’s responsibility to keep the sewer lateral pipe in good working condition.

It is always a good idea to keep the toilet lid down when not in use, and not install carpets in the bathroom unless they can be easily removed and cleaned. For more information please call the Collections Systems Supervisor at (530) 295-6717.

Sincerely,

El Dorado Irrigation District
Fill out this form as completely as possible.
Ask customer if you may enter the home, if sewage entered. If so, take photos of all damaged and undamaged areas.

<table>
<thead>
<tr>
<th>PERSON COMPLETING THIS FORM:</th>
<th>PHONE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Title:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIME STAFF ARRIVED ON-SITE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did customer call cleaning contractor? □ Yes □ No</td>
</tr>
<tr>
<td>If YES, name of contractor:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHECK IF SPOKE WITH OWNER: □</th>
<th>CHECK IF SPOKE WITH TENANT: □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Owner’s Name:</td>
<td>Tenant’s Name:</td>
</tr>
<tr>
<td>Address:</td>
<td>Address:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Phone:</td>
</tr>
<tr>
<td>Cell Phone:</td>
<td>Cell Phone:</td>
</tr>
</tbody>
</table>

| Is nearest upstream manhole visibly higher than the drain/fixture that overflowed? □ Yes □ No |

<table>
<thead>
<tr>
<th>Number of People Living at Residence:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do there appear to be elderly or persons with disabilities living in the home? □ Yes □ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approx. Age of Home:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-floor Material:</td>
</tr>
<tr>
<td>□ Wood □ Concrete</td>
</tr>
<tr>
<td># of Bathrooms:</td>
</tr>
<tr>
<td># of Rooms Affected:</td>
</tr>
</tbody>
</table>

| Is there standing water in the home? □ Yes □ No |
| If yes, how deep? |
| Does the water appear to be □ Clear □ Gray □ Black |

<table>
<thead>
<tr>
<th>Approximate Amount of Spill (gallons):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. Time Sewage Has Been Sitting (hrs/days):</td>
</tr>
<tr>
<td>Has District Staff taken photos/video of the incident? □ Yes □ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Apparent Extent of Damage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If this is a line break/leak: □ Line Break/Leak □ Stoppage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Apparent cause of the incident:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If this is a line break/leak:</td>
</tr>
<tr>
<td>What apparently caused the line break or leak?</td>
</tr>
<tr>
<td>Was the break or leak apparently caused by fatigue or corrosion?</td>
</tr>
<tr>
<td>What is the approximate age of the pipe?</td>
</tr>
<tr>
<td>What material is the pipe?</td>
</tr>
<tr>
<td>Do you know of any recent repairs or construction in the area?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If this is a stoppage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What apparently caused the stoppage?</td>
</tr>
<tr>
<td>Was it apparently due to a foreign object? □ YES □ NO</td>
</tr>
<tr>
<td>If so, describe the object:</td>
</tr>
</tbody>
</table>

<p>| Has the resident had any plumbing work done recently? □ YES □ NO |</p>
<table>
<thead>
<tr>
<th>If YES, please describe:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to Side B</td>
</tr>
</tbody>
</table>

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**LIVABILITY ASSESSMENT**

**SANITARY SEWER LINE BLOCKAGE LOCATION**

Does property have a Property Line Cleanout or BPD?  
☐ YES  ☐ NO  ☐ Unknown  

If yes, was the Property Line Cleanout/BPD operational at the time of the overflow?  
☐ YES  ☐ NO  ☐ Unknown  

**PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:**

<table>
<thead>
<tr>
<th>Customer Cleanout Was:</th>
<th>Public Cleanout was:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Non-Existent</td>
<td>☐ Non-Existent</td>
</tr>
<tr>
<td>☐ Full</td>
<td>☐ Full</td>
</tr>
<tr>
<td>☐ Empty</td>
<td>☐ Empty</td>
</tr>
</tbody>
</table>

**Recommended Follow-Up Action(s):**

On the diagram below, indicate the location of the sewer line and where the problem occurred.

```
| Affected House | Upstream House |
```

Did sewage go under buildings?  
☐ Yes  ☐ No  ☐ Unsure  

Place completed form in Sewer Backup Envelope and follow routing instructions  

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INSTRUCTIONS TO EMPLOYEE:

1. Contact the Collections Supervisor (or designee) at (530) 295-6717 to discuss the resident’s lodging options. The Collections Supervisor (or designee) will contact the hotel to secure a reservation with District credit card or direct billing. If the Risk Analyst is unavailable, use the District credit card to secure one night’s lodging for the Resident.

2. Review this form with the customer and instruct them to read the Instructions to Resident section below.

3. Instruct the customer that this emergency authorization is for LODGING ONLY – NO FOOD, MINIBAR, MOVIE, PHONE or Other Charges).

4. Explain to customer that if circumstances require additional nights’ lodging and other incidentals, the Collections Supervisor (or designee) will address them.

5. Have the customer sign the Acknowledgement section of this form.

6. Complete this Authorization Form and sign.

7. Give the bottom copy of this form to the customer.

INSTRUCTIONS TO RESIDENT: The El Dorado Irrigation District recommends that you temporarily relocate to a local hotel for your safety and convenience while your residence is being cleaned. Please note that this emergency authorization is granted under the following conditions:

1. This authorization provides for one (1) nights’ lodging at the hotel selected below.

2. The authorization is good for room and tax ONLY.

3. Additional nights, other allowances, and special circumstances may be discussed by contacting the Collections Supervisor (or designee) at 530-295-6717 or the Risk Analyst at (530) 622-4513.

CUSTOMER ACKNOWLEDGEMENT:
I/we have read and understood the terms and conditions governing this offer of temporary relocation and agree to abide by them as described above.

Customer Name (please print): 
Customer Address: 
Phone # where customer may be reached: 
Customer Signature: _______________________________ Date: ____________________

☐ Check here to decline this offer of temporary relocation. Customer Signature: ________________________________

Good for one (1) night’s stay on (date): ________________ Number of affected residents: ________________

El Dorado Irrigation District Representative’s Name: ________________ Phone Number: ________________

This voucher is valid at the following hotels:

**Best Western Plus**
6850 Green Leaf Drive, Placerville, CA 95667
530) 622-9100
Pet friendly

**Holiday Inn Express**
4360 Town Center Boulevard, El Dorado Hills, CA 95762
(916) 358-3100
Service animals only

Distribution: Top Copy to: District records  Middle Copy to: Collections Systems Supervisor  Bottom Copy to Customer

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INSTRUCTIONS: Complete all items **EXCEPT** those that are shaded gray

SSO Category (check one):
- Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.
- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

Spill from Private Lateral (specify):
- Single Family Home
- Multi-Family Home
- High Density Residential (5+ units)
- Food Service Establishment (FSE)
- Mixed Use Property
- Industrial Property
- Commercial Property
- Public quasi-public institution (hospital, schools, fire department, etc.)

IMMEDIATE NOTIFICATION: For a Category 1 SSO ≥1,000 gallons reaching surface waters, CalOES must be contacted within 2 hours at (800) 852-7550.

### A. SSO LOCATION

<table>
<thead>
<tr>
<th>SSO Location Name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude Coordinates:</td>
<td>Longitude Coordinates:</td>
</tr>
<tr>
<td>Street Name and Number:</td>
<td></td>
</tr>
<tr>
<td>Nearest Cross Street:</td>
<td>City:</td>
</tr>
<tr>
<td>County:</td>
<td>SSO Location Description:</td>
</tr>
</tbody>
</table>

### B. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)

SSO Appearance Point (check one or more):
- Force Main
- Gravity Mainline
- Lateral Cleanout (Private)
- Gravity Mainline
- Lateral Cleanout (Public)
- Inside Building or Structure
- Manhole
- Pump Station
- Lateral (Private)
- Service Lateral or Lower Lateral
- Other Sewer System Structure (specify):

Were there multiple appearance points?  □ No  □ Yes, number of appearance points:

Did the SSO reach a drainage channel and/or surface water?  □ Yes (Category 1)  □ No

If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer?  □ Yes  □ No (Category 1)

Was this spill from a private lateral?  □ Yes  □ No  If YES, name of responsible party:

Final Spill Destination:
- Surface waters other than ocean
- Drainage channel
- Building/structure
- Separate Storm drain
- Combined storm drain
- Paved surface
- Unpaved surface
- Street/curb/gutter
- Other:

*Provide name(s) of affected drainage channels, beach, etc.:

Total Estimated SSO volume (in gallons – 1,000gal or more = Category 1):

<table>
<thead>
<tr>
<th>Estimated volume reached</th>
<th>Recovered</th>
<th>gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Est. volume that reached a separate storm drain that flows to a surface water body:</td>
<td>gal</td>
<td></td>
</tr>
<tr>
<td>Est. volume that reached a drainage channel that flows to a surface water body:</td>
<td>gal</td>
<td></td>
</tr>
<tr>
<td>Est. volume discharged directly to a surface water body:</td>
<td>gal</td>
<td></td>
</tr>
<tr>
<td>Est. volume discharged to land:</td>
<td>gal</td>
<td></td>
</tr>
</tbody>
</table>

Calc. Methods:  □ Eyeball  □ Photo Comparison  □ Upstream Lat. Connections  □ Area/Volume (include sketch/photo with dimensions)  □ Other (describe):

### C. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)

Estimated SSO start date:  Estimated SSO start time:

Date SSO reported to sewer crew:  Time SSO reported to sewer crew:

Date sewer crew arrived:  Time sewer crew arrived:

Who was interviewed to help determine start time:

Estimated SSO end date:  Estimated SSO end time:

*If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.
### D. CAUSE OF SSO

Where did failure occur? (Check all that apply):
- Air Relief or Blow-Off Valve
- Force Main
- Gravity Mainline
- Siphon
- Lower Lateral (public)
- Manhole
- Pump Station (specify): Controls Mechanical Power
- Lateral (private)
- Service Lateral or Lower Lateral
- Other

SSO cause (check all that apply):
- Air Relief or Blow-Off Valve Failure
- Construction Diversion Failure
- CS Maintenance
- Damage by others
- Debris (specify): From Construction From Lateral General Rags
- Flow Exceeded Capacity
- FOG (Fats, oil, grease)
- Inappropriate Discharge
- Natural Disaster
- Operator Error
- Root Intrusion
- Pipe Structural Problem/Failure
- Pipe Structural Problem/Failure (Installation)
- Rainfall Exceeded Design
- Pump Station Failure (specify): Controls Mechanical Power Roots Siphon Failure Vandalism
- Surcharged Pipe
- Non-Dispersible Wipes
- Other (specify):

Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):

Estimated age of sewer asset at the point of blockage or failure (if applicable):

Description of terrain surrounding point of blockage/spill cause: Flat Mixed Steep

### E. SSO RESPONSE

SSO response activities (check all that apply):
- Cleaned-Up
- Mitigated Effects of Spill
- Contained All or Portion of Spill
- Restored Flow
- Returned All Spill to Sanitary Sewer System
- Returned Portion of Spill to Sanitary Sewer System
- Property Owner Notified
- Other Enforcement Agency Notified (specify)
- Other (specify):

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed? Yes No
Any ongoing investigation? Yes No

Were health warnings posted? Yes No If yes, provide health warning/beach closure posting/details:

Was there a beach closure? Yes No If yes, name of closed beach(es):

Were samples of impacted waters collected? Yes No
If YES, select the analyses: DO Ammonia Bacteria pH Temperature Other:

Recommended corrective actions: (check all that apply and provide detail)
- Add sewer to preventive maintenance program
- Enforcement action against FOG source
- Plan rehabilitation or replacement of sewer
- Remove roots
- Other (specify):

What major equipment was used in the response?

List all agency personnel involved in the response including name, title and their role in the response:

### F. NOTES

### G. NOTIFICATION DETAILS: Enter details if applicable

CalOES contacted on (Date and Time):

Spoke to: CalOES Control Number:

This form prepared by: NAME: TITLE: DATE:

This form reviewed by: NAME: TITLE: DATE:

Place completed form in Sewer Backup Envelope and follow routing instructions.

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SSO Start Date: _________________ Location: ______________________________________

Accurate start time determination is an essential part of SSO volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the District notified of the SSO? ________________________________ □AM □PM

Who notified the District? ____________________________________________________

Did they indicate what time they noticed the SSO? □YES □NO If yes, what time? __________ □AM □PM

Who at the District received the notification? ____________________________________

What time did the crew arrive at the site of the SSO? ____________________________ □AM □PM

Who was interviewed regarding the start time of the SSO? Include their name, contact information, and the statement they provided:

Name: ___________________________ Contact Information: __________________________

Statement: ____________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

Describe in detail how you determined the start time for this particular SSO:

SSO Start Date: _________________ SSO Start Time: _______________ □AM □PM

SSO End Date: _________________ SSO End Time: _______________ □AM □PM

SSO Duration: ____________ minutes

This form completed by:

Name: ___________________________ Signature: ________________________________

Job Title: ___________________________ Date: ________________________________
Use this method only for small SSOs of less than 200 gallons.

SSO Date: __________________ Location: ____________________________________________

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

<table>
<thead>
<tr>
<th>Size of bucket(s) or barrel(s)</th>
<th>How many of this size?</th>
<th>Multiplier</th>
<th>Estimated SSO Volume (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon water jug</td>
<td></td>
<td>x 1 gallons</td>
<td></td>
</tr>
<tr>
<td>5 gallon bucket</td>
<td></td>
<td>x 5 gallons</td>
<td></td>
</tr>
<tr>
<td>32 gallon trash can</td>
<td></td>
<td>x 32 gallons</td>
<td></td>
</tr>
<tr>
<td>55 gallon drum</td>
<td></td>
<td>x 55 gallons</td>
<td></td>
</tr>
<tr>
<td>Other: ______ gallons</td>
<td></td>
<td>x _____ gallons</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Total SSO Volume:

STEP 5: Is rainfall a factor in the SSO? ☐ Yes ☐ No
If yes, what volume of the observed spill volume do you estimate is rainfall? _______ gallons
If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

\[
\text{Estimated SSO Volume} - \text{Rainfall} = \text{Total Estimated SSO Volume}
\]

Do you believe that this method has estimated the entire SSO? ☐ Yes ☐ No
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: __________________________________________ Signature: __________________________
Job Title: __________________________________________ Date: __________________________
SSO Date: _______________________ Location: ________________________________

STEP 1: Compare the SSO to reference images on Side 2 to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: ___________gallons per minute (gpm)

STEP 2: Complete the Start Time Determination Form to provide a detailed description of how start time was determined. Copy the SSO Duration from the Start Time Determination Form here:

SSO Duration: ___________minutes

STEP 3: Multiply the flow rate by the SSO duration to calculate the estimated SSO volume.

\[
\text{Flow Rate} \times \text{SSO Duration} = \text{Estimated SSO Volume}
\]

STEP 4: Did the SSO occur during a period of consistent flow in this portion of the system? ☐Yes ☐No
If no, explain how, based on this portion of the collection system and its users, you believe it may have impacted the estimated SSO volume:

By what percentage are you adjusting the estimation? ☐increase ☐decrease __________ %
Translate the percentage into gallons: ___________gallons

STEP 5: Calculate the adjusted SSO volume estimate:

\[
\text{Estimated SSO Volume} + \text{or} - \text{Adjustment} = \text{Estimated SSO volume}
\]

Do you believe that this method has estimated the entire SSO? ☐Yes ☐No
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: _______________________ Signature: ________________________________
Job Title: _______________________ Date: ________________________________
IMPORTANT NOTE:
These photographs are provided as examples only and will change with many factors.

SSCSC Manhole Overflow Gauge
CWEA Southern Section Collections Systems Committee
Overflow Simulation courtesy of Eastern Municipal Water District

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>Near View</th>
<th>Far View</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 gpm</td>
<td><img src="image1" alt="Near View 5 gpm" /></td>
<td><img src="image2" alt="Far View 5 gpm" /></td>
</tr>
<tr>
<td>25 gpm</td>
<td><img src="image3" alt="Near View 25 gpm" /></td>
<td><img src="image4" alt="Far View 25 gpm" /></td>
</tr>
<tr>
<td>50 gpm</td>
<td><img src="image5" alt="Near View 50 gpm" /></td>
<td><img src="image6" alt="Far View 50 gpm" /></td>
</tr>
<tr>
<td>100 gpm</td>
<td><img src="image7" alt="Near View 100 gpm" /></td>
<td><img src="image8" alt="Far View 100 gpm" /></td>
</tr>
<tr>
<td>150 gpm</td>
<td><img src="image9" alt="Near View 150 gpm" /></td>
<td><img src="image10" alt="Far View 150 gpm" /></td>
</tr>
<tr>
<td>200 gpm</td>
<td><img src="image11" alt="Near View 200 gpm" /></td>
<td><img src="image12" alt="Far View 200 gpm" /></td>
</tr>
<tr>
<td>300 gpm</td>
<td><img src="image13" alt="Near View 300 gpm" /></td>
<td><img src="image14" alt="Far View 300 gpm" /></td>
</tr>
<tr>
<td>400 gpm</td>
<td><img src="image15" alt="Near View 400 gpm" /></td>
<td><img src="image16" alt="Far View 400 gpm" /></td>
</tr>
</tbody>
</table>
SSO Date: ___________________________  Location: ____________________________

STEP 1:  Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: ______ EDUs

NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2:  This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Flow Rate Per EDU</th>
<th>SS0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Gallons</td>
<td>Hours</td>
</tr>
<tr>
<td></td>
<td>per Period</td>
<td>per period</td>
</tr>
<tr>
<td>6am-noon</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>noon-6pm</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>6pm-midnight</td>
<td>54</td>
<td>6</td>
</tr>
<tr>
<td>midnight-6am</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Estimated SSO Volume per EDU:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STEP 3:  Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.

\[
\text{Estimated SSO Volume} = \text{Volume per EDU} \times \text{# of EDUs}
\]

STEP 4:  Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: ____________________________ gallons

Do you believe that this method has estimated the entire SSO?  ☐ Yes  ☐ No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: ____________________________  Signature: ____________________________

Job Title: ____________________________  Date: ____________________________

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<table>
<thead>
<tr>
<th>PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSON COMPLETING THIS FORM:</strong></td>
</tr>
<tr>
<td><strong>CAMERA TYPE:</strong></td>
</tr>
<tr>
<td><strong>AFFECTED PROPERTY STREET ADDRESS:</strong></td>
</tr>
<tr>
<td><strong>CITY, STATE AND ZIP:</strong></td>
</tr>
<tr>
<td><strong>PHONE</strong></td>
</tr>
</tbody>
</table>

**WEATHER AT TIME OF CCTV WORK:**

**PLEASE CHECK ALL THAT WERE DISCOVERED – Describe Extent & Location Using Camera Entry Point As Reference:**

- **Broken Lateral** – Describe:
  - **Depth:**
- **Roots** – Severity: □ Light  □ Moderate  □ Heavy
- **Grease** – Severity: □ Light  □ Moderate  □ Heavy
- **Sag** – Describe:
  - **Depth:**
- **Backflow Prevention Device** – Describe:
  - **Location:**
- **Cleanout** – Describe:
  - **Location:**
- **Joint/Junction** – Describe:
  - **Depth**
- **Grade** – Describe:
- **Grit** – Severity: □ Light  □ Moderate  □ Heavy
- **Other** – Describe:

**TIME OF OVERFLOW:**

**TIME BLOCKAGE RELIEVED:**

**TIME LATERAL TV'd:**

**DEPTH OF LATERAL:**

**RECOMMENDED FOLLOW UP WORK ACTIONS:**

**Mark for USA location?** □ Yes  □ No  **Lateral Locations Marked in Green Paint?** □ Yes  □ No

**SIGNATURE OF EMPLOYEE PERFORMING TV WORK:**

**DATE**

If applicable, place completed form in Sewer Backup Packet and follow routing instructions.
Collections Systems Supervisor

1. Complete the following information:
   - Title: ________________________________
   - Name: ______________________________
   - Phone: ______________________________
   - Today’s Date: ________________________

2. Copy the items listed below and retain originals for internal archiving purposes.

3. Place the copies in the Backup Response Envelope and forward to the Risk Analyst:
   - ☐ Form B-3: First Responder Form
   - ☐ Form B-4: Lodging Authorization Form
   - ☐ Form B-5: Sanitary Sewer Overflow Report - copy
   - ☐ Form B-6: Start Time Determination Form - copy
   - ☐ Form B-7: Volume Estimation Forms (a, b and/or c) - copy
   - ☐ Form B-8: Lateral CCTV Report
   - ☐ Form B-9: Claims Submittal Checklist (this form)
   - ☐ All photos taken: Check here if copy of photographs will be forwarded separately ☐
   - ☐ Any other information you feel is important in this claim

4. Go to Regulatory Notifications Packet and make all appropriate notifications.

5. Complete Form BP-10: Collection System Failure Analysis

Risk Analyst

1. Verify claims packet is complete.
2. Send claim acknowledgement to customer as appropriate
3. Communicate with claimant as appropriate
4. Adjust and administer the claim to closure
To be completed by the Collections Systems Supervisor

<table>
<thead>
<tr>
<th>Incident Report #</th>
<th>Prepared By</th>
</tr>
</thead>
</table>

**SSO/Backup Information**

<table>
<thead>
<tr>
<th>Event Date/Time</th>
<th>Address</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Volume Spilled</th>
<th>Volume Recovered</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cause</th>
</tr>
</thead>
</table>

**Summary of Historical SSOs/Backups/Service Calls/Other Problems**

<table>
<thead>
<tr>
<th>Date</th>
<th>Cause</th>
<th>Date Last Cleaned</th>
<th>Crew</th>
</tr>
</thead>
</table>

Records Reviewed By: 

<table>
<thead>
<tr>
<th>Record Review Date:</th>
</tr>
</thead>
</table>

**Summary of CCTV Information**

<table>
<thead>
<tr>
<th>CCTV Inspection Date</th>
<th>Tape Name/Number</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CCTV Tape Reviewed By</th>
<th>CCTV Review Date</th>
</tr>
</thead>
</table>

Observations

Go to Side B
### Recommendations

<table>
<thead>
<tr>
<th>Type</th>
<th>Specific Actions</th>
<th>Who is Responsible?</th>
<th>Completion Deadline</th>
<th>Who Will Verify Completion?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Changes or Repairs Required</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Repair(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Improvement(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change(s) to Maintenance Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change(s) to Overflow Response Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments/Notes:**

**Review Date:**
Customer Service Packet

Contents:

<table>
<thead>
<tr>
<th>Form</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Information Letter</td>
<td>CS-1</td>
</tr>
<tr>
<td>Claim Form</td>
<td>-2</td>
</tr>
<tr>
<td>Sewer Spill Reference Guide</td>
<td>pamphlet</td>
</tr>
</tbody>
</table>

Instructions:

1. Review the Customer Information letter to determine actions that need to be taken immediately.
2. See the Customer Information letter for information about filing a claim.

If you have any questions contact:

For sewer related issues, contact the Collections Systems Supervisor:
(530) 295-6717

For claims related issues, contact the Risk Analyst:
(530) 622-4513

This packet provided by: ________________________________

Phone: ________________________________
Paquete de servicio al cliente

Contenidos:

<table>
<thead>
<tr>
<th>Formulario</th>
<th>Número de formulario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carta de información para el cliente</td>
<td>CS-1</td>
</tr>
<tr>
<td>Formulario de reclamación</td>
<td></td>
</tr>
<tr>
<td>Guía de referencia en caso de desborde del alcantarillado</td>
<td>folleto</td>
</tr>
</tbody>
</table>

Instrucciones:

1. Revise la carta de información para el cliente para determinar qué medidas deben tomarse inmediatamente.
2. Consulte la carta de información para el cliente sobre cómo presentar una reclamación.
3. Revise el folleto de la Guía de referencia en caso de desborde del alcantarillado.

Si tiene alguna consulta, comuníquese con las siguientes entidades:

Para los problemas relacionados con el alcantarillado, comuníquese con el Supervisor de los Sistemas de Recolección:
(530) 295-6717

Para los problemas relacionados con las reclamaciones, comuníquese con el Analista de Riesgos:
(530) 622-4513

Este paquete lo proporciona: ________________________________

Teléfono: ____________________________________________
Dear Property Owner / Tenant:

The El Dorado Irrigation District (District) recognizes that water and sewer line incidents can be stressful and require immediate response. The District has prepared this brief information packet to help you minimize the impact of the incident by responding promptly to the situation.

At this time, the District is investigating the cause of the incident and cannot assume liability for damages until the investigation is complete. However, if our investigation determines the District is responsible for this incident, the costs you incur for reasonable and necessary cleanup will be reimbursed in the settlement of your claim. The District is not responsible for cleanup charges or damages caused by blockages in the property owner’s sewer line, or by leaks or failures of potable or recycled water lines on the customer’s side of the water meter. Regardless of whether the District is responsible for the incident, it is up to the property owner to arrange for the repairs and to present a claim to the District for consideration. Claims are processed under California’s Government Claims Act, sections 810 to 996.6 of the California Government Code.

As the property owner/tenant, you can contact your insurance carrier to report a claim and contact a restoration company for clean-up and removal of the affected areas. If your insurance carrier does not have a list of recommended clean-up companies to call for service, the following 24-hour emergency restoration companies are available to respond:

- Zebra Restoration Services (916) 635-8571
- Belfor Property Restoration (800) 856-3333
- Certified Property Rescue (916) 939-9400
- Emergency Services Restoration (800) 577-7537
- ServiceMaster Cleaning & Restoration Services (530) 295-1608

*This list is provided as a resource only. The District does not require or endorse the use of any of these companies. This list is not exclusive, comprehensive or limiting in any way. Qualified contractors can be found online or in the Yellow Pages under “Water Damage Restoration” or “Fire & Water Damage Restoration”. However, the District does recommend that you hire a firm with the experience and resources to get the job done quickly.

Water damage and bacteria growth can begin within hours after an incident occurs. Calling a professional service company immediately will increase your chances of a rapid and complete return to normal conditions. In the meantime, here are some guidelines about things not to do, and helpful things you can do.

<table>
<thead>
<tr>
<th>What you need to do now:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What NOT to do:</strong></td>
</tr>
<tr>
<td>• Do not enter a room with standing water until the electricity has been turned off.</td>
</tr>
<tr>
<td>• Do not use any electrical appliances in the affected areas: THEY CREATE A RISK OF ELECTROCUTION.</td>
</tr>
<tr>
<td>• Do not use a regular household vacuum to remove water.</td>
</tr>
<tr>
<td>• Do not lift tacked-down carpet without professional help.</td>
</tr>
<tr>
<td>• Do not disturb visible mold.</td>
</tr>
<tr>
<td>• Do not throw away any damaged property until it has been inspected by a representative of the District.</td>
</tr>
<tr>
<td><strong>What TO Do:</strong></td>
</tr>
<tr>
<td>• Only do activities that are safe for you to perform.</td>
</tr>
<tr>
<td>• Do what you can to minimize or mitigate impacts on your property.</td>
</tr>
<tr>
<td>• Keep people and pets away from the affected area(s).</td>
</tr>
<tr>
<td>• Try to contain the water/sewage to the already damaged area.</td>
</tr>
<tr>
<td>• Prevent any water/sewage from reaching floor vents.</td>
</tr>
<tr>
<td>• Take photographs to document conditions.</td>
</tr>
</tbody>
</table>

(continued on next page)
Claim Process:

- As soon as practical, call or e-mail the District’s Claims Administrator and provide your contact information; i.e., name, address, phone number, cell phone number and e-mail address. Also, if you have filed a claim with your insurance company, provide contact information for your insurance company.

- As soon as practical, complete the attached claim form or download a copy at http://www.eid.org/home/showdocument?id=133 and file your claim with the El Dorado Irrigation District’s Claims Administrator, 2890 Mosquito Road Placerville, CA 95667. The California Government Code, sections 900-935.4, requires filing a written claim and outlines specific timelines and notice procedures that must be followed.

- Per the California Government Code, the claim form must either be personally delivered to the District’s Headquarters at 2890 Mosquito Road in Placerville or mailed using the US Postal Service. A faxed or electronic version cannot be accepted.

**Important Legal Notice:** For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.
Estimado propietario/inquilino:

El Distrito de Riego de El Dorado (El Dorado Irrigation District) (de ahora en adelante, Distrito) reconoce que los incidentes relacionados con el agua y el sistema de alcantarillado pueden ser estresantes y requieren una respuesta de inmediato. El Distrito preparó un paquete con información breve que lo ayuda a minimizar el impacto del incidente al proporcionar una respuesta adecuada ante la situación a la que se enfrente.

En esta oportunidad, el Distrito está investigando el incidente y no puede asumir la responsabilidad por los daños ocasionados hasta que se complete la investigación. Sin embargo, si nuestra investigación determina que el Distrito es responsable por dicho incidente, se reembolsarán los gastos en los que haya incurrido para la limpieza razonable y necesaria en la resolución de la reclamación. El Distrito no es responsable por los cargos por limpieza o los daños causados por bloqueos en el sistema de alcantarillado del propietario, o por pérdidas o fallas en el sistema de alcantarillado de agua potable o reciclada en el medidor de agua que le corresponde al cliente. Independientemente de la responsabilidad del Distrito por el incidente, el propietario es responsable por los arreglos y por la presentación de una reclamación ante el Distrito para que este la considere. Las reclamaciones se consideran según lo estipulado en la Ley de Reclamaciones del Gobierno de California (Government Claims Act), en las secciones 810 a 996.6 del Código de Gobierno de California.

Como propietario/inquilino, puede comunicarse con su compañía de seguro para presentar una reclamación y ponerse en contacto con una compañía de restauración para que limpie y quite las partes afectadas. Si su compañía de seguro no posee una lista de compañías de limpieza a las que pueda llamar, las siguientes empresas de restauración cuentan con servicio de emergencia las 24 horas y podrán darle una respuesta:

- Zebra Restoration Services (916) 635-8571
- Belfor Property Restoration (800) 856-3333
- Certified Property Rescue (916) 939-9400
- Emergency Services Restoration (800) 577-7537
- ServiceMaster Cleaning & Restoration Services (530) 295-1608

*Esta lista es únicamente un recurso disponible para usted. El Distrito no exige ni avala el uso de ninguna de estas compañías. Esta lista no es exclusiva o integral y tampoco plantea una limitación de ningún tipo. Puede encontrar empresas contratistas calificadas en línea o en las Páginas Amarillas (Yellow Pages) en la sección “Restauración por daño causado por agua” (Water Damage Restoration) o “Restauración por daño causado por fuego y agua” (Fire & Water Damage Restoration). Sin embargo, el Distrito sí recomienda que contrate una compañía con la experiencia y los recursos para realizar el trabajo rápidamente.

El daño causado por agua y la proliferación de bacterias puede producirse en pocas horas luego del incidente. Llamar inmediatamente a una compañía que brinde un servicio profesional aumentará las probabilidades de obtener una restauración rápida y completa de las condiciones normales. Mientras tanto, a continuación encontrará algunas pautas sobre lo que no debe hacer y medidas útiles que puede tomar.

Lo que debe hacer ahora:

Lo que **NO** debe hacer:
- No ingrese a una habitación inundada hasta que no se haya cortado la electricidad.
- No utilice dispositivos eléctricos en las áreas afectadas. **EXISTE RIESGO DE ELECTROCUCIÓN.**
- No utilice una aspiradora para el hogar común para quitar el agua.
- No levante la alfombra adherida al piso sin ayuda profesional.
- No toque el moho visible.
- No tire ninguna parte de la propiedad que se haya dañado hasta que un representante del Distrito no la inspeccione.

(Continúa en la página siguiente)
Información para el cliente sobre reclamaciones por desborde del alcantarillado (Español)
Página 2 de 2

Lo que SÍ debe hacer:
• Únicamente realice actividades que sean seguras para usted.
• Haga lo que pueda para minimizar o mitigar los impactos en su propiedad.
• Mantenga a las personas y las mascotas lejos de las áreas afectadas.
• Intente contener el agua/las aguas residuales en las áreas que ya están dañadas.
• Evite que el agua/las aguas residuales lleguen a las aberturas que tenga el piso.
• Tome fotografías para documentar el estado de la propiedad.

Proceso de reclamación:
• Tan pronto como sea posible, llame o envíe un correo electrónico al Administrador de Reclamaciones del Distrito y proporcionele su información de contacto, por ejemplo, su nombre, dirección número de teléfono, número de celular y dirección de correo electrónico. Además, si presentó una reclamación a través de su compañía de seguro, proporcione la información de contacto de esta.

• Tan pronto como sea posible, complete el formulario de reclamación que se adjunta o descargue una copia del sitio http://www.eid.org/home/showdocument?id=133 y presente su reclamación ante el Administrador de Reclamaciones del Distrito de Riego de El Dorado: El Dorado Irrigation District’s Claims Administrator, 2890 Mosquito Road Placerville, CA 95667. El Código de Gobierno de California, en las secciones 900 a 935.4, exige la presentación escrita de una reclamación y estipula plazos y procedimientos de notificación específicos que deben respetarse.

• Según el Código de Gobierno de California, el formulario de reclamación debe entregarse personalmente en la sede del Distrito en 2890 Mosquito Road en Placerville o enviarse a través del Servicio Postal de los Estados Unidos. No se aceptará una versión por fax o electrónica.

**Notificación legal importante:** para su protección, lea atentamente, obtenga una traducción confiable o consulte con su abogado.
INSERT CLAIM FORM in FINAL PDF
How a Sewer System Works
A property owner’s sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.

If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

**El Dorado Irrigation District**
(530) 622-4513

**El Dorado County Environmental Health**
(530) 621-5300

California Health and Safety Code, Sections 5410-5416 requires:
- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters, or if sewage probably will be discharged in or on any waters of the state:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public’s health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

**Central Valley Regional Water Quality Control Board**
(916) 464-3291

Requires the prevention, mitigation, response to, and reporting of sewage spills.

**California Governor’s Office of Emergency Services (CalOES)**
(800) 852-7550

California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:
- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: “Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type of backwater valve.”

The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: “Backwater valves shall be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover.”

Sewer Spill Reference Guide

Your Responsibilities as a Private Property Owner

Provided to you by:

El Dorado Irrigation District
(530) 622-4513

www.eid.org

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How do sewage spills happen?
Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

**CAUTION!**
When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Common causes of sewage spills
- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device
This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!
If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:
Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:
- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

Spill cleanup inside the home:
For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas. You can locate local firms by looking in the Yellow Pages under “Water Damage” or “Fire Damage.” If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner’s insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Other Tips:
- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.

What to do if there is a spill:
**Immediately notify the El Dorado Irrigation District.** Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup.

If the backup is in your private internal plumbing or in the private service laterals, **you are required to immediately:**
- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under “Plumbing Drain & Sewer Cleaning” or “Sewer Contractors.”
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup outside the home:
- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solutions, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands). OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

What to do if there is a spill:
**Immediately notify the El Dorado Irrigation District.** Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup.

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- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under “Plumbing Drain & Sewer Cleaning” or “Sewer Contractors.”
- Always notify your sewer/public works department or public sewer district of sewage spills.
On (date) ____________________, at (location) ____________________, we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

☐ The District sanitary sewer and cleared the line
☐ Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can look on the Internet or in the Yellow Pages of your telephone book under “Sewer Contractors” or “Plumbing Drains & Sewer Cleaning”. If you plan to hire a contractor we recommend getting estimates from more than one company.

El Dorado Irrigation District representative notes: ____________________________________________

El Dorado Irrigation District Representative: ______________________________________________

For questions or comments, please call

El Dorado Irrigation District
Main Office: (530) 622-4513
Direct Dispatch: (530) 642-4000
Appendix C

SANITARY SEWER OVERFLOW RESPONSE PACKET
El Dorado Irrigation District: Overflow Emergency Response Plan

**Sanitary Sewer Overflow Response Packet**

**Table of Contents**

<table>
<thead>
<tr>
<th>Form</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and Chain of Custody</td>
<td>envelope label</td>
</tr>
<tr>
<td>Overflow Response Flowchart</td>
<td>C-1</td>
</tr>
<tr>
<td>Sewer Overflow Report</td>
<td>-2</td>
</tr>
<tr>
<td>Start Time Determination Form</td>
<td>-3</td>
</tr>
<tr>
<td>Volume Estimation Forms</td>
<td>-4a, -4b, -4c</td>
</tr>
<tr>
<td>Lateral CCTV Report</td>
<td>-5</td>
</tr>
<tr>
<td>Collection System Failure Analysis Report</td>
<td>-6</td>
</tr>
<tr>
<td>Regulatory Notifications Packet</td>
<td></td>
</tr>
<tr>
<td>Instructions</td>
<td>envelope</td>
</tr>
<tr>
<td>Regulatory Reporting Guide</td>
<td>RN-1</td>
</tr>
<tr>
<td>Category 1 SSO Reporting Checklist</td>
<td>-2a</td>
</tr>
<tr>
<td>Category 2 &amp; 3 SSO Reporting Checklist</td>
<td>-2b</td>
</tr>
<tr>
<td>Public Posting</td>
<td>n/a</td>
</tr>
<tr>
<td>Door Hanger</td>
<td>n/a</td>
</tr>
<tr>
<td>Pamphlet</td>
<td>n/a</td>
</tr>
</tbody>
</table>

For pre-assembled packets contact DKF Solutions Group at (707) 373-9709 or kpatzer@dkfsolutions.com
In the event of a **Sanitary Sewer Overflow**

**READ THIS FIRST**

- **If this is a Category 1 SSO greater than or equal to 1,000 gallons** immediately contact the Collections Systems Supervisor at (530) 295-6717 to make the 2-hour notification to CalOES.

- **If the SSO may threaten Folsom Lake immediately** contact the Water Manager at (530) 642-4060.

- **Check here if you believe that fats, oils and grease (FOG) caused or contributed to the SSO.**

- **To have water samples collected during business hours**, contact the District Chemist at (530) 295-6856.

- **For any media requests**: Contact the Public Information Officer at (530) 622-4513.

**Collections Crew:**

- Follow the instructions on the Sewer Overflow Response Flowchart (C-1).

- Refer to the Field Guide as necessary.

- Place completed forms, camera (if applicable), and any additional notes/documentation in this envelope.

- Complete the Chain of Custody record (right) and forward this packet to Collections Systems Supervisor.

**Collections Systems Supervisor:**

- Review the enclosed forms.

- Complete the Regulatory Notifications Packet.

- Complete the Chain of Custody Record (right) and file this completed Sewer Overflow Packet in accordance with District policy.

- Debrief using the Collection System Failure Analysis Form.
El Dorado Irrigation District: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet
Overflow Response Flowchart

Start Here

Take necessary measures to prevent sewage from entering storm drains.

Is the spill coming from the District sewer or private sewer?

PRIVATE

Is the customer home?

Is there reason to believe there was a backup into private property?

Complete the remainder of this flowchart (C-1 sides A and B), then go to Sanitary Sewer Backup Packet and follow instructions.

If the spill is entering an area where public contact may occur, post "WARNING RAW SEWAGE" signs and place barricades as necessary to prevent public contact. Be sure to photograph any areas where warnings/barricades are posted, as appropriate.

Consider the need to call out additional staff, contractor or mutual aid assistance or to notify upstream users to curtail water use. Immediately notify the Collections Systems Supervisor in the event of a large SSO event and if the spill appears to be large, in a sensitive area, or there is doubt regarding the extent, impact, or how to proceed.

BEGIN DIVERSION AND CONTAINMENT

1. DIVERT AWAY FROM SENSITIVE AREAS:
   a. Cover unplugged storm drains w/mats, or use dirt/other material to divert sewage away from sensitive areas (e.g., schools, playgrounds, intersections, etc.)
   b. ENSURE PUBLIC CONTACT DOES NOT OCCUR. Use cones/barricades to isolate area.

2. CONTAIN SPILL & RETURN TO SYSTEM, IF POSSIBLE:
   a. Plug storm drain catch basins or use rubber mats to cover basin inlet and divert flow to catch basin
   b. Build/excavate a berm to channel flow to downstream sanitary sewer manhole (barricade manhole if left open)
   c. Use bypass pumps to pump around blockage until it can be removed
   d. Divert to low area of ground where it can be collected later

3. PHOTOGRAPH HOW THE SSO WAS DIVERTED/CONTAINED, AS APPROPRIATE

Power Failure

Is the SSO coming from?

Pump Station

If POWER FAILURE, does station have onsite backup power?
   If YES, ensure the switchover has occurred
   If NO, bring in appropriate size generator to power the station

PUMPING FAILURE, does station have integrated bypass capabilities?
   If YES, implement integrated bypass system.
   If NO, implement manual bypass system.

If customer is not home, complete Customer Service door hangar. If they are home, provide them with the pamphlet – "Sewer Spill Reference Guide."

End. Do not continue to Side B

Is the spill coming from the District sewer or private sewer?

Determine whether the District should clear the stoppage/blockage or have the property owner/manager use a private contractor. Be sure to document District staff time and equipment used for potential billing purposes. Always notify the property owner/manager of the SSO and any District actions.

Is the customer home?

If the customer is not home, complete Customer Service door hangar. If they are home, provide them with the pamphlet – "Sewer Spill Reference Guide."

If tenant or property owner is unable to unwilling to address the cause of the overflow, immediately contact your supervisor and discuss whether City/County Code Enforcement, the County Department of Environmental Health or Regional Water Quality Control Board should be notified.

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El Dorado Irrigation District: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet
Overflow Response Flowchart

Continue Here From Side A

Have 50,000 gallons or more of the SSO reached surface waters?

• During Business Hours: Contact the District Chemist to collect water samples.
• After Hours: Trained individual should refer to the Field Sampling Kit for materials and instructions.

Assign staff to place "WARNING: RAW SEWAGE" signs or other means of warning along the shoreline of impacted surface waters as appropriate, or as directed by the County Environmental Health Department. Be sure to document how many signs were posted and where they were posted.

Is it feasible/practical to contain/recover any of the SSO from the surface waters?

Contain/recover as much of the spill in the waters and shoreline as possible. Contact Collections Systems Supervisor to request outside assistance, as appropriate.

Are storm drains impacted?

YES

WARNING:
Storm drain immediately downstream of the SSO reached sewage – Record the volume of sewage – Record the volume of flush water

NO

Were storm drains impacted?

YES

NO

BEGIN CLEANUP

Is it feasible/practical to contain/recover any of the SSO from the surface waters?

YES

NO

Contain/recover as much of the spill in the waters and shoreline as possible. Contact Collections Systems Supervisor to request outside assistance, as appropriate.

DOCUMENTATION AND REPORTING

2. Make notifications indicated on the Sewer Overflow Envelope
3. Complete the Lateral CCTV Report as necessary

DETERMINE START TIME AND ESTIMATE SPILL VOLUME

1. Complete the Start Time Determination form. Remember – the spill was probably occurring for a period of time before it was reported.
2. Estimate and document SSO volume using two or more of the worksheets provided.

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INSTRUCTIONS: Complete all items EXCEPT those that are shaded gray

SSO Category (check one):

- Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

  - Spill from Private Lateral (specify):
    - Single Family Home
    - Multi-Family Home
    - High Density Residential (5+ units)
    - Food Service Establishment (FSE)
    - Mixed Use Property
    - Industrial Property
    - Commercial Property
    - Public quasi-public institution (hospital, schools, fire department, etc.)

IMMEDIATE NOTIFICATION: For a Category 1 SSO ≥1,000 gallons, CalOES must be contacted within 2 hours at (800) 852-7550.

A. SSO LOCATION

SSO Location Name:

Latitude Coordinates: Longitude Coordinates:

Street Name and Number:

Nearest Cross Street: City: Zip Code:

County: SSO Location Description:

B. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)

SSO Appearance Point (check one or more):

- Force Main
- Gravity Mainline
- Lateral Cleanout (Private)
- Lateral Cleanout (Public)
- Gravity Main
- Inside Building or Structure
- Manhole
- Pump Station
- Lateral (Private)
- Service Lateral or Lower Lateral
- Other Sewer System Structure (specify):

Were there multiple appearance points? ☐ No ☐ Yes, number of appearance points:

Did the SSO reach a drainage channel and/or surface water? ☐ Yes (Category 1) ☐ No

If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? ☐ Yes ☐ No (Category 1)

Was this spill from a private lateral? ☐ Yes ☐ No If YES, name of responsible party:

Final Spill Destination:

- Surface waters other than ocean
- Drainage channel
- Building/structure
- Separate Storm drain
- Combined storm drain
- Paved surface
- Unpaved surface
- Street/curb/gutter
- Other:
  *Provide name(s) of affected drainage channels, beach, etc.:

Total Estimated SSO volume (in gallons – 1,000gal or more = Category 1):

- Est. volume that reached a separate storm drain that flows to a surface water body: gal Recovered: gal
- Est. volume that reached a drainage channel that flows to a surface water body: gal Recovered: gal
- Est. volume discharged directly to a surface water body: gal Recovered: gal
- Est. volume discharged to land: gal Recovered: gal

Calc. Methods: ☐ Eyeball ☐ Photo Comparison ☐ Upstream Lat. Connections ☐ Area/Volume (include sketch/photo with dimensions) ☐ Other (describe):

C. SSO OCCURRING TIME (Complete Start Time Determination Form and then complete information below.)

Estimated SSO start date: Estimated SSO start time:

Date SSO reported to sewer crew: Time SSO reported to sewer crew:

Date sewer crew arrived: Time sewer crew arrived:

Who was interviewed to help determine start time?

Estimated SSO end date: Estimated SSO end time:

*If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage. © 2004-2016 DKF Solutions Group, LLC. All rights reserved.
D. CAUSE OF SSO

<table>
<thead>
<tr>
<th>Where did failure occur? (Check all that apply):</th>
<th>⬜️ Air Relief or Blow-Off Valve ⬜️ Force Main ⬜️ Gravity Mainline ⬜️ Siphon ⬜️ Lower Lateral (public) ⬜️ Manhole ⬜️ Pump Station (specify): ⬜️ Controls ⬜️ Mechanical ⬜️ Power ⬜️ Lateral (private) ⬜️ Service Lateral or Lower Lateral ⬜️ Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSO cause (check all that apply):</td>
<td>⬜️ Air Relief or Blow-Off Valve Failure ⬜️ Construction Diversion Failure ⬜️ CS Maintenance ⬜️ Damage by others ⬜️ Debris (specify): ⬜️ From Construction ⬜️ From Lateral ⬜️ General ⬜️ Rags ⬜️ Flow Exceeded Capacity ⬜️ FOG (Fats, oil, grease) ⬜️ Inappropriate Discharge ⬜️ Natural Disaster ⬜️ Operator Error ⬜️ Root Intrusion ⬜️ Pipe Structural Problem/Failure ⬜️ Pipe Structural Problem/Failure (Installation) ⬜️ Rainfall Exceeded Design ⬜️ Pump Station Failure (specify): ⬜️ Controls ⬜️ Mechanical ⬜️ Power ⬜️ Roots ⬜️ Siphon Failure ⬜️ Vandalism ⬜️ Surcharged Pipe ⬜️ Non - Dispersible Wipes ⬜️ Other (specify):</td>
</tr>
<tr>
<td>Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):</td>
<td></td>
</tr>
<tr>
<td>Sewer pipe material at point of blockage/spill cause (if applicable):</td>
<td></td>
</tr>
<tr>
<td>Description of terrain surrounding point of blockage/spill cause: ⬜️ Flat ⬜️ Mixed ⬜️ Steep</td>
<td></td>
</tr>
</tbody>
</table>

E. SSO RESPONSE

SSO response activities (check all that apply): ⬜️ Cleaned-Up ⬜️ Mitigated Effects of Spill ⬜️ Contained All or Portion of Spill ⬜️ Restored Flow ⬜️ Returned All Spill to Sanitary Sewer System ⬜️ Returned Portion of Spill to Sanitary Sewer System ⬜️ Property Owner Notified ⬜️ Other Enforcement Agency Notified (specify) ⬜️ Other (specify): |

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed? ⬜️ Yes ⬜️ No

Any ongoing investigation? ⬜️ Yes ⬜️ No

Were health warnings posted? ⬜️ Yes ⬜️ No

If yes, provide health warning/beach closure posting/details:

Was there a beach closure? ⬜️ Yes ⬜️ No

If yes, name of closed beach(es):

Were samples of impacted waters collected? ⬜️ Yes ⬜️ No

If YES, select the analyses: ⬜️ DO ⬜️ Ammonia ⬜️ Bacteria ⬜️ pH ⬜️ Temperature ⬜️ Other:

Recommended corrective actions: (check all that apply and provide detail)

- Add sewer to preventive maintenance program
- Enforcement action against FOG source
- Plan rehabilitation or replacement of sewer
- Repair facilities or replace defect
- Remove roots
- Spot repair
- Other (specify):

What major equipment was used in the response?

List all agency personnel involved in the response including name, title and their role in the response:

F. NOTES

G. NOTIFICATION DETAILS: Enter details if applicable

CalOES contacted on (Date and Time):
Spoke to: ___________________________ CalOES Control Number: ___________________________

This form prepared by: NAME: ___________________________ TITLE: ___________________________ DATE: ___________________________

This form reviewed by: NAME: ___________________________ TITLE: ___________________________ DATE: ___________________________
El Dorado Irrigation District: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet
Start Time Determination Form

SSO Start Date: _______________ Location: ________________________________

Accurate start time determination is an essential part of SSO volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the District notified of the SSO? ________________________________ ☐AM ☐PM

Who notified the District? ___________________________________________________

Did they indicate what time they noticed the SSO? ☐YES ☐NO If yes, what time? _____________ ☐AM ☐PM

Who at the District received the notification? ________________________________

What time did the crew arrive at the site of the SSO? ____________________________ ☐AM ☐PM

Who was interviewed regarding the start time of the SSO? Include their name, contact information, and the statement they provided:

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact Information</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Describe in detail how you determined the start time for this particular SSO:

SSO Start Date: _______________ SSO Start Time: _______________ ☐AM ☐PM

SSO End Date: _______________ SSO End Time: _______________ ☐AM ☐PM

SSO Duration: _______________ minutes

This form completed by:

Name: ___________________________ Signature: ___________________________

Job Title: ________________________ Date: __________________________
El Dorado Irrigation District: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Volume Estimation: Eyeball Estimation Method

Use this method only for small SSOs of less than 200 gallons.

SSO Date: ______________________ Location: __________________________

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

<table>
<thead>
<tr>
<th>Size of bucket(s) or barrel(s)</th>
<th>How many of this size?</th>
<th>Multiplier</th>
<th>Estimated SSO Volume (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon water jug</td>
<td></td>
<td>x 1 gallons</td>
<td></td>
</tr>
<tr>
<td>5 gallon bucket</td>
<td></td>
<td>x 5 gallons</td>
<td></td>
</tr>
<tr>
<td>32 gallon trash can</td>
<td></td>
<td>x 32 gallons</td>
<td></td>
</tr>
<tr>
<td>55 gallon drum</td>
<td></td>
<td>x 55 gallons</td>
<td></td>
</tr>
<tr>
<td>Other: ______ gallons</td>
<td></td>
<td>x _____ gallons</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Total SSO Volume: ________________________________

STEP 5: Is rainfall a factor in the SSO? ☐ Yes ☐ No

If yes, what volume of the observed spill volume do you estimate is rainfall? _______ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

______ gallons − _______ gallons = _______ gallons

Total Estimated SSO Volume

Do you believe that this method has estimated the entire SSO? ☐ Yes ☐ No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: __________________________ Signature: __________________________
Job Title: __________________________ Date: __________________________

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SSO Date: __________________  Location: ________________________________

**STEP 1:** Compare the SSO to reference images on Side 2 to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: ___________ gallons per minute (gpm)

**STEP 2:** Complete the **Start Time Determination Form** to provide a detailed description of how start time was determined. Copy the SSO Duration from the Start Time Determination Form here:

SSO Duration: ___________ minutes

**STEP 3:** Multiply the flow rate by the SSO duration to calculate the estimated SSO volume.

\[
\text{Flow Rate (gpm)} \times \text{SSO Duration (minutes)} = \text{Estimated SSO Volume (gallons)}
\]

**STEP 4:** Did the SSO occur during a period of consistent flow in this portion of the system? ☐ Yes ☐ No

If no, explain how, based on this portion of the collection system and its users, you believe it may have impacted the estimated SSO volume:

By what percentage are you adjusting the estimation? ☐ increase ☐ decrease ________ %

Translate the percentage into gallons: ________________ gallons

**STEP 5:** Calculate the adjusted SSO volume estimate:

\[
\text{Estimated SSO Volume (gallons)} + \text{or} - \text{Adjustment (gallons)} = \text{Estimated SSO Volume (gallons)}
\]

Do you believe that this method has estimated the entire SSO? ☐ Yes ☐ No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: __________________________  Signature: ________________________
Job Title: __________________________  Date: __________________________

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IMPORTANT NOTE:
These photographs are provided as examples only and will change with many factors.

SSCSC Manhole Overflow Gauge
CWEA Southern Section Collections Systems Committee
Overflow Simulation courtesy of Eastern Municipal Water District

5 gpm  25 gpm  50 gpm  100 gpm
Near View

150 gpm  200 gpm  300 gpm  400 gpm
Near View

Far View
Far View
SSO Date: ____________________ Location: ____________________

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: __________ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Flow Rate Per EDU</th>
<th>SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A Gallons per Period</td>
<td>B Hours per period</td>
</tr>
<tr>
<td>6am-noon</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>noon-6pm</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>6pm-midnight</td>
<td>54</td>
<td>6</td>
</tr>
<tr>
<td>midnight-6am</td>
<td>18</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Estimated SSO Volume per EDU:

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1. 

\[
\text{Volume per EDU} \times \frac{\text{gallons}}{\text{# of EDUs}} = \text{Estimated SSO Volume in gallons}
\]

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: ____________________ gallons

Do you believe that this method has estimated the entire SSO? ☐Yes ☐No
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:
Name: ____________________ Signature: ____________________
Job Title: ____________________ Date: ____________________

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## Sanitary Sewer Overflow Response Packet
### Lateral CCTV Report

**PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE**

<table>
<thead>
<tr>
<th>PERSON COMPLETING THIS FORM:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHONE:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAMERA TYPE:</th>
<th>LOCATION OF CAMERA ENTRY:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>AFFECTED PROPERTY STREET ADDRESS:</th>
<th>LOCATION OF CAMERA STOP:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CITY, STATE AND ZIP:</th>
<th>DESCRIBE AREA TV’d:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PHONE</th>
<th>UPSTREAM MANHOLE #:</th>
</tr>
</thead>
</table>

**WEATHER AT TIME OF CCTV WORK:**

**PLEASE CHECK ALL THAT WERE DISCOVERED – Describe Extent & Location Using Camera Entry Point As Reference:**

- [ ] Broken Lateral – Describe:
  - Depth:

- [ ] Roots – Severity: [ ] Light [ ] Moderate [ ] Heavy

- [ ] Grease – Severity: [ ] Light [ ] Moderate [ ] Heavy

- [ ] Sag – Describe:
  - Depth:

- [ ] Backflow Prevention Device – Describe:
  - Location:

- [ ] Cleanout – Describe:
  - Location:

- [ ] Joint/Junction – Describe:
  - Depth

- [ ] Grade – Describe:

- [ ] Grit – Severity: [ ] Light [ ] Moderate [ ] Heavy

- [ ] Other – Describe:

**TIME OF OVERFLOW:**

**TIME BLOCKAGE RELIEVED:**

**TIME LATERAL TV’d:**

**DEPTH OF LATERAL:**

**RECOMMENDED FOLLOW UP WORK ACTIONS:**

Mark for USA location? [ ] Yes [ ] No

Lateral Locations Marked in Green Paint? [ ] Yes [ ] No

**SIGNATURE OF EMPLOYEE PERFORMING TV WORK:**

<table>
<thead>
<tr>
<th>DATE</th>
</tr>
</thead>
</table>

If applicable, place completed form in Sewer Overflow Packet and follow routing instructions.

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# El Dorado Irrigation District: Overflow Emergency Response Plan

## Sanitary Sewer Overflow Response Packet

### Collection System Failure Analysis

To be completed by the Collections Systems Supervisor

<table>
<thead>
<tr>
<th>Incident Report #</th>
<th>Prepared By</th>
</tr>
</thead>
</table>

### SSO/Backup Information

<table>
<thead>
<tr>
<th>Event Date/Time</th>
<th>Address</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Volume Spilled</th>
<th>Volume Recovered</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cause</th>
</tr>
</thead>
</table>

### Summary of Historical SSOs/Backups/Service Calls/Other Problems

<table>
<thead>
<tr>
<th>Date</th>
<th>Cause</th>
<th>Date Last Cleaned</th>
<th>Crew</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Records Reviewed By: ______________________ Record Review Date: ______________________

### Summary of CCTV Information

<table>
<thead>
<tr>
<th>CCTV Inspection Date</th>
<th>Tape Name/Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CCTV Tape Reviewed By</th>
<th>CCTV Review Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observations

Go to Side B
## Recommendations

<table>
<thead>
<tr>
<th>Type</th>
<th>Specific Actions</th>
<th>Who is Responsible?</th>
<th>Completion Deadline</th>
<th>Who Will Verify Completion?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Changes or Repairs Required</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Repair(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Improvement(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change(s) to Maintenance Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change(s) to Overflow Response Procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments/Notes:

Review Date:
DANGER

RAW SEWAGE ● AVOID CONTACT

PELIGRO

AGUA CONTAMINADA ● EVITE TODO CONTACTO

El Dorado Irrigation District
Main Office: (530) 622-4513
Direct Dispatch: (530) 642-4000
On (date) ____________________, at (location) _______________________________________,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:
☐ The District sanitary sewer and cleared the line
☐ Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can look on the Internet or in the Yellow Pages of your telephone book under “Sewer Contractors” or “Plumbing Drains & Sewer Cleaning”. If you plan to hire a contractor we recommend getting estimates from more than one company.

El Dorado Irrigation District representative notes: ______________________________________

El Dorado Irrigation District Representative: ___________________________________________

For questions or comments, please call
El Dorado Irrigation District
Main Office: (530) 622-4513
Direct Dispatch: (530) 642-4000
How a Sewer System Works

A property owner’s sewer pipes are called service laterals and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: “Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type of backwater valve.” The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: “Backwater valves shall be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover.”

If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

El Dorado Irrigation District
(530) 622-4513

El Dorado County Environmental Health
(530) 621-5300

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters, or if sewage probably will be discharged in or on any waters of the state:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

Central Valley Regional Water Quality Control Board
(916) 464-3291
Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES)
(800) 852-7550
California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.
How do sewage spills happen?
Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

**CAUTION!**
When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Common causes of sewage spills
- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device
This type of device can help prevent sewage backups into homes and businesses. If you don’t already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!
If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:
Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don’t dismiss unaccounted-for wet areas. Look for:
- Drain backups inside the building
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building

The following are indicators of a possible obstruction in your sewer line:
- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

What to do if there is a spill:
Immediately notify the El Dorado Irrigation District. Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup. If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:
- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under “Plumbing Drain & Sewer Cleaning” or “Sewer Contractors.”
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup outside the home:
- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ¼ cup of bleach to 5 gallons of water, but don’t allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill cleanup inside the home:
For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, You can locate local firms by looking in the yellow pages under “Water Damage” or “Fire Damage.” If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner’s insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Other Tips:
- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.
Appendix D

FIELD SAMPLING KIT
Table of Contents

<table>
<thead>
<tr>
<th>Form</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill</td>
<td>D-1</td>
</tr>
<tr>
<td>Sample Collection Chain of Custody Record</td>
<td>-2</td>
</tr>
</tbody>
</table>

Go to Water Quality Sampling Area and get the following supplies:

- Ice pack
- Ice
- Sample pole
- Latex gloves
- Long rubber gloves
- Safety glasses
- Waterproof Pen (i.e. Sharpie®)
- Chain of Custody form
- Sample Containers
  - Bac-T
  - Ammonia
**El Dorado Irrigation District: Overflow Emergency Response Plan**

**Field Sampling Kit**
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill

1. **Get Field Sampling Kit**
2. **Get ice pack from a convenience store and place in cooler**
3. **Determine point spill entered waterway – photograph this location (include a reference point in the photo)**
4. **Don the PPE from the Sampling Kit**

- Collect all samples against the direction of the water flow! (face upstream)
- Collect upstream sample first!
- Collect samples well away from the bank (preferably where water is visibly flowing) and 6” below the surface
- Avoid sampling debris or scum layer from the surface.
- Photograph evidence of dead fish!

**Move 50’ upstream of point where spill entered waterway (reference sample)**

- Take out the temp/pH meter. Calibrate it. Take temperature and pH of the water at that sample location. Record those results on the chain of custody form.
- Remove the seal from the enterococcus sample container (100ml) just prior to collecting your sample. A chemical has been added to the sample container. Leave the chemical in the bottle and do not rinse.  
  1. Remove the cap immediately before collecting each sample.
  2. Do not allow the inside of the cap to touch anything
  3. Holding the bottle in one hand, face upstream and lower the bottle 6” below the water surface. Then sweep the bottle upstream and out of the water. Be careful not to disturb the bottom sediment. Pour a little water out so that bottle is filled to the line. Immediately replace the cap.
- Open the ammonia-nitrogen sample container and follow collection process above (steps 1-3) to fill to just below the neck of the jar. NOTE: The ammonia-nitrogen sample bottle contains sulfuric acid – LEAVE THE ACID IN THE BOTTLE AND DO NOT ALLOW IT TO TOUCH YOUR SKIN!

- Label all of the samples with their location and note the date and time collected
- Place samples in cooler on the ice pack
- Take a photo of this sample location (include a reference point in the photo)

**Complete the Chain of Custody form from the Sampling Kit.**

**Move at least 10' downstream of point where spill entered waterway and repeat sampling steps (red boxes)**

- Immediately contact the contract lab and inform them that the following samples require processing: Ammonia-Nitrogen and Enterococcus.

**Post warning signs as directed by the County Environmental Health Department, and remove warning signs and lift restrictions when authorized by County Environmental Health.**

**Take cooler containing the samples and completed chain of custody to the District Lab sample refrigerator for pickup by the contract lab. Samples should be taken to the lab within 6 hours of collection.**

**Repeat sampling daily from time the spill is known until the results of two consecutive sets of samples indicate the return to the normal level or cessation of monitoring is authorized by the County Environmental Health Department.**

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This example is provided for illustrative purposes only! Base each sampling event on the geography, drainage and interference factors (i.e. birds, animals, runoff, etc.) of the area impacted. Consult the District or Contract Laboratory as needed.

**Sample Location 1:** Baseline Sample, *no* observable interference from birds, animals, runoff, etc.

**Sample Location 2:** Baseline Sample, *observable* interference from birds, animals, runoff, etc.

*NOTE:* Only collect this sample if you observe any possible interfering factors upstream from the spill location.

**Sample Location 3:** Immediately downstream of SSO entry point.

**Sample Location 4:** Further downstream of SSO entry point – note any possible interfering factors.

**Sample Location 5:** Further downstream of SSO entry point – note any possible interfering factors.

REMEMBER!
Always try to get photos of each sample point and include reference points and interference factors in each photo.
### Field Sampling Kit

**Sample Collection Chain of Custody Record**

<table>
<thead>
<tr>
<th>Customer Name</th>
<th>Hazardous Waste</th>
<th>PO#</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unknown Material</td>
<td>WO#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Address</th>
<th>Mail Code</th>
<th>CONTRACT LAB INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Turnaround Requirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Phone #</th>
<th>Ship to:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab Program Coordinator</th>
<th>Ship Date:</th>
<th>Courier:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Sampled By | |
|------------||
|            | |

### SAMPLE COLLECTION INFORMATION

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Type</th>
<th>Sample Location</th>
<th>Field pH</th>
<th>Field Temp</th>
<th># Containers</th>
<th>Matrix*</th>
<th>Analysis Requested</th>
<th>QA/QC Requirements</th>
<th>Remarks/Notes</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td>Upstream</td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td>Entry Point</td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td>Downstream</td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ ☑</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>A</td>
<td>☒ ☒ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td></td>
</tr>
</tbody>
</table>

*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

### Transport/Shipping Information

<table>
<thead>
<tr>
<th>Container intact?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Correct container?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Field preserved?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Custody tape intact?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cooled?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Temp. Blank?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

| Comments: | |
|-----------||

<table>
<thead>
<tr>
<th>Sample distribution:</th>
<th>Lab bench</th>
<th>Ice chest</th>
<th>Walk-in cooler shelf</th>
<th></th>
</tr>
</thead>
</table>

| Disposal Date: | |
|----------------||

<table>
<thead>
<tr>
<th>Disposed by:</th>
<th>(inits.)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C-O-C Distribution</th>
<th>Date:</th>
<th>By:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Lab Admin File</th>
<th>Prog/proj Mgr.</th>
<th>Lab Prog. Coord.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Delivery courier</th>
<th>Pick-up courier</th>
</tr>
</thead>
</table>

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Appendix E

CONTRACTOR ORIENTATION
The following procedures are to be followed in the event that you cause or witness a Sanitary Sewer Overflow.

**Contractor causes or witnesses a Sanitary Sewer Overflow**

**Immediatly Notify the District**
Direct Dispatch: (530) 642-4000  
Main Office Line: (530) 622-4513

**Protect the storm drains**
using mats, dikes, berms, etc.

**Protect the Public**
If the spill is entering an area where public contact may occur, and if it is safe to do so, monitor the location until the District Collections Crew arrives.

**Provide Information**
Provide the District Collections Crew with information about the overflow such as start time, appearance point, suspected cause, weather conditions, etc.

**Direct ALL media and public relations requests to:**
Public Information Officer  
(530) 622-4513
A sanitary sewer overflow (SSO) is a discharge of untreated human and industrial waste before it reaches the wastewater treatment facility.

SSOs usually occur through manholes, plumbing fixtures and service cleanouts.

SSOs are usually caused by grease, debris, root balls, or personal hygiene products blocking the sewer lines, or by unusually high flow volume.

---

### How to prevent SSOs:

#### …when clearing plugged sewer laterals:
- Remove root balls, grease blockages and any other debris from the sewer.
- If you can’t prevent root balls, grease or debris from entering the sewer main, call us at the numbers listed to the right, so we can work with you to remove the blockage and prevent blockages further downstream.
- Use plenty of water to flush lines.

#### …when constructing or repairing sewer laterals:
- Refer to the El Dorado Irrigation District website (www.eid.org) for design specifications. Permits are issued through the El Dorado County Building Division.
- Check your work area. Make sure there is no debris left in the sewer line before you backfill.
- Avoid offset joints, which may make sewer lines vulnerable to root intrusion and grease or debris accumulation. Properly bed your joints and don’t hammer tap.

---

If you cause or witness an SSO, immediately contact:

**El Dorado Irrigation District**

Direct Dispatch: (530) 642-4000

Main Office Line: (530) 622-4513

El Dorado Irrigation District

2890 Mosquito Road
Placerville, CA 95667

www.eid.org
### Food Service Establishment Wastewater Discharge Inspection Report

**Name of Facility**  
**Facility Address**  
**Mailing Address**  
**Name of Owner**  
**Phone**

#### Type of Facility
- [ ] Full service restaurant  
- [ ] Fast food restaurant  
- [ ] Cafeteria  
- [ ] Carry out  
- [ ] Fast food  
- [ ] School/College  
- [ ] Club/Organization  
- [ ] Convenience shop  
- [ ] Caterer  
- [ ] Church  
- [ ] Grocery store  
- [ ] Nursing home  
- [ ] Coffee shop  

#### Type of Grease Removal Device (GRD) (Check all that apply)
- [ ] Grease interceptor  
- [ ] Mechanical GRD  
- [ ] Manual grease trap  
- [ ] Other: _____________

#### Types of Fixtures (Check all that apply)

<table>
<thead>
<tr>
<th>Items</th>
<th>Connected to a GRD (Y/N)</th>
<th>Connected to a GRD (Y/N)</th>
<th>Connected to a GRD (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep fryer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ovens</td>
<td>2-compartment sink</td>
<td>2-compartment sink</td>
<td>2-compartment sink</td>
</tr>
<tr>
<td>Rotisserie</td>
<td>Pre-wash sink</td>
<td>Pre-wash sink</td>
<td>Pre-wash sink</td>
</tr>
<tr>
<td>Tilt kettle</td>
<td>Mop sink</td>
<td>Mop sink</td>
<td>Mop sink</td>
</tr>
</tbody>
</table>

#### Inspection Checklist

<table>
<thead>
<tr>
<th>Number</th>
<th>Item Description</th>
<th>Field Data</th>
<th>Compliance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The establishment recycles used cooking oil and can provide record of this.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Food waste is properly disposed of by recycling or solid waste removal and is not discharged to the grease trap or interceptor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The establishment “dry wipes” pots, pans, and dishware prior to rinsing and washing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Grease trap(s) is cleaned as stated on permit and the establishment can provide records of this. <strong>(Note and record the frequency and last date of cleaning.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Grease trap does not contain greater than 25% the depth in FOG and solids accumulation. <strong>(Estimate and record amount of grease in trap.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Grease interceptor does not contain greater than 25% the depth in FOG and solids accumulation. <strong>(Estimate and record amount of grease in interceptor.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Grease interceptor is completely pumped regularly and the establishment can provide records of this. <strong>(Note and record the frequency and last date of pumping.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Absorbent pads or other material (e.g., “kitty litter”, etc.) are used to clean up grease spills before reaching floor drains.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Method and frequency floor mats and exhaust systems filters are cleaned. If cleaned on premises ensure process includes a GRD.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Screens are located or placed on each sink and floor drains.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Additives are not placed into the kitchen drains or GRD (i.e., enzymes, bacteria, etc.).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>“No Grease” signs are posted at appropriate locations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>The establishment has implemented a training program to ensure that kitchen BMPs are followed. The establishment can provide records (sign-in sheets).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Related Board Policies

Board Policy 6010: Wastewater System Management

The District will maintain a wastewater collection, treatment, and disposal system that comply with applicable state, and federal wastewater discharge requirements and regulations.
Consideration

To approve the updated 2019 Sewer System Management Plan (SSMP)
Summary of Issue

The SSMP describes how the collection system is managed, operated, and maintained with the overall goal of Protecting Public Health and the Environment by reducing the number of Sanitary Sewer Overflows.

Development and periodic update of a Sewer System Management Plan (SSMP) is necessitated by the State Water Resource Control Board’s (SWRCB) adopted Statewide General Waste Discharge Requirements (GDWR).
Elements of the SSMP

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
6. Overflow Emergency Response
7. Fats, Oils, and Grease Control Program
8. System Evaluation and Capacity Assurance Program
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communications Program
Section 4: Operational and Maintenance Program

- Perform regularly scheduled maintenance
- Maintain proper asset records
- Develop short-term and long-term Capital Improvement Plan
Hydro Cleaning

EID’s Goal is to clean every wastewater gravity pipe every six years.

Scheduled/Month: 47,500 (ft)
Actual Average/Month: 44,945 (ft)
Pipeline Root Abatement

Program to systematically inject Vapo-Root chemical into select sewer lines to eliminate root intrusion

This method treats the roots themselves, not the void in the pipe in which the roots entered
Odor & Corrosion Control

Systematic Chemical Supplementation in the Collection System to mitigate H₂S gas and reduce creation of sulfuric acid

*Photo depicts corroded ductile iron pipe exposed to conditions in a lift station wet well

*H₂S Concentration measured in BP1LS

Average: 139 ppm
Peaks: 200-600 ppm
Closed-Circuit Television Inspection

Proactively seek out condition deficiencies to eliminate near-failure situations, reduce inflow & infiltration, and gain an understanding of overall system health.
CCTV Database Update

Enable Staff to efficiently process inspection data to concentrate future inspection efforts

Pipe Condition Index

- Excellent
- Good
- Fair
- Poor
- Very Poor
Service Calls

In 2018, Collections Staff responded to 264 service calls.

Temporary solutions are performed to prevent SSOs.
Infrastructure Inventory

- 411 Miles of Gravity Mainline
- 55 Miles of Force Mains
- 9372 Manholes
- 25,893 Service Connections
- 231 Miles of Lower Laterals
- 60 Lift Stations
GIS Mapping
Section 8: System Evaluation and Capacity Assurance Plan

El Dorado Hills

Camino Heights

Deer Creek

Gold Ridge Forrest
Sewer System Hydraulic Model

- Develop a hypothesis of where capacity deficiencies may exist
- Test hypothesis with flow monitoring
- Determine if capacity deficiencies can be mitigated through inflow & infiltration reduction or pipeline upgrades
- Update 5-year CIP with upcoming capacity upgrades
Inflow & Infiltration

Determining I&I through flow monitoring, modeling, and field observations
Short-Term and Long-Term Planning

Utilize gathered information to properly assess risk of pipe failure

- Asset Information
- Maintenance Records
- CCTV Data
- Capacity Deficiencies
# Criticality Matrix

<table>
<thead>
<tr>
<th>Risk of Failure</th>
<th>Negligible</th>
<th>Minor</th>
<th>Moderate</th>
<th>Critical</th>
<th>Catastrophic</th>
</tr>
</thead>
<tbody>
<tr>
<td>81-100%</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>61-80%</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>41-60%</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>21-40%</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>0-20%</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

Consequence
Section 9: Monitoring, Measurement, and Program Modifications

![Bar chart showing the number of SSOs per year from 2007 to 2018. The chart indicates a peak in 2008 and a decrease in subsequent years.]
“Check in” SSO Stats

• In 2019, the District has witnessed two Category 1 SSO and two Category 3 SSOs
• In total, the District has witnessed 0.62 SSOs per 100 miles of pipe in 2019

*The Figure depicts SSOs within the last 4 months as reported to the SRWCB
Overall SSMP Goals

1. To maintain and improve the condition of the collection system infrastructure in order to provide continuous reliable service.

2. Cost effectively;
   a) Reduce preventable SSOs
   b) Minimize inflow/infiltration (I&I)
   c) Minimize adverse impacts of SSOs
   d) Improve operational efficiencies
   e) Ensure corrective action is taken in a timely manner
   f) Improve emergency response strategies
Board Options

Option 1: Adopt the updated 2019 Sanitary Sewer Management Plan

Option 2: Take other action as directed by the Board

Option 3: Take no action
Recommendation:

Option 1
Questions?